



Exploring Cotton Farm Workers' Job Satisfaction by Adapting Social Cognitive
Career Theory to the Farm Work Context

A Thesis submitted by

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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. Respondents' 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.

KEYWORDS

Social Cognitive Career Theory, Mixed Methods, Agriculture, Cotton, Farm Worker, Job Satisfaction

Certification of Thesis

This thesis is entirely the work of Nicole Jane McDonald except where otherwise acknowledged. The work is original and has not previously been submitted for any other award, except where acknowledged.

Student and supervisors signatures of endorsement are held at USQ.

Associate Professor Peter McIlveen

Principal Supervisor

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Associate Supervisor

Professor Karen Noble

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LIST OF CONFERENCE PRESENTATIONS

- 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
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CHAPTER ONE: INTRODUCTION

This chapter introduces (a) the current production challenges being faced by the agriculture industry, (b) industry strategies to address these challenges through workforce development, and (c) the necessity for a vocational psychological approach to investigate these matters. The absence of the vocational psychology discipline from the study of careers in the agriculture sector is noted. Social Cognitive Career Theory (SCCT) is proposed as a useful theory to understand farm workers' experiences of job satisfaction (Lent & Brown, 2006a). A brief explanation of the SCCT Model of Job Satisfaction is given, the aims and research questions of the current project disclosed, and expected outcomes of the research are identified. Finally, an overview of the thesis organised by chapters is outlined.

1.1 Issues in Agriculture

The current world population of 7.3 billion is expected to reach 9.7 billion by the year 2050 (Linehan, Thorpe, Andrews, Kim, & Beaini, 2012). The challenge is for global agriculture to improve production in order to adequately feed and clothe the world. The United Nations Development Programme (UNDP; 2017) has set out a series of sustainable development goals which include an increased commitment to “implement resilient agricultural practices that increase productivity and production that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality”. To drive action towards this goal, it is essential that agricultural industries attract, develop and retain skilled and competent people (UNDP).

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 (Australian Bureau of Agricultural and Resource Economics and Sciences; ABARES, 2017). Although there are concerns that the productivity of Australian farms is plateauing, and understandably there is a concerted effort 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 have 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 (Fragher, Cass & Cooper, 2005; Ford, Heinen, & Langkamer, 2007; Lent et al., 2005). Job satisfaction has also 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 lens through which to view such a phenomena.

1.2 A Vocational Psychological Perspective of Careers in Agriculture

The discipline of Vocational Psychology is concerned with the study of career development and the role of work in people's lives. It encompasses theory development, research, and provision of career services and it is central to the origins of the counselling profession. Critical discourse from within the discipline has drawn attention to the need for the adaption and evolution of well-established core theories to encompass more diverse perspectives and remain relevant in the ever changing world of work (Hartung, Walsh, & Savickas, 2013).

Exploring careers in the farm context responds to this appraisal of Vocational Psychology's challenge to meet real world demands, especially as agriculture is responsible for providing up to 40 percent of the global population with employment and income (UNDP, 2017). Little up to date research exists that provides any in-depth analysis of the relevancy or utility of the career development theories that currently underpin the discipline with respect to this particular real world work environment. In fact, with a few exceptions, a search of the literature finds most of the careers research on farmers and other workers in the agricultural industry take place well into last century (Burt & Ives, 1923; Tolman & Likert, 1942; Grigg, 1948; Brayfield & Marsh, 1957). This criticism is not to be confused with contributions made to studies of agricultural education including the attraction and engagement of students to studying agricultural science and future agricultural careers aspirations (Esters & Bowen, 2005; Esters, 2007; Overbay & Broyles, 2008; Esters & McCulloh, 2008).

The absence of vocational psychologists in the agricultural industry and the potential for the discipline to add value to sustainable farming production was raised in the 1970's (Richards, 1973) and has more recently been addressed by McIlveen's (2015) establishment of the Vocational Psychology of Agriculture – Farming Food and Fibre (VPA-FFF) research agenda. In this he writes:

That vocational psychology is effectively absent from the field of agriculture is a two-fold loss: first, to the discipline itself, as, like all others, vocational psychology must demonstrate its relevance to society, and what better way than by enhancing an industry that provides the food and fibre of life; and, second, vocational psychology's absence is a loss to the world of work that needs research and interventions directed to understanding the role of, and

improving the quality of, work in people's lives, particularly work that is relatively less prestigious (p.158)

Currently, one of the most researched Vocational Psychology theories is SCCT (Brown & Lent, 2016). SCCT emphasises the agency of the individual who through their thoughts, actions, and emotion, interact with their environment to shape their work experiences, including the development of their careers (Lent, Brown, & Hackett, 2000). Initially used to explain a range of potential outcomes of relevance to the practice of careers counselling, including career interests, career choices, and academic and job performance, the range of SCCT models have since been expanded to include those examining adaptive career self-management behaviours, and job satisfaction and wellbeing. (Lent, Brown, & Hackett, 1994; Lent & Brown, 2013; Lent & Brown, 2008). Some recent publications have used SCCT to inform research into agricultural career choice and exploration, but extensive testing of the SCCT Model of Job Satisfaction in the Australian agricultural context has not been explored until now (Moffatt, 2016; Turner & Hawkins, 2014; Li, 2015; Ding, 2015).

1.3 The SCCT Model of 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).

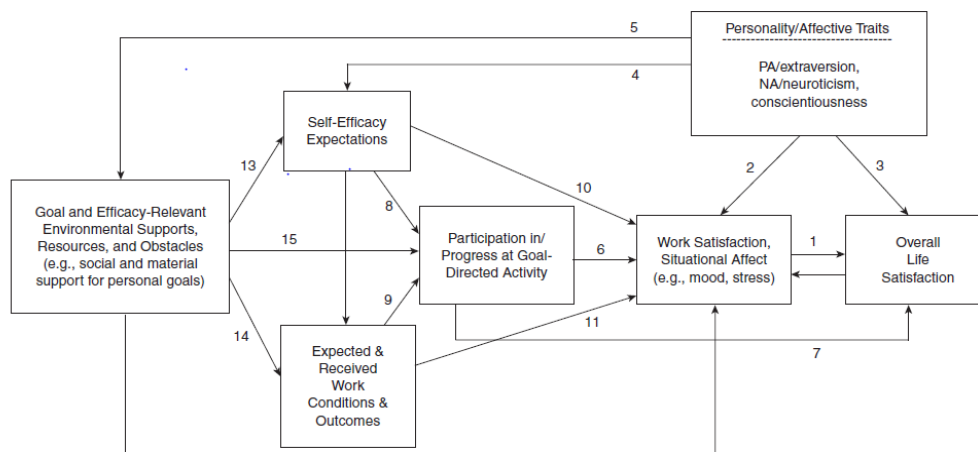


Figure 1.1. A process model of work satisfaction. This model highlights theorised interrelations among personality, affective, cognitive, behavioural, and environmental variables. Reproduced with permission (Lent & Brown, 2008).

1.4 Aims and Research Questions

The current research project aims to address the identified gaps in the Vocational Psychology literature by testing the SCCT Model of Job Satisfaction in a previously unexplored population. Specifically, each construct will be examined within the cotton farm work context to inform appropriate operationalisation and measurement selection, essentially adapting Lent & Brown's (2008) model to become the SCCT Model of Farm Worker Job Satisfaction. The addition of the work volition construct to the SCCT Model of Farm Worker Job Satisfaction will further expand the potential for new evidence to avoid the assumption that every participant is able to exercise volition in entering into work on farm. This allows for a more nuanced analysis of the utility of the SCCT in the agricultural context.

The current research project will work towards answering the following questions:

1. What do the SCCT constructs look like in the cotton farm context?
2. Are the proposed measures appropriate to capture data to investigate the SCCT as a measurement model?
3. What tasks need to be included in a measure of crop farm worker self-efficacy?
4. Does the proposed SCCT model of farm worker job satisfaction explain how psychological constructs inter-relate to predict job satisfaction?

1.5 Anticipated Contributions of the Research

The current research project expects to make the following theoretical contributions to the Vocational Psychology literature and practical contributions to the cotton industry:

- the research is the first to audit the utility of the SCCT model of job satisfaction in a farm context, by doing so;
- the research provides evidence to tailor career development interventions in the cotton farming context;
- the research includes the construct of work volition in the SCCT model of agricultural job satisfaction, a recent construct which addresses previous criticisms of assumptions of choice which underlie theory;
- the research contributes to the cotton industry's workforce development strategy agenda by providing empirical evidence of the psychological factors influencing farm workers' appraisals of the agricultural industry as a desirable employer and a farm career providing opportunity for job satisfaction.

1.6 Organisation of Thesis

Following this introduction chapter, Chapter Two provides a review of the literature on the SCCT and each of the theoretical constructs that form the SCCT Model of Job Satisfaction. A rationale for the importance of job satisfaction to the agricultural sector's efforts to attract, retain and motivate their workers is established. The operationalisation of each theoretical SCCT construct is proposed and the broader psychological literature as well as relevant studies on farm workers and blue-collar workers are referred to in support of these arguments.

Chapter Three outlines the methodology of the current research project. Clear research questions are identified and the post-positivist paradigm is used to frame the selection of appropriate research methods. A researcher-as-instrument statement is included, disclosing prior knowledge, thoughts, and attitudes about conducting research in the farm context. This self-reflecting exposes any biases that have the potential to impact the research. Consideration is given to how best to imbed the SCCT Model of Job Satisfaction into the farm worker context including the need to scrutinise the face validity of proposed measures and development of a new measure

of Farm Worker Self-efficacy before proceeding to empirically test the SCCT Model of Farm Worker Job Satisfaction.

Chapter Four reports on the methods and results of Study One, which consists of a thematic analysis of semi-structured interviews with farm workers and cotton growers. The analysis investigates each of the theoretical factors and operationalised constructs of the SCCT Model of Job Satisfaction using the coded responses to better understand them in the cotton farm context. The data is used to inspect proposed operationalised constructs and measures of these operationalised constructs. The analysis will inform any adaptations to existing measures deemed necessary and a new measure of farm worker self-efficacy is introduced.

Chapter Five reports on the methods and results of Study Two, which seeks to test the SCCT Model of Farm Worker Job Satisfaction. The recruitment strategies, participant demographics, and the measures used will be described. The data will be screened, methods to handle missing data will be proposed. Proportion counts and polychoric correlations for each categorical variable will be reported. Analysis of the factor structure for each measure will be conducted using Confirmatory Factor Analysis (CFA). Structural Equation Modeling (SEM) will then be used to test the SCCT Model of Farm Worker Job Satisfaction and this model including work volition.

The final chapter of the dissertation will discuss the results from Study Two, and will use qualitative data from Study One to assist interpretation and explanation of the quantitative results. Consideration for the theoretical and conceptual implications that arise from the current study will be made and linked back to the body of relevant academic literature. Methodological implications including any limitations to the current study will be disclosed. Practical outcomes and applications of the current research findings in the cotton industry will be determined. Finally, future research and potential new directions for the study of the SCCT Model of Job Satisfaction and career development in the Australian agricultural industry will be discussed.

CHAPTER TWO: LITERATURE REVIEW

Presently, there are potential labour shortages in the Australian agriculture industry, which is reflected in the challenge to attract and retain suitable people to work in the cotton industry (National Rural Advisory Council, 2013; The Allen Consulting Group, 2012; Cotton Research Development Corporation [CRDC], 2013b; Kahl, 2017, as cited in Nuffield Australia, 2017). A lack of appropriately skilled workers with the right attitude is impacting production and potentially forcing cotton growers to work harder, contributing to burnout and possible exiting of the industry (Nettle, Moffatt, Power, Yu, & Oliver, 2013; Queensland Department of Agriculture, Fisheries and Forestry, 2013). Responding to the cotton industry's concerns, the Cotton Research Development Corporation (CRDC, 2013a) has made it a priority to understand and address the issues experienced by its workforce. As yet there has been no line of enquiry which has specifically investigated the psychological factors which motivate individuals to pursue careers as cotton farm workers.

Barriers to attracting the talent required to drive on-farm productivity, include the negative, outdated image and consequent low occupation status that the general Australian public assigns jobs held in the agriculture industry (Turner & Hawkins, 2014). However, the reality is that modern agriculture is driven by science and technology, with farmers increasingly finding new ways to improve the sustainability of production even in the face of challenges such as climate change (Langridge, 2014). Indeed, the developments made are further changing the workforce required with less unskilled labour and more traditionally and non-traditionally skilled people required for farms to capitalise on the new digital agricultural practices. It does appear that the message about the quality careers on offer in agriculture is beginning to reach young people aspiring to higher education with enrolments in tertiary agriculture courses this year increasing by 20 percent (Smith, 2017), but this is still too few with estimates that there are 1400 new jobs each year with only 400 graduates to fill these positions (Medway, 2017). Furthermore, the agricultural workforce as a whole struggle to attract and retain young people, with the proportion of their workforce aged under 35 well below the industry average (22.3% vs 39.3%) (ABS 2011, as cited in National Rural Advisory Council, 2013).

The current research project will extend on recent investigations into the workplace structures, conditions and policies which contribute to attraction and retention of farm workers (Moffatt & Nettle, 2013; Nettle et al., 2013). The optimal functioning of on-farm workers will be explored with the aim of understanding how established psychological constructs such as job satisfaction (Section 2.1); factors explored in SCCT (Section 2.2) including personality and affective traits (Section 2.3.1), goal-relevant environmental supports, resources, and obstacles (Section 2.3.2), self-efficacy (Section 2.3.3), expected work conditions and outcomes (Section 2.3.4), and goals and goal-directed activity (Section 2.3.5); and work volition (Section 2.3.6) contribute to a satisfying career in the cotton industry. Further to this, an understanding of how these psychological constructs inter-relate will be determined. In particular, SCCT will be used to formulate the hypotheses and model of job satisfaction (Lent & Brown, 2006a). The relevance of the research project to the cotton industry and a review of the current literature will be presented, followed by proposed research questions and hypotheses.

2.1 Job Satisfaction

Over the past 100 years of psychological research on how people experience and evaluate their work experience, job satisfaction is considered the most widely studied construct (Judge, Weiss, Kammeyer-Mueller, & Hulin, 2017). Locke (1976) defines job satisfaction as “a pleasurable or positive emotional state resulting from the appraisal of one’s job or job experiences” (p.1300, as cited in Lent & Brown, 2008). In this way, it is considered an attitude, formed by the individual from both a cognitive evaluation and an affective reaction to their work circumstances and experiences (Brief, 1998). Job Satisfaction has been conceptualised as an overall general judgement and as a multi-faceted construct comprised of an employee’s ratings for a range of job factors such as pay, promotion, work tasks, supervision, and co-worker relationships (Brayfield & Rothe, 1951; Warr, Cook, & Wall, 1979).

It is widely accepted that both situational and dispositional factors impact an individual’s experience of job satisfaction (Arvey, Carter, & Buerkley, 1991; Judge, Heller, & Mount, 2002). Different work contexts may impact not just the levels of job satisfaction but also the way people conceptualise their satisfaction. For example, a study of white collar and blue collar workers found the way people drew conclusions about satisfaction with co-workers differed (Hu, Kaplan, & Dalal, 2010). Blue collar workers, who generally worked in teams and established closer

relationships with their co-workers had a more general and less differentiated appraisal of their co-workers compared to the people employed in less collaborative white collar roles. The relative importance of different facets of job satisfaction to each individual also means simply adding them together may not be a true indication of a worker's overall job satisfaction (Faragher et al., 2005). Overall job satisfaction has found to be a predictor of a range of positive individual and organisational outcomes. These along with the research on job satisfaction for farm workers and potential considerations for the importance of job satisfaction outcomes in the cotton industry will be discussed.

2.1.1 Job Satisfaction and the Individual

A considerable body of research exists on the dispositional antecedents and beneficial outcomes for an individual that are associated with job satisfaction. Job satisfaction has been linked to reduced incidences of poor physical and mental health; in particular individuals experiencing low levels of job satisfaction are more likely to report lower self-esteem, higher levels of anxiety and depression and to experience emotional burn-out (Faragher et al., 2005). Experiences of job satisfaction may also impact on other domains of wellbeing, including family satisfaction and overall life satisfaction (Ford et al., 2007; Lent et al., 2005). There is limited research on the outcomes of job satisfaction or life satisfaction for individuals in the agricultural industry. That which exists focuses on farmers and not farm workers. However, these research studies may offer some insight into experiences of job satisfaction for people who work in the farming context.

Farmers are often considered highly satisfied with their work, largely due to the characteristics of their jobs (Willock, et al., 1999). Past research has shown farmers to experience work that makes use of a wide range of skills, perform tasks that are meaningful, and have large amounts of autonomy in decision making. While they reported less financial security and pay satisfaction than the average American worker, they experienced higher general satisfaction, were more satisfied in terms of opportunity for personal growth at work, and were highly motivated in their job (Hinsz & Nelson, 1990). The weak impact of pay satisfaction on overall satisfaction is consistent with other occupational contexts. A meta-analysis of past research shows a minimal significant relationship between pay and pay satisfaction with overall job satisfaction suggesting other job features are more influential in predicting this job attitude (Judge, Piccolo, Podsakoff, Shaw, & Rich, 2010).

One study (O'Brien, Berry, & Hogan, 2012), comparing drought-affected Australian farmers to a general community sample examined the impact of different domains of general satisfaction (i.e., religion/spirituality, relationships, community connectedness, health, safety, future security, achieving in life, and standard of living) on the factor structure of overall psychological satisfaction. Each domain loaded onto one of two latent constructs; connectedness and efficacy. It was found that efficacy mediated the relationship between connectedness and psychological satisfaction. Differences were found between the two samples for the loading patterns of domain satisfaction on connectedness and efficacy. For farmers, three domains of satisfaction; (a) future security satisfaction, (b) achieving in life satisfaction, and (c) standard of living satisfaction; and the additional predictor of household income contributed to the crucial mediator of efficacy satisfaction. All of these factors are directly related to farmers' work and more specifically to production and financial outcomes of their farming businesses. This would suggest that occupational achievement and economic security are integral to overall psychological satisfaction and wellbeing for Australian farmers who have experienced adversity.

For the general public, additional domains of health satisfaction and safety satisfaction, as well as education levels, and employment status predicted the efficacy latent factor. Whether farm workers' experiences of domain and overall satisfaction match the pattern of results reported by drought-affected farmers or the general public remains to be seen. If farm workers more closely align with the general public, there may be a tension between the domains of satisfaction that farmers see as important and their responsibility to address in the workplace as opposed to the domain satisfaction needs of their employees in the workplace.

2.1.2 Job Satisfaction and the Organisation

Throughout the literature, well established links have been demonstrated between job satisfaction and a range of organisational outcomes. High job satisfaction has been associated with improved job performance, reduced turnover, and stronger affective organisational commitment, all of which can impact the productivity of the workplace (Judge et al., 2001; Griffeth et al., 2000; Meyer et al., 2002). Results of a meta-analysis also demonstrated the positive relationship between employees' overall job satisfaction and engagement, with the additional

organisational outcomes of customer satisfaction and loyalty, safety and profitability (Harter, Schmidt, & Hayes, 2002).

In considering the impacts of job satisfaction for the cotton industry it is necessary to understand the complexity of the workforce composition. This section will summarise the various groups that make up the cotton industry workforce. The different outcomes and benefits for the cotton industry that may result from these occupational groups' experiences of job satisfaction will be discussed.

In Australia, farm workers are a diverse occupational group made up of residents, 417-visa holders (backpackers) and 457-visa holders, filling permanent, casual and contract on-farm positions (Nettle et al., 2013). To clarify, "backpackers" or 417-visa holders are international tourists from selected countries, including but not limited to Canada, Korea, Taiwan, the United Kingdom, and Italy, who have come to Australia for a working holiday for twelve months. An option to extend this visa and their visit to Australia for a further 12 months is made possible if they have engaged in at least three months specified work in a designated regional area. The plant and cultivation industry is one of five specified work industries (Australian Government Department of Immigration and Border Protection, 2017). These backpackers are increasingly relied upon across different agricultural industries to fill labour gaps during peak periods such as harvest time (Cotton Australia, 2017). International visitors that hold a 457-visa are considered skilled workers and are sponsored by Australian businesses, including farming operations and associated agricultural businesses, to fill labour gaps. Depending on the position description and job performed this could be for anywhere from two to four years (Australian Government Department of Immigration and Border Protection, 2017). This diversity and complex composition of the cotton industry workforce needs to be considered when discussing the impact of job satisfaction.

The potential ability of job satisfaction to reduce turnover intention may be particularly important for the permanent agricultural workforce. During the drought at the turn of the century, experienced farm workers left the industry when growers down sized operations, resettled elsewhere, and have not re-entered the industry (Moffatt & Nettle, 2013). With labour requirements dependent on external economic and climatic factors, the potentially insecure nature of a career in agriculture is a barrier towards building an experienced, capable, permanent workforce. Job insecurity is associated with lower organisational commitment, and an increased

likelihood that workers will exit the industry, particularly those who are skilled and have the opportunity to find more stable work elsewhere. In addition, studies have shown that job insecurity negatively impacts job satisfaction and that the relationship between job insecurity and turnover intention is stronger for manual workers than non-manual workers (Sverke, Hellgren, & Naswall, 2002). Understanding the psychological factors which keep people experiencing job satisfaction in the face of this uncertainty is important to retaining staff and ensuring the industry benefits from investments made to train and up-skill new and existing workers.

It has been argued that job satisfaction is a valuable outcome for permanent employees, but it is also important for the large number of casual and contract workers employed on farms. The reliance on backpackers in the harvest season is a relatively recent change in the cotton workforce (CRDC, 2013b). With on-farm labour demands potentially changing from year to year due to climatic and economic impacts on production, it is understandable that this source of seasonal workers is attractive and is used to fill the gaps in on-farm staff. While backpackers have not been considered a sustainable source of labour in the past, lobbying by grower networks and changes to up-skilling pathways means that those employed under a 417-visa may be able to obtain a 457-visa or possibly be sponsored to live and work long term in the Australian agriculture industry now and in the future. It is clear backpackers are a valuable source of labour and consideration needs to be given to how best to motivate and engage these workers.

Backpackers and other casual workers may be at risk of experiencing lower levels of job satisfaction, especially when they compare the outcomes they receive with permanent workers (Wilkin, 2013). It can be argued that ensuring backpackers experience job satisfaction while employed on farm, may result in them choosing to return to the cotton industry the following year (417-visas can be extended for a second year). Even if not returning, the workplace provides a major life experience that in today's world will be reflected on and communicated about through increasingly vast social media networks, both to other backpackers and Australian residents (Haygroup, 2014; Field, 2015, January 20). A positive experience has the potential to turn short-term workers into advocates of the cotton industry as a preferred employer, increasing the desirability and possible numbers of people seeking agricultural work. A larger talent pool may increase the quality of worker which can be hired.

2.1.3 Summary of Job Satisfaction

It is clear that job satisfaction is an important outcome for an individual's health and wellbeing and for organisations' productivity and retention of staff. The farm work environment offers conditions, such as requiring workers to develop a wide range of skills, which may promote job satisfaction, but could also be an environment that offers minimal job security which can negatively impact job satisfaction. Understanding the psychological characteristics that influence how individuals experience job satisfaction on farm could offer new insight into the current attraction and retention issues experienced in the Australian cotton industry and the Australian agricultural industry. SCCT offers a theoretical model that can provide a foundation for the exploration of the mechanisms that lead to farm worker job satisfaction. The SCCT and the constructs encompassed by the theory are discussed in the next section.

2.2 Social Cognitive Career Theory

SCCT is a social constructivist approach to career, whereby individuals are considered active agents who through their beliefs, abilities and emotions, interact with sets of social, economic and other environmental conditions to influence their life course, including work experiences and the development of a career (Lent & Brown, 2006a; Lent, Brown, & Hackett, 2000; Lent, 2013). The origins of SCCT can be credited to Bandura's (1977) social cognitive framework. Intrapersonal constructs and environmental influences and the interaction between these have been used to explain the process of career and educational interest development, choice, and performance, in three distinct models (Lent & Brown, 2006a). As the theory developed, it has been used to explain other career outcomes including career self-management, and job satisfaction and wellbeing (Lent & Brown, 2013; Lent & Brown, 2006a; Lent & Brown, 2008).

SCCT draws on the developments made by both organisational and vocational psychologists, and attempts to unify the two perspectives while also incorporating dispositional and situational approaches to understanding wellbeing at work. The initial process model proposed a series of causal relationships between predictor variables including: (a) personality and affective traits; (b) goal-relevant environmental supports, resources, and obstacles; (c) self-efficacy; (d) expected work conditions and outcomes; and (e) goals and goal-directed activity, and explained the direct and indirect influences these had on an individual's experience

of work satisfaction (Lent & Brown, 2006a). The SCCT Model of Job Satisfaction was then extended to include overall life satisfaction, which is theorised to share a reciprocal relationship with work satisfaction (Lent & Brown, 2008) (see Figure 2.1).

A majority of the studies examining the SCCT model of job satisfaction have explored its application in the university context, substituting job satisfaction for academic satisfaction (Section 2.2.1). Discussion of the SCCT model is then extended to include job satisfaction in general (Section 2.2.2) and then more specifically job satisfaction in agriculture (Section 2.2.3).

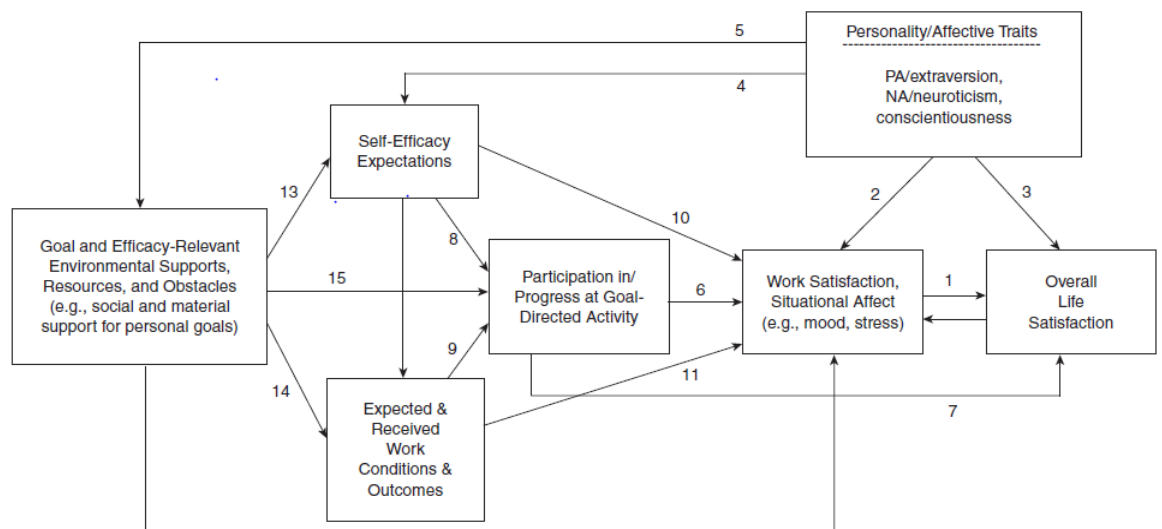


Figure 2.1. A process model of work satisfaction. This model highlights theorised interrelations among personality, affective, cognitive, behavioural, and environmental variables. Reproduced with permission (Lent & Brown, 2008).

2.2.1 SCCT Model of Academic Satisfaction

Within the USA, studies of the SCCT have focused not only on college students as a general group, but sought to understand sub-cultures within the American college context including Mexican-American students (Ojeda, Flores, & Navarro, 2011), African students (Ezeofor & Lent, 2014), and Asian-American students (Hui, Lent, & Miller, 2013). Testing of the model according to academic major has focused on understanding the experiences of engineering students (Lent, Singley, Sheu, Schmidt, & Schmidt, 2007; Lent et al., 2013; Navarro, Flores, Lee, & Gonzalez, 2014). Outside of the USA, the complete model has been tested in student samples from Singapore and Taiwan, (Sheu, Chong, Chen, & Lin, 2014), China (Sheu, Liu, & Li, 2017), Portugal (Lent, Taveira, Sheu, & Singley, 2009; Lent, Taveira, & Lobo, 2012), Spain (Lent et al., 2017), Angola and Mozambique (Lent et al., 2014). Overall, testing of the model has shown the relationships among

the predictor variables are applicable to diverse cultures in the university context, accounting for between 33% and 69% of the variance in academic satisfaction (Lent et al., 2017; Lent et al., 2014; Lent et al., 2007; Lent et al., 2012; Ojeda, 2009). It is worth noting that some studies have included a pathway from personality to goals and goal-directed activity which, while not previously theorised in the original SCCT model of academic/work satisfaction, is considered a conceptually sound inclusion and improved the model fit (Lent et al., 2017). Interestingly, one of the few longitudinal studies that has been conducted on the wellbeing model, found the relationship between academic satisfaction and life satisfaction to be unidimensional (Lent et al., 2012). This lends weight to the argument that the promotion of academic/work satisfaction is important for individual wellbeing as it acts as a source of overall life satisfaction.

2.2.2 SCCT Model of Job Satisfaction

Limited studies testing the SCCT model of job satisfaction have been conducted in the work context (Lent et al., 2011; Duffy & Lent, 2009; Badri, Mohaidat, Ferrandino, & El Mourad, 2013). Some studies have used SCCT to inform research, focusing on constructs such as self-efficacy coupled with context or population specific mediators, to examine workers' appraisals of job satisfaction (Chang & Edwards, 2015; Foley & Lytle, 2015; Abele & Spurk, 2009), but peer-reviewed journals have published few studies testing the full model to date. Three studies of the SCCT model of job satisfaction for teachers and one study of female engineers are notable exceptions and will be discussed.

Duffy and Lent (2009) first tested the SCCT model of job satisfaction in a sample of 366 teachers employed in the North Carolina Association of Independent Schools. Overall the six factor solution demonstrated good fit to the data and predicted 75% of the variance in work satisfaction. Positive affect, self-efficacy and work conditions (measured as Perceived Organisational Support [POS]) showed direct paths to work satisfaction. While goal progress and goal support both were significantly correlated with work satisfaction, they were not unique predictors of work satisfaction within the model. Goal support did produce indirect paths to job satisfaction through work conditions (measured as POS). The non-significant relationship between goal progress and work satisfaction may be a result of only capturing participants' perceptions of progress at one (their most important) goal,

when work satisfaction may be more highly impacted by overall progress at a range of valued goals.

Lent et al. (2011) examined the cross-cultural application of the SCCT Model of work satisfaction and wellbeing, testing the application of the theory in a sample of Italian school teachers. Their analysis predicted 41% of the variance in job satisfaction with different results observed for the direct paths in the model. Consistent with Duffy and Lent (2009), positive affect and work conditions (measured as POS) directly predicted job satisfaction. The only other direct predictor was efficacy-relevant support, which unlike goal support in prior studies of the SCCT, accounted for unique variance in job satisfaction. Interestingly efficacy-relevant support, similar to studies of goal support, did not predict task self-efficacy, instead relating strongly to POS. That self-efficacy only influenced job satisfaction through work conditions (POS) may be an indicator that in the real world context, it is not enough to feel confident in one's abilities but the work context needs to be accommodating and supportive for individuals to experience job satisfaction. Again, goal progress, this time measuring multiple relevant teaching goals, did not add any significant influence to the prediction of job satisfaction.

Badri et al.'s (2013) study of 5022 teachers in the United Arab Emirates found further cross-cultural support for the SCCT Model of Job Satisfaction, predicting 82% of the variance observed in job satisfaction, but with some specific differences in terms of the hypothesised direct paths in the model. Positive affect, goal progress, and work conditions all directly predicted work satisfaction. As with Lent et al.'s (2011) study, self-efficacy did not account for any unique variance in work satisfaction but was an indirect predictor through work conditions (measured as a combination of POS, Person-Environment fit and Needs-Supplies fit). In contrast to Lent et al.'s (2011) findings, self-efficacy also had an indirect effect on job satisfaction through goal progress. The explanation offered; that teachers who feel confident in performing their work tasks, may not be satisfied in their jobs unless they feel they are making progress towards their goals; is sound, but the failure to include a description of the measures used to capture self-efficacy scores limits the critical evaluation of the findings. No direct path was observed between goal support and job satisfaction and, while little analysis is offered of the results for this non-significant relationship, it is consistent with the findings of Duffy and Lent (2009). There is some confusion in the discussion of results with the terms perceived

organizational support (POS) and goal support used interchangeably even though these are two distinct psychological constructs. Reviewing the methods section, the Survey of Perceived Organizational Support – Short Form (SPOS; Eisenberger, Huntington, Hutchison, & Sowa, 1986) was used to capture some of the data for work conditions in this study. That perceptions of goal support would indirectly affect job satisfaction through work conditions (partially measured as POS) is evident in the research findings and consistent with the literature (Duffy & Lent).

Singh, Fouad, Fitzpatrick, Liu, Cappaert, and Figueredo (2013) explored female engineers' intentions to leave their current employer, in a sample of 2042 women employed in the profession. The study modified the SCCT model of job satisfaction, adding a measure of organisational commitment, which along with job satisfaction loaded onto the latent variable of job attitudes. The personality factor was not included, instead the model was extended to test the predictive ability of job attitudes on turnover intentions. Similar to Lent et al. (2011) and Badri et al. (2013), no direct relationship was observed between task self-efficacy and job attitudes, only an indirect relationship through task achievement outcome expectations. While the percentage of variance in turnover intentions predicted by the model was not reported, the significant pathway from job attitudes to turnover intentions was indicative of the strong relationship between feeling satisfied at work and reduced intentions to leave their job that exists for the participants.

Overall support for the SCCT Model of job satisfaction indicates the potential for this theory to be adapted and useful in diverse cultural contexts and professions. That different results were found for the paths of the SCCT model of job satisfaction, even within the same profession, strengthens the rationale for continued testing of this theory to determine what may be generalisable from the literature and what may be unique to a particular setting or group of people. It also allows for the review of potential measures used to capture the data and exploration of different operationalisations of the broad SCCT theoretical constructs. These are important considerations when seeking to use evidence to tailor potential career development interventions to new contexts such as Australian agriculture and more specifically cotton farms.

2.2.3 SCCT in Agriculture

The few studies on the agricultural professions that mention SCCT were mainly focused on the career choice outcomes made by participants as opposed to

the outcome of job satisfaction. Furthermore, the application of theory was used in varying degrees to inform research design or discuss results. Only one study demonstrated rigorous quantitative testing of the SCCT adapting the constructs of the choice model to understand career exploration behaviours of African-American agricultural science undergraduate students (Ding, 2015). Two studies used SCCT to underpin their investigation of agricultural education for urban USA high school students (Henry, Talbert & Morris, 2014; Frazee, Wingenbach, Rutherford, & Wolfskill, 2011). Two of the studies used SCCT to understand the career choices made by university students enrolled in agricultural science degrees with particular attention paid to outcome expectations (Turner & Hawkins, 2014; Li, 2015). One study conducted in the farm work context used a range of career development theories, briefly mentioning SCCT in a broader attempt to theorise the Australian farm hand career (Moffatt, 2016). The three studies conducted on university students' career exploration behaviours, influences, and aspirations capture data for people on the verge of entering the agricultural industry, and will now be further evaluated for relevancy to the current research project. Moffatt's (2016) study is also of particular interest as the research participants are from the Australian cotton industry.

Turner and Hawkins (2014) used SCCT to explore the career choices of Australian agricultural science university students. Using thematic analysis to interpret interview responses, they found that students changed their career preference to agriculture based on increased understanding of the career outcomes on offer in the agriculture industry. The outcome expectations of the students were changed through direct exposure to agricultural work environments and the positive experiences had as a result of work experiences that were (a) holistic in nature, demonstrating the extent of potential careers offered through the agricultural supply chain, and (b) emphasised the science and technical skill that underpins successful farm production. Past negative work experiences that limited the scope of what was involved with a career, or the absence of agriculture from career information during high school damaged the perception of agricultural careers as requiring an extensive knowledge base and providing rewarding work. The findings suggested that students' outcome expectations were flexible and farmers that offered positive workplace experiences were able to affect and change an individual's outcome expectations. This study used the SCCT in terms of choice in that work placement

environmental supports and adjusted outcome expectations solidified a student's decision to complete an agricultural science degree.

Li (2015) investigated the career motivations of Chinese agriculture students in attempting to understand the attraction and retention of them to farm manager positions on large dairy farms in China. The SCCT underpinned the mixed-methods study of job choice upon graduation with a focus on outcome expectations. This construct was operationalised by both measuring expectations of work conditions, and work values. Expectations that the job would offer opportunities for career growth and stability of employment were related to higher likelihood of choosing this job. Those that expected to gain work that reflected social dignity, offered high payment, and was located in a developed region were less likely to choose the farm manager job. Students' concerns that large farms were remote and removed from society, and that finding a romantic partner would be difficult illustrates consideration of the lifestyle that this choice of job would offer. Furthermore, illustrating the relationship of volition in appraisals of job choice, students who enrolled in an agricultural related degree by choice were more likely to choose a farm manager job.

Ding (2015) tested a comprehensive SCCT model incorporating person inputs (instrumentality/expressivity), environmental supports (social supports), self-efficacy (career decision making self-efficacy and coping efficacy), outcome expectations (positive outcomes after graduation), interests (interest in maths/science activities), and goals (commitment to complete an agricultural degree), which all either directly or indirectly predicted career exploration behaviours relating to career choices (self-exploration and environmental exploration). In a sample of 313 African-American agricultural science students, the SCCT model was able to predict 54.3% of the variance in the participants' career exploratory behaviours informing career choices. They found that instrumentality traits such as perceived tendencies to be independent, competitive and decisive were related to greater self-efficacy which was then consequently predictive of stronger interests in mathematics/science and increased engagement in career exploratory behaviours. Social support was the only direct predictor of degree goals. Interestingly, outcome expectations was not a significant predictor of degree goals. This was unexpected, especially when considering Turner and Hawkins (2014) conclusions which emphasise the importance of outcome expectations on Australian university students' intention to

engage in goal directed activity by pursuing an agricultural science degree. However, the temporal order of the SCCT model of choice for Ding (2015) is different to the time order of the relationships explored in the Australian study, which analysed students' responses after they had already engaged in career exploratory behaviour that changed their outcome expectations. Through direct experiences with the agricultural sector, the students developed a greater understanding of positive and realistically attainable career outcomes and in this way outcome expectations influenced the students' degree goals. Ding's (2015) analysis of the qualitative open response questions supports the perceived importance of positive career outcomes, finding it to be the second most frequent factor (behind mentor availability) considered helpful for pursuit of a STEM-intensive agricultural science degree.

In another qualitative analysis, Moffatt's (2016) research consisted of semi-structured interviews with eight employers (farmers) and five farm hands from the Australian cotton industry. It was found that self-efficacy, a core construct of the SCCT, was demonstrated by participants who returned to work as a farm hand after a career break or "gap year" in another industry. That these individuals felt confident in their ability to effectively perform the tasks required of a farm hand, and negotiate a return to previous job, proactively contacting a former employer, influenced their choice to re-enter the farm hand profession.

While Moffatt's (2016) study looked to career development theories other than SCCT in the analysis of farm hands' work experiences, findings from this research that report on the factors that influence retention of farm hands, including (a) participants' level of contentment, (b) appraisal of employer-employee relationships, and (c) work conditions, are salient to the current research. Similarly, there are career development studies which focus on the agriculture industry, or blue collar workers and have findings which may be useful for adapting SCCT to the agricultural context. In order to explore these aspects further it is necessary to investigate the role of the SCCT predictor constructs in relation to job satisfaction.

2.3 Theorising the SCCT Model of Farm Worker Job Satisfaction

Although previous studies of the cotton industry workforce and the Australian agricultural workforce have not used vocational psychology to investigate the current workforce attraction and retention issues, they do report results that can inform the current research. Furthermore, the international research literature on (a) farmers and farming careers, (b) careers that represent similar interests to those in

farming, and (c) blue collar workers may contain noteworthy findings. The relevance of this evidence will be discussed and integrated into the review of literature for each SCCT predictor construct including (a) personality traits and affective disposition (Section 2.3.1), (b) goal and efficacy-relevant environmental barriers, supports, and resources (Section 2.3.2), (c) self-efficacy (Section 2.3.3), (d) expected and received work conditions and outcomes (Section 2.3.4), and (e) goal activity and goal-directed behaviour (Section 2.3.5). From the literature, preliminary arguments will be made to operationalise the general SCCT Model of Job Satisfaction, adapting it for the cotton farm context. Further to this the construct of work volition will be introduced (in Section 2.3.7) and an argument built for the inclusion of this construct in the SCCT Model of Farm Worker Job Satisfaction.

2.3.1 Personality Traits and Affective Disposition

Personality Traits and Affective Disposition is positioned on the outside of the SCCT Model of Job Satisfaction (see Figure 2.2). It is theorised to directly affect individuals' appraisals of (a) goal and efficacy-relevant barriers, supports, and resources, (b) self-efficacy, and (c) job satisfaction.

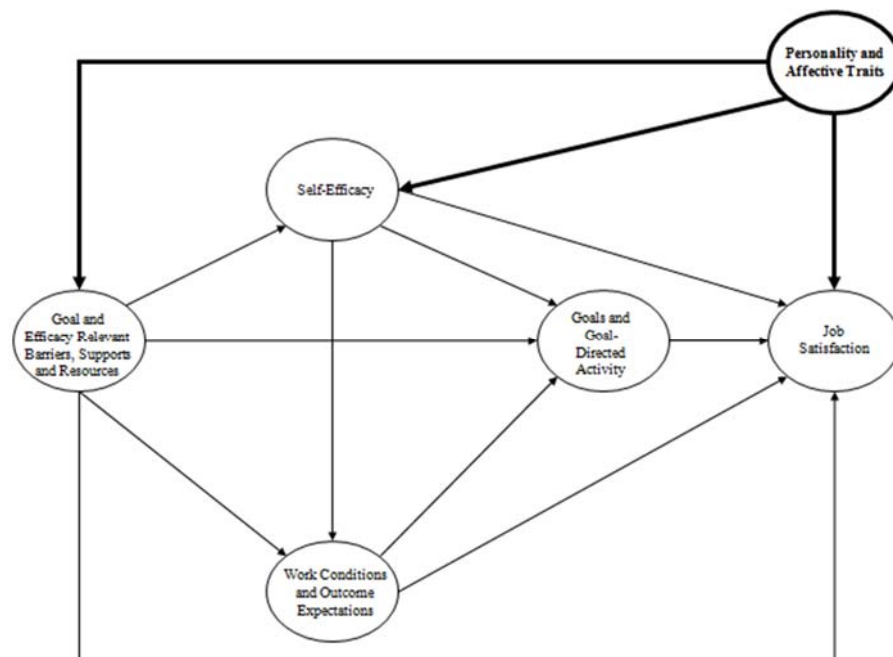


Figure 2.2 SCCT Model of Job Satisfaction. Bold paths highlight direct effects from Personality and Affective Traits. Adapted from “Social Cognitive Career Theory and Subjective Well-being in the Context of Work,” by R. W. Lent and S.D. Brown, 2008, *Journal of Career Assessment*, 16(1), p. 10. Copyright 2008 The Authors.

Personality is defined as a collection of stable traits that represent “endogenous basic tendencies of thinking, feeling, and acting that are shaped largely by biology and lead to characteristic ways of adapting to the different environmental setting in which individuals interact” (Brown & Hirschi, 2013, p. 300). They are characteristic of a person’s “enduring emotional, interpersonal, experiential, attitudinal, and/or motivational style” (McCrae & Costa, 1989, as cited in Mount, Barrick, Scullen, & Rounds, 2005, p. 448). The lack of a universal framework describing the structure and nature of personality has seen many proposed dispositional traits studied in relation to job satisfaction (Judge et al., 2002). A meta-analysis of the stability of job satisfaction found that even though work environment does impact levels of satisfaction, ratings of job satisfaction remain relatively stable across time which suggests that there is a dispositional influence on job satisfaction (Dormann & Zapf, 2001). The following review of the literature will firstly examine personality and affective traits in past SCCT studies of academic and job satisfaction.

Past SCCT research into academic satisfaction has explored the following personality and affective traits: (a) positive affect (Ojeda et al., 2011; Lent et al., 2012), (b) extraversion (Sheu, et al., 2017), (c) emotional stability (Sheu et al., 2014), (d) self-construal (Ezeofor & Lent, 2014), and (e) instrumentality (Navarro et al., 2014). SCCT research into work satisfaction has focused on positive affect (Duffy & Lent, 2009), with one exception that examined the personality traits of (a) extraversion, (b) conscientiousness, and (c) neuroticism (Foley & Lytle, 2015). The operationalisation of the personality and affective trait construct appears to be either (a) selected from the Five Factor Model (FFM) of Personality or operationalised as trait Positive/Negative affect, both well-established generalizable constructs within the academic literature, or (b) selected to tap into culturally and context specific aspects of personality that are relevant to the population of interest; for example, the personality trait of self-construal seems to be applied in situations where the SCCT is being adapted to a population that may experience competing collectivist and individualistic cultural influences (Sheu et al., 2014; Ezeofor & Lent, 2014).

For the purposes of understanding personality in relation to job satisfaction of agricultural workers, a review of personality, affective traits and job satisfaction will be narrowed to the Five-Factor Model of Personality (extraversion, neuroticism, openness to experience, agreeableness and conscientiousness) and the dimensions of

Positive and Negative affect. Distinctive patterns of personality traits for Holland's (1997) Realistic interest type will also be considered. Where possible, literature related to the agricultural context will be drawn from to inform a discussion of these factors.

The Five-Factor Model of Personality (FFM) is considered a consistent conceptual framework for the sorting of numerous personality traits (Sackett, Lievens, Iddekinge, & Kuncel, 2017). It comprises of the following: (a) neuroticism, described as anxious, tense, self-conscious, and insecure; (b) extraversion, described as assertive, outgoing, enthusiastic and expressive; (c) openness to experience, described as imaginative, insightful, curious, and a wide range of interests; (d) agreeableness, described as considerate, trusting, generous, sympathetic and warm; and (e) conscientiousness, described as efficient, organised, dependable, self-disciplined, and responsible (McCrae & John, 1992). The FFM has demonstrated generalisability across measures, cultures, and with ratings from different sources (McCrae & John, 1992). A meta-analysis investigating the relationship between the big five framework of personality and job satisfaction found that traits of neuroticism, extraversion and conscientiousness displayed moderate correlations with job satisfaction (Judge et al., 2002). These results indicate that individuals who are emotionally adaptive (low on neuroticism), sociable and assertive, and who commit to and are involved in their work tasks are more likely to report experiencing job satisfaction. Studies on the SCCT model have also shown extraversion to be related to environmental supports and resources, self-efficacy, and academic satisfaction (Lent et al., 2005). To better understand the impacts personality may have on job satisfaction for farm workers the literature on personality in realistic interest types, and personality in agricultural workers will now be reviewed.

Studies have investigated the relationship between the Five-Factor Model of Personality and occupation interest using Holland's (1997) typography of vocational interests which categorises job interests into six categories: realistic, investigative, artistic, social, enterprising, and conventional (i.e., RIASEC). On-farm jobs fall into the Realistic category which is characterised by an interest in mechanical, manual, physical, and athletic tasks (Nauta, 2013). The link to job satisfaction is made in Holland's (1997) Person-Environment (P-E) fit theory's assertion that an individual's job satisfaction and turnover intentions depend on the level of congruence between an individual's personal preferences and the work environment.

Support for this proposition was found in Duffy and Lent's (2009) test of the SCCT Model of Job Satisfaction when measures of fit (Person-Organisation fit and Needs-Supplies fit) were found to load onto the same latent construct as job satisfaction.

A meta-analysis of 24 samples found no meaningful prediction of personality factors on those who are drawn to pursue work that is representative of Realistic types (Larson, Rottinghaus, and Borgen, 2002). This finding was replicated in a later meta-analysis of 46 independent samples (Mount et al., 2005). However, Larson et al. included a break-down of the relationship between interest type and personality by gender which showed a slightly positive relationship between Realistic interests and Openness to Experience for women with a minimal correlation for men. Weirnik (2016) conducted a more in depth study of the relationship between personality and realistic profession by (a) splitting occupations in either realistic-production interests (e.g. trades, farming and forestry, animal care) or realistic-adventuring interests (e.g. military officer, ski instructor, athletics coach) and (b) distinguishing between the NEO Personality Inventory – Revised (NEO-PI R; Costa & McCrae, 1992) and the Hogan Personality Inventory (HPI; Hogan & Hogan, 1992) in their analysis. Along with examining absolute values for personality traits, they inspected the personality profile for these interests. The intellect aspect of openness to experience, as opposed to the experience aspect was found to be elevated in personality profile patterns for individuals with interests in the production professions that fall into the realistic category in Holland's typography of work. Realistic-production occupations also were low in Extraversion. This indicates that people who are interested in these careers generally show an interest in problem-solving (high Openness to Experience – Intellect), prefer to work alone with little social interaction (lower Extraversion - Sociability), and are not interested in formal education (lower Openness to Experience – School Success). When further investigating for nuances by profession, the personality profile for farming/forestry occupations showed a flatter pattern suggesting that personality is not as important a factor in driving interest in this industry compared to other realistic-producing professions such as mechanical or woodworking trades. Consequently, personality may not be a strong indicator of fit in agriculture and by association, not predictive of job satisfaction for farm workers.

One of the few studies that have focused on personality in agriculture is not related to job satisfaction but goal-directed behaviour. In a study of Scottish farmers, it was found the characteristics of extraversion, openness to experience, and

conscientiousness were positively related to production and environment oriented behaviour of farmers (Austin, Deary & Willock, 2001). This indicates that farmers that are higher in traits associated with being active and assertive, thorough and resourceful, and enquiring and perceptive are more likely to efficiently run their farming business, and make decisions taking into account conservation aspects of land stewardship.

When considering the information about personality in relationship to the current research project, while Openness to experience was not a significant contributor to job satisfaction in the Judge et al. (2002) meta-analysis and was not as pronounced a factor for farm workers compared to other realistic-production occupations, it was a significant predictor of farmers' (employers) goal-oriented behaviour which may similarly be an adaptive trait for farm workers. Being open to new experiences and seeking opportunities for growth may be of importance for cotton farm workers, where technological and scientific advances have seen the industry workforce requirements change from unskilled to skilled, and a failure to be willing to learn and adapt to these workplace changes could affect job satisfaction levels (Nettle et al., 2013). However, personality is only one part of the dispositional inputs theorised to predict the social-cognitive factors and the outcome of job satisfaction in the SCCT Model of Job Satisfaction. The literature on the second domain of the disposition predictor factor, affective traits, and relevancy for the farming context, is now considered.

Affective disposition is composed of two facets: positive affect (PA) which is associated with a tendency to experience positive emotions (including enthusiasm and alertness) and negative affect (NA) which is associated with a tendency to experience negative emotions (including distress and anger). Theorists have linked PA to the personality trait of extraversion and NA to the personality trait of neuroticism (Watson, Clark, & Tellegen, 1988). A meta-analysis of 27 studies investigating the role of affectivity in job satisfaction found PA to be positively correlated with job satisfaction, and NA to be negatively correlated with job satisfaction, and estimated that affect can account for between 10-25% of variance in job satisfaction (Connolly & Viswesvaran, 2000). It has been proposed that people who are high on NA generally perceive their environment and interactions negatively and those high on PA generally perceive their environment and interactions positively. This may explain the relationship that PA has been shown to

have with environmental supports and resources, self-efficacy, and academic/job satisfaction appraisal in tests of the SCCT model of academic/job satisfaction (Lent et al., 2005; Duffy & Lent, 2009; Lent et al., 2014).

Positive and negative affect has been studied in the Australian agricultural context particularly in research on farmers' mental health. Australian farmers and farm workers have been found to report higher positive affect than a comparable sample of other people living in rural locations (Judd et al., 2006). Remaining positive and optimistic in the face of challenging circumstances was a conscious coping strategy used (Greenhill, King, Lane, & MacDougall, 2009). Expression of negative thoughts or "whinging" was frowned upon amongst the farming community (Judd et al., 2006). This culture of positivity or "she'll be right mate"¹ attitude from farmers, may influence farm workers public displays of affect in the workplace. The observed higher presence of PA in farmers could also be the result of self-selective exiting of the industry. Those that do not possess a tendency towards positive mood may find it difficult to sustain continued engagement in farming activities when experiencing adverse conditions, exiting to reduce work stress and maintain mental health.

In summary, personality, as operationalised as the FFM, would seem to have potentially little influence in predicting interest in farming and while certain traits are related and potentially influence farmer's business decisions, little is known about the impacts of personality on job attitudes and behaviours for Australian farm workers. The elevated levels of PA for Australian farmers and farm workers compared to the general population are interesting, in that it would seem to be an influential trait on adaptive coping in tough work conditions. This evidence is promising in terms of looking for potential personality and affective traits that will be important to adapting the SCCT Model of job satisfaction to the Australian agricultural context.

2.3.2 Goal and Efficacy-Relevant Environmental Barriers, Supports, and Resources

Goal and efficacy-relevant environmental barriers, supports and resources are positioned on the outside of the SCCT Model of Job Satisfaction (see Figure 2.3).

¹ "she'll be right mate" is a colloquial expression indicating an optimistic outlook while experiencing a less than ideal situation

This construct proposes to capture the contextual affordances that have a direct relationship to an individual's (a) self-efficacy, (b) expected and received work conditions and outcomes, (c) goals and goal-directed activity, and (d) job satisfaction.

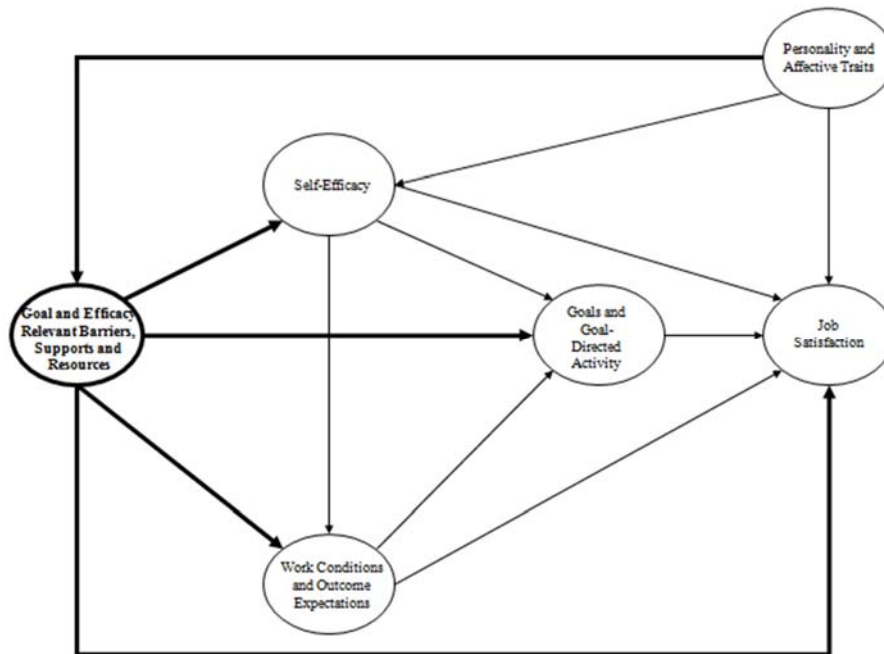


Figure 2.3 SCCT Model of Job Satisfaction. Bold path highlights direct paths to and from Goal and Efficacy Relevant Barriers, Supports, and Resources. Adapted from “Social Cognitive Career Theory and Subjective Well-being in the Context of Work,” by R.W. Lent and S.D. Brown, 2008, *Journal of Career Assessment*, 16(1), p. 10. Copyright 2008 The Authors

Goal and Efficacy Relevant Environmental Barriers, Supports, and Resources, is defined as social and material support which removes obstacles to promote progress at goal directed activity and increase job satisfaction (Lent & Brown, 2006a). It has been theorised that individuals develop self-efficacy from four sources, identified by Bandura (1977) as: (a) past performance accomplishments, (b) vicarious experiences, (c) verbal persuasion, and (d) physical and emotional arousal. The effectiveness of modelling and verbal persuasion as supports for self-efficacy is particularly encouraging as they can act as protective factors if past performance experiences are less than ideal (Bandura, 2012). People employed in workplaces where (a) they receive adequate training opportunities, (b) the employer or team mates provide good examples for the modelling of ideal job performance, and (c)

they receive encouragement and regular and specific feedback on performance, are likely to feel more self-efficacious in their ability to carry out their work tasks and supported in their pursuit of goals (Bandura, 1997; Lent & Brown, 2006a).

Past research examining SCCT predictors of academic satisfaction has operationalised Goal and Efficacy Relevant Environmental Barriers, Supports, and Resources as academic supports, and acculturation and enculturation. Considerable differences exist in the results across different studies for the relationship between academic support and academic satisfaction. For students in Singapore, academic support was the strongest direct predictor of academic satisfaction, the impact of which potentially reduced the direct effect of academic goal progress on academic satisfaction to non-significance (Sheu et al., 2014). Alternatively, for African students enrolled at an American university, academic support had no direct effect on academic satisfaction, only impacting indirectly through academic self-efficacy and academic outcome expectations. These seemingly polar opposite observations justify the continued necessity for testing the SCCT models for replicability across different samples and contexts.

Research on the SCCT Model of Job Satisfaction have operationalised Goal and Efficacy Relevant Environmental Barriers, Supports, and Resources as (a) goal support (measure modified from the marital partner goal support scale), and (b) efficacy development support. In the few studies conducted with employed adults, goal support and efficacy support had no direct relationship with job satisfaction. Interestingly they both had strong significant relationships with perceived organisational support (POS), which had been positioned in the model as a measure of work conditions. These studies were cross-sectional, meaning that the path from goal support or efficacy support to POS is directional in theory only, and means it is possible to interpret this relationship the opposite way. That an individual feeling valued by their organisation and that their personal wellbeing mattered to their organisation (POS) was so strongly associated with perceptions of goal support and efficacy support perhaps is indicative that a generally supportive and caring organisation is also one that will provide a learning context that gives workers the ability to reach their potential in both skills and performance.

The current study will not conceptualise POS as a measure of work conditions, but argues it may be used to operationalise the Goal and Efficacy Relevant Environmental Barriers, Supports, and Resources construct within the

SCCT Model of Job Satisfaction. POS is defined as the “employees’ general belief that their work organization values their contribution and cares about their well-being” (Rhoades & Eisenberger, 2002, p. 698). It has been suggested that workplace rewards and favourable job conditions which are above and beyond industry standards contribute to increase POS (Eisenberger et al., 1986, as cited in Rhoades & Eisenberger, 2002).

A review of 73 studies consistently found a moderate to large association between POS and job satisfaction (Rhoades & Eisenberger, 2002). It is proposed that perceptions that the workplace is supportive affect job satisfaction indirectly by increasing positive outcome expectations, self-efficacy, promoting value congruence and employee engagement. Previous research has found that: (a) employees that feel supported and valued are more likely to expect they will be rewarded for their efforts and feel they can seek assistance or aid when attempting challenging tasks, (b) employees who perceive that a work-place cares about their socio-emotional wellbeing are also more likely to then assimilate and identify with the dominant values of the workplace, and (c) employees’ perceptions of support were moderately related to greater job involvement (Rhoades & Eisenberger, 2002; Panaccio & Vandenberghe, 2009).

In considering the construct of POS with respect to the current research project, the term organisation is theorised to be the cotton farm, and supervisor/employer to be the cotton grower. Recent research on employee turnover on cotton farms sought to understand the different approaches that cotton growers had in terms of managing their workforce (Kuehne, Lee, Nettle, & Armstrong, 2016). Three distinct workforce world views held by growers were identified, including: (a) “get the job done” – a transactional arrangement which views money exchanged for work output, (b) “look after people” – aims to meet the needs of staff to motivate performance, and (c) “get the best people” – aims to identify workers that are the best fit with the farm culture and goals. Each approach had benefits, risks, and consequences, but in terms of support for staff, those that prioritised to “look after people” and “get the best people” focused on retention strategies that align with the dimensions of POS. These growers: (a) provided training opportunities for staff, (b) encouraged good relationships amongst workers, (c) gave feedback rewards, (d) enabled autonomy in task performance, and (e) encouraged a

sense of ownership in the farming business. The relationship of these approaches on workers reports of POS and work engagement were not reported.

With regards to the employee perspective, anecdotal evidence from cotton farm workers indicates that rewards, such as above award wage pay, are valued but not over and above a respectful working relationship with their employers and working conditions which include flexible work hours and adequate family time (Nettle et al., 2013). In a study of USA seasonal farm workers, it was found that farmers increased employee retention rates when they invested funds in improving work benefits and conditions (e.g. health care, paid leave) rather than increased wages (Gabbard & Perloff, 1997). These findings would indicate that implementation of incentives which take into account an employee's overall wellbeing increases POS and in turn farm workers satisfaction. It has also been theorised that farm owners who value their employees' wellbeing are also concerned for their safety at work. These attitudes characterise a positive safety climate which has been shown to lead to young farm workers being more open about communicating workplace errors (Cigularov, Chen & Stallones, 2009). Cotton farm workers (many who are inexperienced) who feel supported in the workplace may be more likely to discuss potentially hazardous errors made, allowing these mistakes to be reframed as learning opportunities, which could help protect their sense of self-efficacy, and contribute to their experience of job satisfaction.

In summary, POS, while not a direct indicator of self-efficacy or goals support, is nevertheless an appraisal of environmental supports that promote employee job satisfaction. High appraisals of POS are likely to be associated with growers/farmers that believe in looking after people and getting the best people; and the workforce strategies used by these growers support the development of staff self-efficacy and fit with the farm culture (Kuehne et al., 2016). It is therefore argued that goals and efficacy-relevant environmental barriers, supports, and resources will be operationalised as POS for the SCCT Model of Farm Worker Job Satisfaction.

2.3.3 Self-Efficacy

Self-efficacy is one of the core constructs of the SCCT (see Figure 2.4). The SCCT Model of Job Satisfaction proposes that self-efficacy directly predicts (a) expected and received work conditions and outcome expectations, (c) goal progress and goal-directed activity, and (d) job satisfaction.

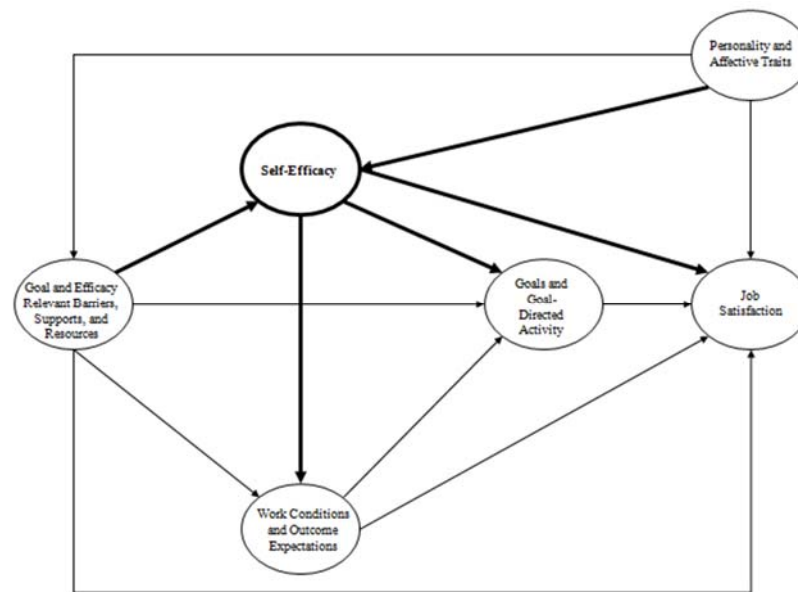


Figure 2.4 SCCT Model of Job Satisfaction. Bold path highlights direct paths to and from Self-efficacy. Adapted from “Social Cognitive Career Theory and Subjective Well-being in the Context of Work,” by R.W. Lent and S.D. Brown, 2008, *Journal of Career Assessment*, 16(1), p. 10. Copyright 2008 The Authors

Self-efficacy refers to the belief and conviction that one has in their ability to carry out specific behaviours or tasks in an effort to attain a designated performance goal (Bandura, 1977). Self-efficacy has been widely studied in the workplace and has been found to significantly predict work performance and job satisfaction (Stajkovic & Luthans, 1998; Judge & Bono, 2001; Chen, Goddard, & Casper, 2004). However, some have claimed that the overall predictive influence of self-efficacy on work performance, compared to other individual difference factors such as personality, is small (Judge, Jackson, Shaw, Scott, & Rich, 2007). Interestingly, in a study conducted across a number of occupations, it was found that farmers were one of the few professions in which occupational self-efficacy had a direct effect on job satisfaction above and beyond personality factors (Maggiori, Johnston, & Rossier, 2016).

SCCT studies of academic satisfaction have measured (a) academic performance self-efficacy, (b) self-efficacy for coping with barriers to academic success and (c) social self-efficacy (Lent et al., 2005). These have consistently demonstrated support for the hypothesised direct pathway from self-efficacy to goal-directed activity and from self-efficacy to satisfaction with academic major. SCCT

studies of work satisfaction have measured (a) goal achievement self-efficacy, (b) generalised self-efficacy for job performance, and (c) occupational task self-efficacy (Duffy & Lent, 2009). The SCCT job satisfaction studies have consistently found a positive relationship between teacher self-efficacy and goals and goal-directed activity. In tests of the SCCT Model of Job Satisfaction, mixed results have been found for the direct pathway between teacher self-efficacy and job satisfaction, and no direct pathway was found between engineering task self-efficacy and the attitudes of job satisfaction and organisational commitment. More consistent is the indirect relationship of self-efficacy with job satisfaction through the work conditions and outcome expectations experienced by both engineers and teachers. This potentially indicates that feeling confident to perform job tasks may only lead to job satisfaction if coupled with perceptions that the work environment is supportive, recognising an individual's contributions and rewarding their efficacious efforts (Duffy & Lent; Lent et al., 2011; Badri et al., 2013; Singh et al., 2013). In the one SCCT study that used all three different self-efficacy measures, it was occupational task self-efficacy that showed the strongest correlations with job satisfaction, perceived organisational support, person-organisation fit, and needs-supplies fit (Duffy & Lent). In delimiting the current study, the literature review focus will be on task self-efficacy.

Theorists argue that high self-efficacy promotes goal-directed activity and this relationship is at the core of social cognitive theory and social cognitive career theory (Bandura, 1997; Lent, Brown, & Hackett, 1994). It is thought that those with low self-efficacy may view tasks as impossible and see little point in dedicating effort to the task, leading to the perceived inevitable failure to succeed in task performance. While those with high self-efficacy view tasks as achievable challenges that they persistently approach in pursuit of task performance success. However, some recent research challenges the dominant view that self-efficacy consistently exerts a positive influence on performance and job satisfaction (Schmidt & DeShon, 2010; Duffy, Bott, Torrey, & Webster, 2013). Studies have found that high self-efficacy can result in poorer performance and propose that this occurs when individuals who have inflated self-efficacy underestimate what is required to achieve task performance goals and consequently are not motivated to exert effort in pursuit of goals (Vancouver, Thompson, & Williams, 2001; Vancouver, Thompson, Tischner, & Putka, 2002). For those who are limited by constraints to take any job they can get and who feel a low sense of volition in their career choices, the more

self-efficacious at work they are, the lower their sense of job satisfaction (Duffy, Bott, Torrey et al., 2013).

Bandura (2012) has been critical of the body of work by Vancouver et al. (2001, 2002) arguing that insufficient measures and research design renders the findings of the studies of little use in understanding the complexities of self-efficacy's motivational function. Vancouver (2012) responded pointing out the misrepresentation in Bandura's editorial asserting that research on the negative self-efficacy effect does not equate self-efficacy as self-debilitating; pointing out the effect that low self-efficacy can have in mobilising an individual's efforts towards goal achievement. This academic sparring, while making for interesting reading, illustrates the potential complex nature of self-efficacy on goal selection, effort, goal behaviours, and task performance. In terms of relevance to the current study, the conclusion of Judge et al. (2007), that "self-efficacy matters in some conditions but not in others" (p.116) highlights the need to understand the influence of context and situational factors, that may be present on cotton farms. Two factors that may impact the relationship of self-efficacy with goal-directed activity and performance are task complexity and performance ambiguity.

With regards to task self-efficacy, task complexity was found to partially moderate the relationship between self-efficacy and work performance such that the more complex the task the weaker the relationship to performance (Stajkovic & Luthans, 1998; Judge et al., 2007). It may be for complex tasks, the confidence to achieve the desired outcome is not enough to do so, but a sufficient level of competence is also required to reach optimal performance. Stajkovic and Luthan's meta-analysis also compared studies of the self-efficacy-performance relationships in laboratory settings vs. real world settings and found the relationship between these two variables significantly decreased in the naturalistic setting. There would appear to be other context specific influences on the performance of individuals above and beyond their task self-efficacy.

Other research has proposed that performance ambiguity (uncertainty in knowing how well one is doing) is an influential context condition which affects the positive or negative relationship of self-efficacy with performance (Vancouver et al., 2002). Schmidt and DeShon (2010) were able to demonstrate that high self-efficacy had a negative effect on performance when participants were unable to monitor their ongoing task progress against clear expectations for ideal performance.

Alternatively, when participants had a clear indication of what result they were aiming for in the task and could consequently bench mark their progress, high self-efficacy was positively related to their performance. This experimental study took place in a laboratory setting. As such, it is unclear whether the results are generalisable to the work context.

Past research has found that self-efficacy has contributed to cotton farm hands career choices and re-entry into the profession (Moffatt, 2016). It is argued that both the influence of task complexity and performance ambiguity have the potential to complicate the hypothesised direct pathways for self-efficacy in adapting the SCCT Model of Job Satisfaction to the cotton farm context. Firstly, the cotton industry, like other agricultural industries, is experiencing the rise of digital agriculture. Entry level jobs on farms are moving away from no or low skilled positions to semi-skilled positions, increasing in complexity depending on the worker's role (Agrifood Skills Solutions, 2015). While on the whole, technological advances and innovative practices are readily accepted by the industry there is still diversity among business structures (Cotton Australia, 2017). Some farms may have more complex approaches to work tasks than others. Furthermore, whether a task is considered complex could change depending on an individual's experience and actual skill level.

Adding to the challenge of understanding self-efficacy's role in goal-directed activity and job satisfaction is the potential for industry-wide variance in how farming businesses manage and train their staff. While there have been gains made in encouraging all cotton growers to adopt some measures which will help reduce role ambiguity, including providing clear position descriptions for employees, it is possible that some farm workers, could experience performance ambiguity (Cotton Australia, 2017; myBMP, 2017). Most job training happens on farm and is provided by growers and fellow workers (Agrifood Skills Solutions, 2015). The clarity of instruction given and communication of expectations is important, particularly for new entrants to the cotton farm workforce who may have little prior knowledge of the tasks they will perform, and backpackers who could experience language barriers if their English skills are not of a certain standard.

In summary, self-efficacy has had a mixed performance in the SCCT Model of Job Satisfaction, with the potential for factors such as task complexity and performance ambiguity to impact on the direct effects hypothesised. However, farm

worker task self-efficacy is considered important as the farm environment is one where learning to master tasks is essential for workers both new to farming and existing employees. It is expected that the more confident an individual is at their job, the more they would embrace their work conditions, and identify the expected outcomes as personally important. As yet, no measure of farm worker task self-efficacy exists and this will be developed specifically for the current study.

2.3.4 Work Conditions and Outcome Expectations

Expected and Received Work Conditions and Outcome Expectations are a core construct in the SCCT Model of Job Satisfaction (see Figure 2.5). Work conditions and outcome expectations are theorised to directly predict goal progress and goal directed-activity, and job satisfaction.

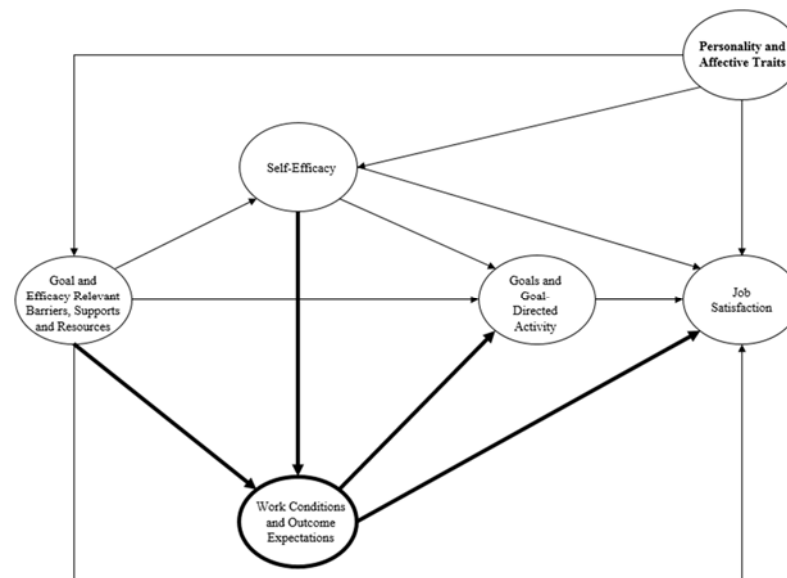


Figure 2.5 SCCT Model of Job Satisfaction. Bold path highlights direct paths to and from Work Conditions and Outcome Expectations. Adapted from “Social Cognitive Career Theory and Subjective Well-being in the Context of Work,” by R.W. Lent and S.D. Brown, 2008, *Journal of Career Assessment*, 16(1), p. 10. Copyright 2008 The Authors

Outcome expectations are defined as “personal beliefs about the consequences of performing particular behaviours” (Lent, Brown, & Hackett, 2000, p. 41). Outcome expectations are shaped by information received through past performance experiences, observational learning, social encouragement and

persuasion, and physiological and affective states and reactions (Lent & Brown, 2013). When theorising the SCCT Model of Job Satisfaction, work conditions was added to this construct with Lent and Brown (2006a) reasoning that along with outcomes, aspects of work characteristics, work values and expectancy-value beliefs are similar as they are elements of person-environment (P-E) fit which can predict job satisfaction.

Past studies on the SCCT with student populations have found mixed results for the relationship between expected positive outcomes that could result from obtaining an undergraduate degree with academic satisfaction (Lent et al., 2005; Ojeda, 2009; Lent et al., 2007). It is possible that the outcomes measured, such as future employment opportunities or potential income after graduating, were too distal to have an effect on present experience of academic satisfaction (Lent et al., 2007). Studies of the SCCT Model of Job Satisfaction have operationalised Expected and Received Work Conditions and Outcomes as (a) a measure of fit with the organisation (Person-Organisation fit [P-O fit], and Needs-Supplies fit [N-S fit]; Badri et al., 2013), (b) a measure of the workplace as supportive (POS; Duffy & Lent, 2009; Lent et al., 2011), and (c) task achievement outcome expectations (Singh et al., 2013). The research in these work contexts demonstrates a consistent relationship between Expected and Received Work Conditions and Outcomes and job satisfaction across the various operationalisations of the construct (Duffy & Lent; Lent et al.; Badri et al.; Singh et al.).

In adapting the SCCT Model of Job Satisfaction to the farming context, the current study limits the review of the literature on work conditions and outcome expectations to a review of person-environment (P-E) fit, and person-organisation (P-O) fit, specifically values congruence. The notion of “fit” in vocational psychology has been addressed in Holland’s (1997) theory of vocational choice and adjustment. It is proposed that people and environments can be classified as six model types: realistic, investigative, artistic, social, enterprising and conventional (RIASEC; Nauta, 2013). Research has found that person-environment (P-E) congruence is positively related to job satisfaction (Spokane, Meir, & Catalano, 2000). Person-organisation (P-O) fit is defined as “the compatibility between people and organizations that occurs when: (a) at least one entity provides what the other needs, or (b) they share similar fundamental characteristics, or (c) both” (Kristof, 1996, p. 4). The P-O fit construct found to impact the most on job satisfaction,

organisational commitment, and turnover intention, is value congruence (Verquer, Beehr, & Wagner, 2003; Hoffman, & Woehr, 2006).

Farm workers correspond to the realistic interest code, which is reflective of work involving mechanical, manual, physical and athletic tasks (O*NET OnLine, 2010; Nauta, 2013). No studies specifically examining the relationship between farm workers occupational interests and job satisfaction were found; but, a multi-occupational study examining the differences in interests for satisfied vs dissatisfied workers included two blue collar professions: production workers and carpenters (Rottinghaus, Hees, & Conrath, 2009). Unlike other occupational groups, there was no difference in interest scores for satisfied and dissatisfied production workers and only a small difference for carpenters indicating that other factors may be more influential on job satisfaction experiences for workers employed in these professions (Rottinghaus et al., 2009). There are a range of occupations which could be considered congruent for people who hold realistic interests. A search of the jobs listed for the realistic interest category on O*NET OnLine, shows these to include machine worker, cook, taxi driver, construction worker, and electrician, just to name a few. Each of these jobs, organisations and industries can differ in the values that determine important work outcomes. It is argued that using Holland's (1997) realistic theme to operationalise the work conditions and outcome expectations construct for the current study will be too broad to capture the level of desired specificity when investigating the farm work context.

SCCT describes the formation of outcome expectations through social learning. It is argued that social learning influences the level of importance attributed to particular values, and affects what an individual can then expect to gain from pursuing opportunities that reflect these values (Lent & Brown, 2013). Therefore, cognitions surrounding the formation of outcome expectations are not the sole question of "If I do this, what will happen?", but also "Do I value the possible outcomes?" When engaged in an occupation, the dominant values of the workplace determine the scope of possible outcomes and it is therefore proposed that the effect of outcome expectations on job satisfaction will be influenced by the level that an individual identifies with the workplace values. This type of fit is referred to as value congruence. Individuals who are value congruent possibly experience higher levels of job satisfaction as the reinforcers and potential expected outcomes of their work performance are personally important to them (Verquer et al., 2003).

Maybery, Crase, and Gullifer (2005) have found that the dominant values Australian farmers place on their landholdings can be categorised as economic, conservation, and lifestyle farming values. It is likely that individuals who identify with these economic, conservation and lifestyle values, perceive important outcomes of their jobs as related to (a) contributing to maximise profits, (b) leaving the land in better condition than when they found it, and (c) connecting to a desirable rural community. It is expected that in pursuit of these outcomes, farm workers experience states of work engagement and higher levels of job satisfaction. The conservation values aspect may be particularly important for younger people interested in the agriculture industry who are attracted to farming operations that use up-to-date science and technology in sustainable approaches to grow their crops and manage their land (Turner & Hawkins, 2014).

In summary, past studies of the SCCT Model of Job Satisfaction have operationalised the Expected and Received Work Conditions and Outcome Expectations construct as perceived organisational support ([POS]; Duffy & Lent, 2009; Lent et al., 2011). However, as the current study has positioned POS as a measure of Goal and Efficacy Relevant Environmental Barriers, Supports, and Resources, there is the opportunity to use a specific measure to capture the work conditions and outcome expectations for the farming context. At the core of this SCCT construct is the notion of occupational and organisational fit. Values congruence has been shown to be an important factor when individuals appraise their fit with their organisation. It is expected that the more a worker aligns with the dominant values of the farm, the more dedicated they would be in their pursuit of farm goals and the more satisfied they would be with their work. It is therefore proposed that the Expected and Received Work Conditions and Outcome Expectations construct is operationalised as farming values congruence for the SCCT Model of Farm Worker Job Satisfaction.

2.3.5 Participation in and Progress at Goal-Directed Activity

Goal progress and goal-directed activity is a core construct of the SCCT Model of Job Satisfaction (see Figure 2.6). It is theorised to directly impact job satisfaction and to mediate paths from the other predictor variables; including (a) goal and efficacy relevant barriers, supports, and resources, (b) self-efficacy, and (c) expected and received work conditions and outcome expectations; to job satisfaction.

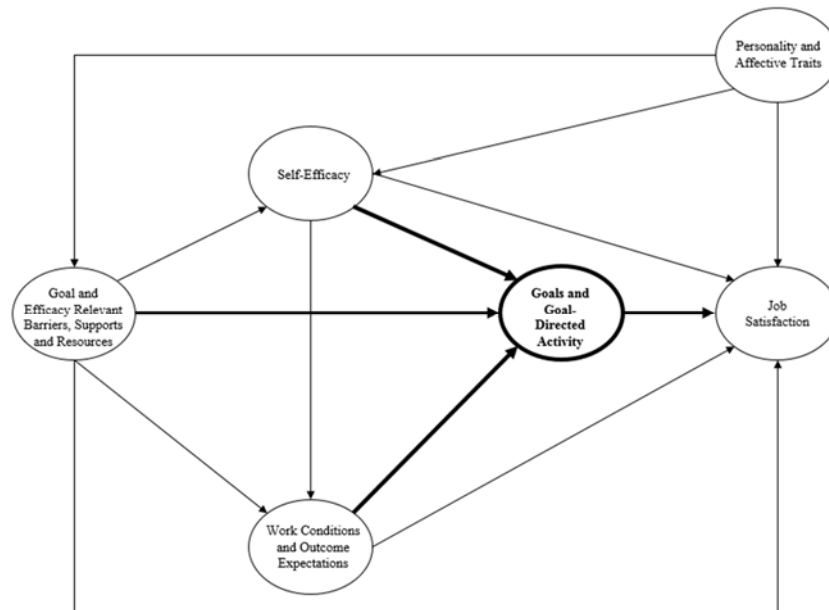


Figure 2.6 SCCT Model of Job Satisfaction. Bold path highlights direct paths to and from Goals and Goal-directed Activity. Adapted from “Social Cognitive Career Theory and Subjective Well-being in the Context of Work,” by R.W. Lent and S.D. Brown, 2008, *Journal of Career Assessment*, 16(1), p. 10. Copyright 2008 The Authors

Elliot, Sheldon, & Church (1997, as cited in Lent & Brown, 2008) define goals as “consciously articulated, personally relevant objectives” (p.915). Goals give people a focus for their actions and the progress made in goal attainment accounts for the behavioural influence on job satisfaction appraisals within SCCT (Lent & Brown, 2008). Goals are a core construct in social cognitive theory, which proposes that efficacy beliefs influence goal setting and that goals are more likely to mobilise individuals into action when they are (a) specific, (b) challenging, and (c) proximal in temporality (Bandura, 1997).

SCCT studies of academic satisfaction have operationalised participation in and progress at goals and goal-directed activity using items or adapted items from the academic goal progress scale used by Lent et al. (2005). These measured broadly relevant goals such as (a) actively participating in class, (b) comprehending and learning the course material, and (c) effective completion of assignments (Lent et al., 2014; Ezeofor & Lent, 2014; Sheu et al., 2017). Some studies also included social goal progress which measured developmentally appropriate social aspects of student life such as finding other people who can provide support in difficult times (Lent et

al., 2005; Hui et al., 2013). Progress at both of these goals significantly predicted academic satisfaction in student populations across cultures, gender and academic majors.

For the study of the SCCT Model of Job Satisfaction in a sample of teachers, Duffy & Lent (2009) operationalised participation in and progress at goals and goal-directed activity by asking participants to select their most important work-related goal and then respond to a series of general statements appraising their progress towards attainment of this personal work goal. Unexpectedly, the relationship from goal progress added no direct predictive value to the teachers' reports of job satisfaction when taking into account other predictors in the model. It was thought that consideration of a single goal, when people likely have multiple work goals, may have impacted the performance of the goal progress construct in the study. However, Badri et al. (2013) used a measure of single goal progress adapted from the Duffy and Lent (2009) study and were able to demonstrate a significant direct effect on job satisfaction. In Lent et al. (2011), ten common teaching goals were listed and teachers were asked to rate their progress on those that they felt were personally relevant. Yet again, there was no significant direct pathway from goal directed activity to job satisfaction but making progress at work goals was influential on overall life satisfaction. Goal directed activity was not included in Singh et al.'s (2013) SCCT study of engineers.

The mixed results observed for the importance of work goal progress in predicting job satisfaction raises the question of whether it is perceived progress that leads to job satisfaction, or is it potentially the sense of purpose derived when striving for goals and engaging in goal-directed activity? People have personal work goals for their careers and organisations have work goals for their businesses. The intersection of these goals is the difference between work goals becoming mechanisms of self-motivation or enforced mandates in the employee-organisational contract (Bandura, 1997). Work alignment, when the individual and organisational goals align, has been shown to be an antecedent of work engagement (Biggs, Brough, & Barbour, 2014). Work engagement describes the state of an individual when they personally invest their energy and attention in the performance of their daily work tasks (Christian, Garza, & Slaughter., 2011); it is a characteristic way of performing goal-directed activity. For the purpose of the current study, the focus of

the goal progress construct will be on goal-directed activity, and operationalised as work engagement.

Work engagement is defined as “a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption” (Schaufelli & Bakker, 2004a, p. 295). Vigour is characterised by high levels of energy, dedication refers to strong involvement in work characterised by enthusiasm and pride, and absorption is when an individual’s attention is concentrated such that they experience time quickly passing (Bakker, 2011; Schaufeli, Salanova, Gozalez-Roma, & Bakker, 2002). In this way work engagement is all encompassing as it proposes to embody the physical (vigour), affective (dedication), and cognitive (absorption) aspects that typify highly motivated work activity (Eldor, Harpaz, & Westman, 2016). Work engagement has been shown to be related to job satisfaction, job performance, and reduction in turnover intentions (Koyuncu, Burke, & Fiksenbaum, 2006; Yeh, 2013; Christian et al., 2011; Halbesleben, 2010). A majority of the work engagement literature has come from the field of organisational psychology and is underpinned by the job demands-resources (JD-R) model. The JD-R proposes that the accessibility and use of job resources and personal resources in the face of job demands help to motivate individuals at work to be highly engaged employees (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001, as cited in Bakker & Demerouti, 2007). A meta-analysis of antecedents of work engagement found that work demands such as work overload are negatively related to work engagement, and work resources including social support, autonomy, feedback, positive organisational climate and self-efficacy are positively related to work engagement (Halbesleben, 2010). An exploration of work engagement and the closely related concept of burnout, as well as the literature on work engagement in the cotton industry will inform consideration for the use of this construct to understand farm workers’ job satisfaction.

Work engagement has been considered the opposite of burnout, which is characterised by emotional exhaustion and cynicism (Demerouti & Bakker, 2008). Traditionally these constructs have been thought to be two ends of the one continuum, the vigour-exhaustion “energy” continuum and the dedication-cynicism “identity” continuum. Recent evidence however demonstrates that these are two distinct constructs, and that specifically vigour and exhaustion appear to develop over time independently of each other (Demerouti, Mostert, & Bakker, 2010;

Makikangas, Feldt, Kinnunen, & Tolvanen, 2012). Adding support to the argument that work engagement and burnout are distinct but related constructs was a recent study of the factor structure of the Utrecht Work Engagement Scale (UWES; Schaufeli et al., 2002) and the Maslach Burnout Inventory – General Survey (MBI-GS; Schaufeli, Leiter, Maslach, & Jackson, 1996). It was found that vigour and dedication were more closely related with each other than their theoretically proposed burnout counterparts (Trepanier, Fernet, Austin, & Menard, 2015).

The negative impact of job demands on work engagement may be of concern in the cotton industry as reports of excessive on-farm work hours (sometimes 6 to 7 days per week and in excess of 38 hours per week) expected of employees could relate to the prevalence of self-reported burnout and work related stress (Moffat & Nettle, 2013). However, a more recent study found cotton farm employees that reported long work hours during peak periods (52 hours to 74 hours per week), still reported moderately high engagement levels and low intention to quit (Kuehne et al., 2016). These farm workers also reported high levels of support from their supervisors and low to moderate levels of burnout. No correlations or multivariate analysis of these data was reported and the small convenience sample ($N = 22$) potentially opted to participate because they are engaged at work. Despite these limitations, this evidence is promising in adapting the SCCT to the farm context, focusing on work engagement as an indication of goal-directed activity. It also potentially highlights the role of supports in promoting work engagement in the face of job demands such as work overload.

In summary, work engagement, as described as dedication, vigour and absorption, is an important factor that contributes to job satisfaction. From the literature, work engagement is expected to underpin the pursuit of goals on farm and may be a protective factor against farm worker burnout. Self-efficacy, POS, and value congruence may buffer the effects of job demands on burnout, such that (a) a supportive, caring workplace, (b) confidence in one's ability to successfully complete challenging tasks, and (c) aligning with the organisations values, are all expected to increase an individual's level of work engagement. Work engagement is expected to in turn be related to farm workers' job satisfaction levels. It is therefore proposed that goals and goal-directed activity be operationalised as work engagement for the SCCT Model of Farm Worker Job Satisfaction.

2.3.6 Work Volition

The SCCT Model of Job Satisfaction offers an indepth look at the psychological antecedants of job satisfaction but there is an important assumption that underpins the model which may require attention, particularly in the farm context; this is the assumption of volition. When studying career decision-making, many vocational psychology theories have assumed that people have free choice in their pursuit and attainment of employment (Duffy & Dik, 2009). In considering the potential impacts of this assumption, *The Psychology of Working* offers a useful framework within which to position the current research project. This perspective addresses the necessity for Vocational Psychology to not only service the comparatively privileged societal demographic that historically reflects the status quo from which career choice and development theories were formed, but to also expand to address the working population (both paid or unpaid) that may be engaged in work motivated by survival needs (Blustein, 2006). A construct that is central to the Psychology of Working, and that may be an important addition to understanding the job satisfaction of farm workers, is work volition (Blustein, 2006).

Work volition is defined as “the perceived capacity to make occupational choices despite constraints” (Duffy, Diemer, Perry, Laurenzi, & Torrey, 2012, p. 401). Specific constraints individuals may experience in the pursuit of work include family demands, financial pressures, economic restrictions, disability or health problems, and discrimination. For the current measure of work volition, the Work Volition Scale (WVS), the inter-related dimensions of the construct have been conceptualised as (a) volition, (b) financial constraints, and (c) structural constraints (Duffy et al., 2012). For working adults, work volition has been found to weakly related to positive affect and work self-efficacy, and strongly related to core self-evaluations, perceived organisational support, and job satisfaction (Duffy, Bott, Torrey, & Webster, 2013).

Since the introduction of the Work Volition Scale (WVS; Duffy et al., 2012), studies have attempted to integrate work volition into SCCT models of life satisfaction, and job satisfaction (Duffy, Bott, Allan, et al., 2013; Duffy, Bott, Torrey, et al., 2013). Work volition has been found to mediate the relationship between personality (optimism), and life satisfaction (Duffy, Bott, Allan, et al.). This study of unemployed adults had theoretically positioned work volition within the centre of the model. However, the failure for self-efficacy and supports to predict

overall work volition, and the non-significant path from work volition to behaviour, may mean this construct is better positioned on the outside of the model as an additional overarching appraisal of environmental factors outside of the work context that influence an individual's relationship with their job and experiences of satisfaction.

Duffy, Bott, Torrey, et al., (2013) explored the moderation effects of work volition on the relationships between SCCT job satisfaction constructs. They found that the relationship between perceived organisational support and job satisfaction was stronger for workers that reported low work volition. Conversely, the relationship between self-efficacy and job satisfaction decreased for people who reported lower work volition. A full structural model was not hypothesised or tested in this study. A study of university students found that work volition moderated the relationships between self-efficacy and outcome expectations and self-efficacy and goals, but when entered into the structural model of the SCCT this moderation effect was no longer significant (Duffy, Bott, Allan, & Autin, 2014). This lead the authors to conclude that when accounting for the influence of all variables in the model, the strength and direction of the relationships between the SCCT variables may be consistent regardless of people's varying levels of work volition.

Central to the discussion of farm workers' experiences of work volition is the diversity of work roles and the demographics of workers employed in Australian agriculture. The types of workers on-farm are varied with roles on offer including: (a) farm managers, (b) farm hands (whether casual or permanent), (c) seasonal workers employed at peak times including irrigation and mulching, (d) contractors with machinery or without machinery used for picking, spray application, and module transport, and (e) consultants including on-farm agronomists (Agrifood Skills Solutions, 2015; Cotton Australia, & Cotton Research and Development Corporation, 2014). There are cotton farm workers who come from an agricultural background and may be in a region that is experiencing low unemployment leading to plenty of job opportunities (Moffatt & Nettle, 2013; Moffatt, 2016). It is expected that these workers would report high levels of work volition in their current on-farm roles. Other cotton farm workers may need to engage in farm work to meet visa requirements (e.g., backpackers, as described in Section 2.1.2) or could be limited by a lack of education and therefore need to pursue jobs like farm work which require no formal qualification (Moffatt & Nettle, 2013). These constraints may lead

workers to take up employment in jobs that require them to complete tasks that they do not feel confident in performing and do not enjoy.

The factors that contribute to an individual's experience of job satisfaction may be impacted by entering an on-farm role with high or low work volition (Duffy, Bott, Torrey, et al., 2013). This is possibly evident in the conundrum observed in Moffatt and Nettle's (2013) research, that while employees report they are happy to work long hours, they also report wanting greater flexibility and better work/life balances. This evidence lead to the conclusion that the long work hours required on some farms could be detrimental to retention of workers. However, it is possible that long work hours could be both a positive and negative work condition for people depending on their level of work volition and corresponding motivation for pursuing the farm worker role.

In summary, as the work volition construct may have a broad range of variability for farm workers it is a particularly interesting and potentially important inclusion to the cotton farm worker job satisfaction model. For the current study, the direct effects of work volition on the SCCT Model of Farm Worker Job Satisfaction constructs, and potential for work volition to mediate the relationship between personality and the SCCT constructs will be explored. Consistent with the definition of work volition, it will be positioned at the beginning of the model, as it represents an appraisal of the individual's career choice within the context of the broader labour market environment and other non-work environmental constraints that will then impact on their current experiences of work. It is expected that the more work volition one has, the more likely one is to obtain work in environments (a) that are viewed as supportive; (b) that allows the use of skills the worker is confident in performing; (c) that is congruent with personally important values; (d) that the worker wants to dedicate effort in pursuit of the workplace goals; and (e) that they find rewarding and satisfying. It is also expected that personality and affective traits would impact the individual's perception of work volition.

2.4 Conclusion

Job satisfaction is an important construct associated with individual workers' wellbeing and organisational outcomes including productivity and labour retention. As such exploring the antecedents of job satisfaction is important to gain insight into potential ways to attract and retain farm workers to the cotton industry. The SCCT Model of Job Satisfaction may be particularly useful as it looks at the relationship

between psychological factors, some of which are flexible and may be improved through intervention programs. The literature on SCCT and the constructs as they relate to job satisfaction has been reviewed and the evidence used to propose the following:

1. Personality and affective traits is operationalised as the FFM of Personality or Positive and Negative Affect
2. Goal and efficacy-relevant environmental supports, resources, and barriers is operationalised as POS
3. Self-efficacy is operationalised as farm worker task self-efficacy
4. Work conditions and outcome expectations is operationalised as farming values congruence
5. Goals and goal-directed activity is operationalised as work engagement
6. Work volition is a potential useful inclusion to the model.

The SCCT Model of Farm Worker Job Satisfaction and the inclusion of the work volition construct to this model is presented in Figure 2.7. Further research is needed to determine whether the current proposed operationalisation of the SCCT Model of Job Satisfaction is a relevant and useful way to adapt the broad theoretical constructs to the farm work context. Investigation of this theory in a sample of farm workers will add to the vocational psychology literature by critically testing the generalisability of the SCCT in a previously unexplored population.

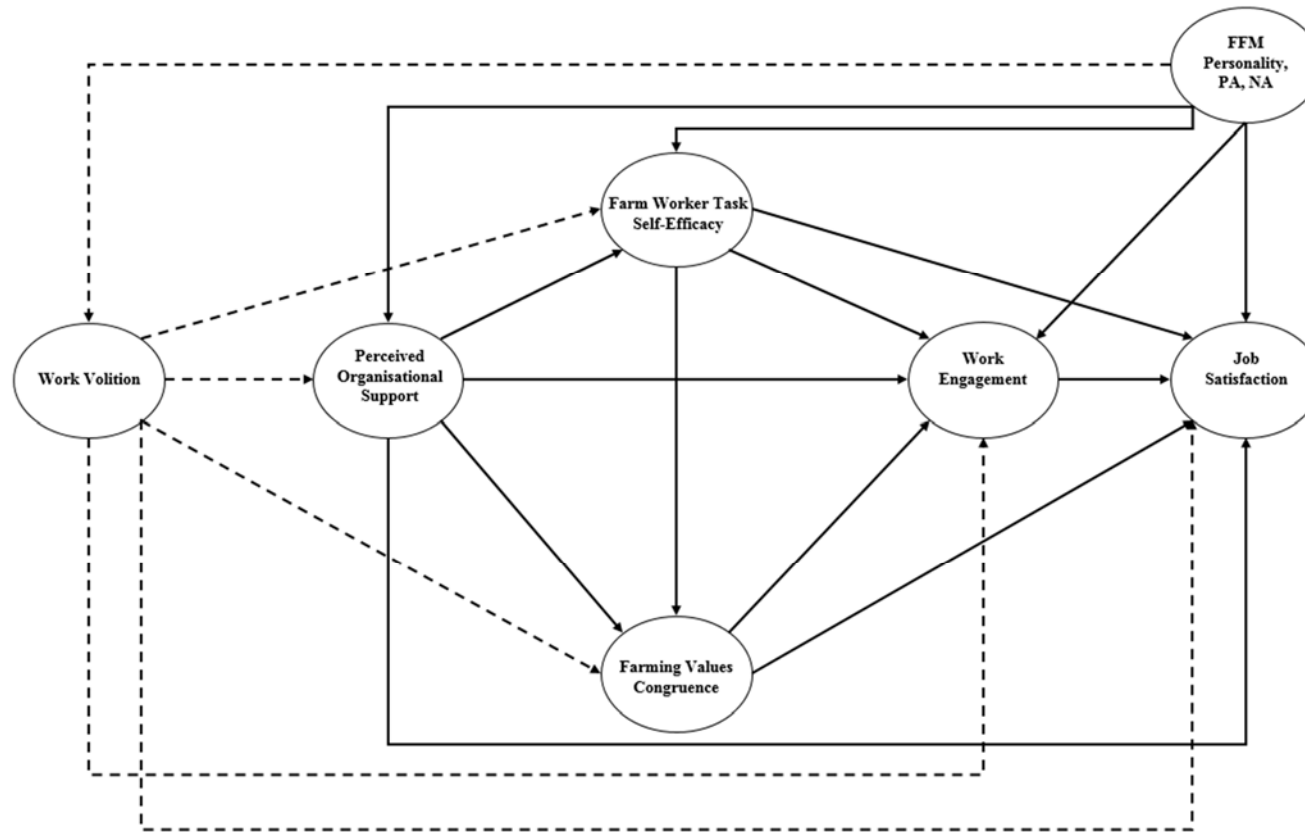


Figure 2.7 SCCT Model of Farm Worker Job Satisfaction. Bold pathways are between all SCCT constructs. Dotted pathways indicate the proposed relationship of work volition to the SCCT variables when included in the model. Adapted from “Social Cognitive Career Theory and Subjective Well-being in the Context of Work,” by R.W. Lent and S.D. Brown, 2008, *Journal of Career Assessment*, 16(1), p.10. Copyright 2008 The Authors.

CHAPTER THREE: METHODOLOGY

This chapter presents an analysis of the principles that underpin the research strategy used to adapt and explore the SCCT Model of Job Satisfaction in the cotton farm context. The paradigmatic positioning of the current research project is discussed. In doing so, the epistemological and ontological boundaries of the research are given consideration. Extensive reflection of the researcher's axiological positioning within the research project is explained in a research-as-instrument statement. Finally, an overview of the sequential mixed-methods design to be used is presented.

3.1 The Research Questions

From the literature review, it has been argued that there is limited knowledge on the understanding of the adaptability of SCCT Model of Job Satisfaction to the agricultural context. Furthermore, the Australian cotton industry lacks a comprehensive evidence base to inform career development interventions that would help to secure a sustainable workforce to maintain and improve on current production levels. It has been proposed that understanding the psychological antecedents of farm workers' experiences of job satisfaction would help to improve attraction and retention of talented employees to the Australian cotton industry. As such, the current research project aims to address the gap in knowledge within the vocational psychology discipline and provide useful evidence to the cotton industry by adapting the SCCT Model of Job Satisfaction and testing the SCCT Model of Farm Worker Job Satisfaction.

It will meet this aim by asking the following research questions:

1. What do the SCCT constructs look like in the cotton farm context?
2. Are the proposed measures appropriate to capture data to investigate the SCCT as a measurement model?
3. What tasks need to be included in a measure of crop farm worker self-efficacy?
4. Does the proposed SCCT Model of Farm Worker Job Satisfaction explain how psychological constructs inter-relate to predict job satisfaction?

In attempting to satisfy the aims outlined above, it is important that the research design is informed by an appropriate paradigm and suitable methods are selected to generate the evidence required to answer these research questions.

3.2 The Post-Positivist Paradigm

The current research project takes a scientific approach to understanding job satisfaction and the core aim of the research is to deductively test the SCCT model of job satisfaction in a previously unexplored occupational group. This aim of theory testing, and the SCCT hypothesised model with its assumed causal pathways, may seem to initially lend itself to the traditional Positivist paradigmatic approach to research. However, in attempting to understand the work experiences of this occupational group through SCCT, the multiple ways people now make sense of their working lives also needs to be considered.

It is widely accepted that the notions of career have shifted away from the traditional grand narrative proposed in the 20th century (Savickas, 2012). As the societal norms which underlie assumptions of career development are rejected in the modern world, it is no longer tenable to subscribe to the positivist assumptions that the universe is knowable as a single reality (Richardson, 2004; Clark, 2002). Previous criticism of the vocational psychology discipline, including the dominant theories on career development, as oriented primarily towards the white, middle class has resulted in a concerted effort to expand research to include more diverse racial, ethnic, and class populations (Richardson, 1993; Blustein, 2006).

To date the research on the SCCT has clearly demonstrated support for the overall theoretical models, but also shows differences in the model's hypothesised pathways across cultures and contexts. From this evidence it can be concluded that context is influential on the way the theory performs. This emphasis on contextualising the SCCT is also made by Lent and Brown (2006b) in their recommendations for operationalisation of social cognitive variables. They identify the need for domain specific measurement of key constructs in the model, including self-efficacy, outcome expectations, goals, and contextual supports and barriers. With this understanding from the literature, the current research intends to work with participants (as opposed to conducting research on participants), in order to effectively make contextual affordances in adapting and testing the SCCT Model of Job Satisfaction in the farm worker context. Therefore, the research project is positioned within the post-positivist paradigm.

Post-positivism asserts that the researcher's perspective of the phenomenon being explored is central to the project and the resulting knowledge is created by the participants (Cohen, Manion, & Morrison, 2011). The occupational experiences of

farm workers is hence considered subjective, with multiple perspectives of reality co-existing, yet these individual viewpoints are able to be conceptualised as psychological constructs which are measurable and analysed as quantitative and qualitative data. In acknowledging the complexity of knowledge creation, the researcher acknowledges their own epistemological stance and assumptions used to make sense of the world (Ryan, 2006). By recognising the potential motivations, values, and societal influences on the research process, it is proposed that the researcher is able to set these aside, aim for neutrality and strive for objectivity, thereby taking a distanced view of the bigger picture that makes up the phenomena of interest (Morrow, 2007; Ryan, 2006). These paradigmatic principles have informed the selection and approach to data collection, sequencing of data collection, and the analysis and interpretations of the findings.

3.3 Axiological Considerations for the Research Project

McIlveen (2017) draws attention to the inextricable influence that career development practitioners can bring into the counselling setting in terms of their inherent view of what constitutes “the good life”. The assumptions made as a result of an individual’s definition of the good life is also a value that can inform decisions and judgements made by researchers. The potential impacts for the current study include, but are not limited to, (a) perceptions of the problem to be solved, (b) prioritisation of the research questions and selection of corresponding methods to answer these questions, (c) direction and focus of the data collection, (d) attention to and interpretation of the interview data, and (e) the researchers utilisation of their knowledge to theorise and draw conclusions from both the qualitative and quantitative data.

Essential to framing the researcher’s position within the current project is the following self-reflection on personal motivations and knowledge that inform the analysis and understanding of both the qualitative and quantitative data. This is referred to as the Researcher as Instrument statement (Morrow, 2005). In seeking to understand and lay bare my axiological stance, I offer an extended researcher as instrument statement which will encompass (a) my experience of work and my own pursuit of the good life, (b) motivations to engage in the current research project, and (c) changing knowledge and understanding of the cotton farm context and the Australian agricultural industry. The brief descriptions of personal experiences offer

the reader an additional tool to critique the current research project design, findings, and conclusions.

3.4 Researcher as Instrument Statement

3.4.1 Work and “The Good Life”

I have engaged in paid work since the age of 15, when I was legally considered old enough to be employed. Over the course of my working life, I have mostly taken jobs which do not require qualifications and were customer service based. In my early twenties this was due to my uncertainty around career goals, and inability to commit to tertiary education. Later, after discovering my passion for psychology, these types of jobs gave me the means to financially support myself while studying part-time. They were also complementary to these pursuits as they were not taxing or stressful, did not require much mental effort, and work concerns were easily left behind when I had finished for the day. Furthermore, I enjoyed these jobs because of the people I worked with, the sense of purpose I felt when helping others, and they brought structure to my life and taught me the satisfaction of when effort and dedication resulted in a job well done. Finally, this type of work gave me plenty of time to have a life outside of the workplace and time for pursuits of my own. It has always been a priority for me to be able to follow my curiosity, whether that was reading, doing short courses, volunteering, going to dance class, trying food at a new restaurant, travelling, seeing live music and meeting new people, watching and discussing movies, hanging out with old friends and drinking good coffee. None of this would be considered ground breaking in terms of human desire but it all adds up to be part of what feels like “the good life” to me.

Work is a core part of how I spend my time and so it definitely impacts on my “good life”. In some ways my love of these service jobs that I have had over the years was possible because of my lack of knowing anything else. This has changed through experiences I have had while conducting the current research project. Over the last three years I have been called upon to give presentations, offer opinions, and sharpen my expertise in my chosen specialisation of vocational psychology. Having my eyes opened to the possibility that I can contribute in many ways that involve the knowledge I have about a field I am very interested in and passionate about (and that this is of use to people) has in some ways changed my ability to find motivation and satisfaction in jobs that are unrelated to this, have little autonomy and that do not allow me the opportunity to demonstrate the full range of value I feel I can now add

in the world. The “good life” for me now also includes the ability and opportunity to do more of this sort of work. I intend to pursue my “good life” after completion of my studies by seeking employment as a researcher; hopefully finding a job which will still allow me the time to cultivate my other interests.

In summary, my view of the “good life” in terms of work is one that allows for job/life balance, access to work which requires me to use some aspect of talent or skill which is valuable to others, employment which pays a decent living wage, and the opportunity to do work (paid or unpaid) which is of personal interest.

3.4.2 Motivations to Engage in the Current Research Project

My motives to engage in the current research project stem from my personal interest in the application of psychology in the workplace and my desire to develop my skills as a researcher and expand my understanding of a part of Australian society about which I knew little.

3.4.2.1 A personal interest in the intersection of psychology and working.

I believe understanding the psychology of workers’ motivations can be a good thing, but care needs to be taken in applying this to workforce strategy in a way that is not potentially manipulative or unfair to workers. My own experiences working in a front-line customer service position for a large financial company have made me sceptical about organisations’ collection of employee work engagement and job satisfaction attitudes through surveys. In some of the questions I have been asked, the inference seems to be that working beyond your current role requirements is an expectation and an indication of normal engaged work behaviour as opposed to an exception in which the organisation benefits from an employee’s unpaid labour.

Furthermore, their introduction of positive psychology initiatives such as improving your mindset (incorporating aspects of mindfulness), where the responsibility lies with the individual to ensure a positive attitude is brought to all customer interactions, have at times felt like gaslighting² by a manipulative partner - where if an individual has a problem or feels anything negative the fault lies with them and their inability to manage their emotions, not the possibly stressful work situation. Then there is the hypocrisy of “R U OK? day”³ in which the boss earnestly asks this question, but then weeks later when a request is made to use an

² Gaslighting refers to psychologically manipulating people into doubting their own sanity.

³ R U OK day is national day in Australia that raises awareness of suicide prevention by promoting meaningful connections between people.

accumulated sick day, as an employee pre-emptively attempts to manage their mental health and take a break because “life is getting a bit much”, they are told not unless they are unwell enough to obtain a doctor’s certificate (company policy). Poorly implemented strategies where there are mixed-messages communicated through the organisation’s actions and policies, certainly impacted my frustration and disengagement in a role I was probably overqualified for but persisted in due to the flexible work hours, good pay including generous weekend loadings, great colleagues and a genuine, caring team leader.

I carry these experiences into my current role as a researcher and have a desire to ensure any knowledge generated from the findings of this research are translated into careful and considered recommendations to be integrated into the cotton industry’s workforce strategies.

3.4.2.2 An opportunity to expand my world view. Well documented histories of the Vocational Psychology profession have criticised past theorists’ attention towards populations that were relatively privileged and socially mobile while ignoring others including women, people of colour, and people with disabilities that had limited access to power structures that afford occupational choice (Savickas & Baker, 2005). Blustein (2017) argues that this was likely the result of macrolevel influences creating feelings of optimism for the nation’s future prosperity and consequent work opportunities rather than an intentional disregard for marginalised groups in the development of theory and practice. I argue that the risk of this ignorance and potentially limited worldview is something we still encounter today. For example, while the internet has given rise to many diverse voices that may have been overlooked in the past, social media and marketing algorithms respond to our personal preferences creating online echo chambers that reaffirm rather than challenge the views that we use to shape our understanding of the world. I identify as a feminist and consequently have reflected on the discrimination of women, and the progress (or sometimes lack of progress) made towards achieving equality for women in the workplace. Informed by my feminist values, I recognise the disadvantages that different groups of people experience when they lack representation in and access to systems of power within our society. I am also aware of the privilege afforded to me as an educated, white, middle class, cisgender, heterosexual woman, in terms of the access I get to power structures compared to others, and that the benefits I receive because of my privilege directly result from the

disempowerment of cultural minorities. I am aware that my understandings of the experiences of people with different backgrounds and histories to mine have limitations. There are limitations to my worldview. I feel that a continued commitment to work towards expanding my worldview is important in my work to be an ethical researcher.

I believe that both confronting inherent bias and having a willingness to listen and learn from participants is essential to conduct quality research. I reached this conclusion while reflecting on my limited knowledge of farmers, farm workers, and the agricultural industry prior to engagement in the current research project and the experiences I had during the research project that have resulted in the knowledge that I now have three years later. This research project has given me the chance to get out of my comfort zone, cross the metropolitan-rural divide and expand my worldview.

3.4.3 Changing Knowledge of Farm Work Throughout the Research Project

A brief description of the change in my knowledge of cotton farming and the agricultural industry is now provided. A few key events are used to illustrate the development of the personal values and beliefs that I now hold as a direct result of my experiences in conducting the research. This timeline is separated into (a) early experiences, (b) the turning point, and (c) the resulting change in my professional identity.

3.4.3.1 Early perspectives. I was raised in a large, regional city, and have lived in a metropolitan State capital for the last 15 years. I don't personally know any farmers or farm workers, or anyone involved in the agricultural industry. With no real knowledge of this job, my thoughts were based on stereotypes formed from images of drought ravaged outback Australia. What kind of person found dirty, hard, exhausting farm work satisfying? Especially when they were not the land owner, which to me meant no share in the potential big profits at end of season. There were my concerns that farm work would not meet the criterion set out by the International Labour Organisation (ILO, 2017) for decent work, particularly on the dimensions of safety (agriculture reports one of the highest proportion of workplace deaths of all industries), and adequate recovery time (the standard for long hours and potential for burnout was raised in one of the first research reports I read). Historically agriculture seemed exploitative (from what I could remember from the lyrics of the famous Australian song "From Little Things Big Things Grow" about the Wave-Hill

Walkoff (Kelly & Carmody, as cited in National Museum Australia, 2017) and still potentially was from what recent news stories said about the treatment of backpackers (working holiday visa holders) on some properties. But whether this was outdated or sensationalised or actually the reality for the cotton industry – I could not say. At the start of the research project I questioned, was farm work one of those jobs that people did because they needed to earn a living and this was the only work they could get?

Fully aware of the limits of my knowledge of the industry, I set out reading as much as I could. Fortunately, the CRDC had been investing in social science research and the research reports from The Innovative Work Project gave some insights into the working conditions and treatment of workers on present-day cotton farms (Moffatt & Nettle, 2013). One particularly interesting finding from the research was the conundrum of both farm employer and employee being motivated to work long hours even though this could be considered less than best practice due to risks of fatigue and burnout (Moffatt & Nettle). There was no real explanation given beyond the statement that long hours are standard practice in agriculture and that those employed on an hourly rate are financially incentivised to do so. In considering this work condition, it is also interesting to note that in another finding of the research, one of the main reasons given for attraction to farming and farm work was lifestyle (Nettle, Moffatt, Power, Yu, & Oliver, 2013). If you love the lifestyle of farm work, and part of that includes long work hours, is it possible that this work condition is not as detrimental to work engagement and job satisfaction for farm workers as it is for workers in other contexts? This evidence made me think that “the good life” may be possible while working on farm, but maybe it looks different to what I perceive “the good life” to be.

An experience that took place approximately six months into my postgraduate research journey cemented the need to prioritise and familiarise myself with the farm workers knowledge and understanding of their work context beyond secondary sources of information. I attended the 2014 Australian Cotton Conference in hopes of networking and making connections that would assist with participant recruitment the following year. I had prepared my three minute elevator pitch about the research project, outlining what the issues were, what I was doing to address them and what outcomes I expected to achieve. Over lunch I was introduced to a grower who enquired about my research. When I began with, “At the moment the

cotton industry is struggling to attract and retain workers on farm”, he quickly cut me off replying, “No I’m not”. Slightly taken aback and not really knowing where to take the conversation I asked about his experiences with workers on his farm. He began to tell me about how he helped to run his family farm with his father and brothers on the Darling Downs. Compared to some other farming locations, these properties are fairly close to the comparatively large rural town of Dalby and anywhere between one to two hour’s drive from the regional city of Toowoomba. This means relatively easy access to a capable workforce. Also, with the new round bale pickers they no longer needed to hire as many workers. This new technology that had gained popularity over the last 12 months meant that one person could do the work of six. The grower explained that they could make do quite easily with the people they already had, and it was not difficult to contract the extra few staff required at peak periods during the season. This lesson taught me that I did not need to tell people, my potential participants, what their problems are, I needed to ask. I had also made the error of assuming that the cotton industry was homogenous, when it consisted of a diverse range of farming businesses. These businesses differed on size, structure, climatic conditions, and therefore had different challenges and requirements when it came to workforce management. I needed to take more care to understand this unfamiliar context and that meant climbing out of the university “ivory tower” and getting out and visiting people, listening, and asking them questions.

3.4.3.2 The turning point. Hearing farm workers talk about their work experiences undoubtedly ignited my passion for this research project. I found the men I spoke with on the whole to be very open about their motivations to pursue careers in agriculture. Most of them had tried other careers in other industries but voluntarily returned to farm work. Their love of working outdoors, facing new challenges every day, and their obvious satisfaction with a job well done was infectious. They pragmatically accepted that a large part of their success at work, the weather, was out of their control but that seemed to only make them more determined to carry out their tasks with care and precision. For one man who had migrated from the city, there was a self-proclaimed sense of adventure driving his initial pursuit of this career. For another, who was “born and bred in the dirt”, the connection to agriculture was a clear extension of his identity. A man in his mid-twenties contrasted his experiences with the “sell at any cost” values of a prior job in

metropolitan city real estate with the honest and straightforward people that made up the farming community. Listening back to the recordings I was totally convinced that this work was purposeful, meaningful, and a quality career could be found on cotton farms. I am aware that I was given access to workers who probably were on farms that implemented best practice approaches to staff management, e.g. working no more than 12 hour shifts in peak periods, receiving regular feedback on performance, and being made to feel appreciated at work. This is likely not how all farms are run, and the participants did reflect on some less than ideal situations they had experienced with past employers and parts of their current jobs that were not enjoyable, but as one participant stated:

Every job no matter what job you do, there's always going to be part of the job where you're going to shovel the cow poo. You know it's just how it is...whether you're doing rubbish runs or handing the mail out in the city. Whatever it was – whatever it is. There's always going to be that no matter what job you get.

Beyond the data used for the research project, what these participants had given me was a window into the “the good life” for farm workers and more generally the agricultural industry. This experience contributed to closing the gap between me, the researcher, and my participants, which also helped to develop my empathic understanding of farm workers working lives (Blustein, 2006).

3.4.3.3 Moving from outsider to agvocate⁴. The cotton industry is no stranger to researchers. There is a strong research and development program (CRDC), as well as active industry bodies (Cotton Australia) that aim to influence policy and represent the interests of the cotton industry on a national level. Consequently, there are continually requests for grower input and participation in surveys, focus groups, and interviews. Understandably, people will choose to participate in research that best serves their business interests and as a relative outsider requesting support it can be difficult to get responses. Genuinely wanting to contribute to supporting growers and farm workers through my research, and asking for their time and participation in the research project, I felt I needed to demonstrate through my actions my commitment to being a part of the cotton industry. I did this by volunteering at industry events, attending field days to network and meet people in person, and

⁴ Agvocate is a portmanteau of the words agriculture and advocate

reaching out to support others in their research work. What I found was that there is plenty of support and a warm welcome into the industry for new people who are willing to put their hand up and be proactive in getting involved.

A key part of my current desire to build a career dedicated to researching agricultural careers was the experience of attending a three day summit called GrowAg which aimed to facilitate the development of young people to influence the future of agriculture in Australia. This experience was made possible through the support of the CRDC. One hundred delegates from every part of the nation, representing many different agricultural industries gathered to listen to presentations about potentially disruptive new technologies and to workshop what needed to be prioritised to ensure a strong, sustainable future for the agricultural industry. In my opinion, Australian agriculture is one of the most progressive in the world in terms of embracing new technology, managing natural resources, and a commitment to continued improvement. It is underpinned by a respect for science, recognition of the dangers and challenges of climate change, and is driven by smart, passionate, hard-working people. This is something I am incredibly excited to be a part of, to contribute to, and to champion in the career development space. I now consider myself to be an Advocate.

This new identity, as well as the prior statements around my motivations and values, informs my desire to promote best practice human resource management, find potential opportunities for improvement in workforce development strategies, and use research to influence quality career development in agriculture. It does not hinder my intention to attend to the multiple perspectives that will be presented throughout the research process. In keeping with the post-positivist paradigm, and by making explicit my axiological stance and personal influences I will be able to reflexively question my findings, thereby striving to accurately represent the data in my analysis while seeking to answer the research questions.

3.5 Mixed-Methods Approach

Drawing on the Psychology of Working (Blustein, 2006) in designing the current research project, the contextual nature of the work experience is emphasised. As such, both qualitative and quantitative methods are considered viable and important to studying people's work lives. The research project will use a sequential mixed-methods research design. Aside from being the most appropriate and effective approach to address the aims and research questions listed at the start of this chapter,

it is argued that combining qualitative and quantitative data will allow a deeper and broader understanding of psychological factors than if only qualitative or quantitative data was analysed. It has been demonstrated that research that uses both forms of evidence gives the reader more confidence in the validity of the results and a more complete picture of the phenomenon of interest (McKim, 2017). This means a greater potential to exert influence in arguing for any change that may be supported by the evidence. An overview of the research design to be used presented in Figure 3.1. A brief description of the methods is presented with further elaboration on these reported with the results for Study One and Study Two in Chapter Four and Chapter Five respectively.

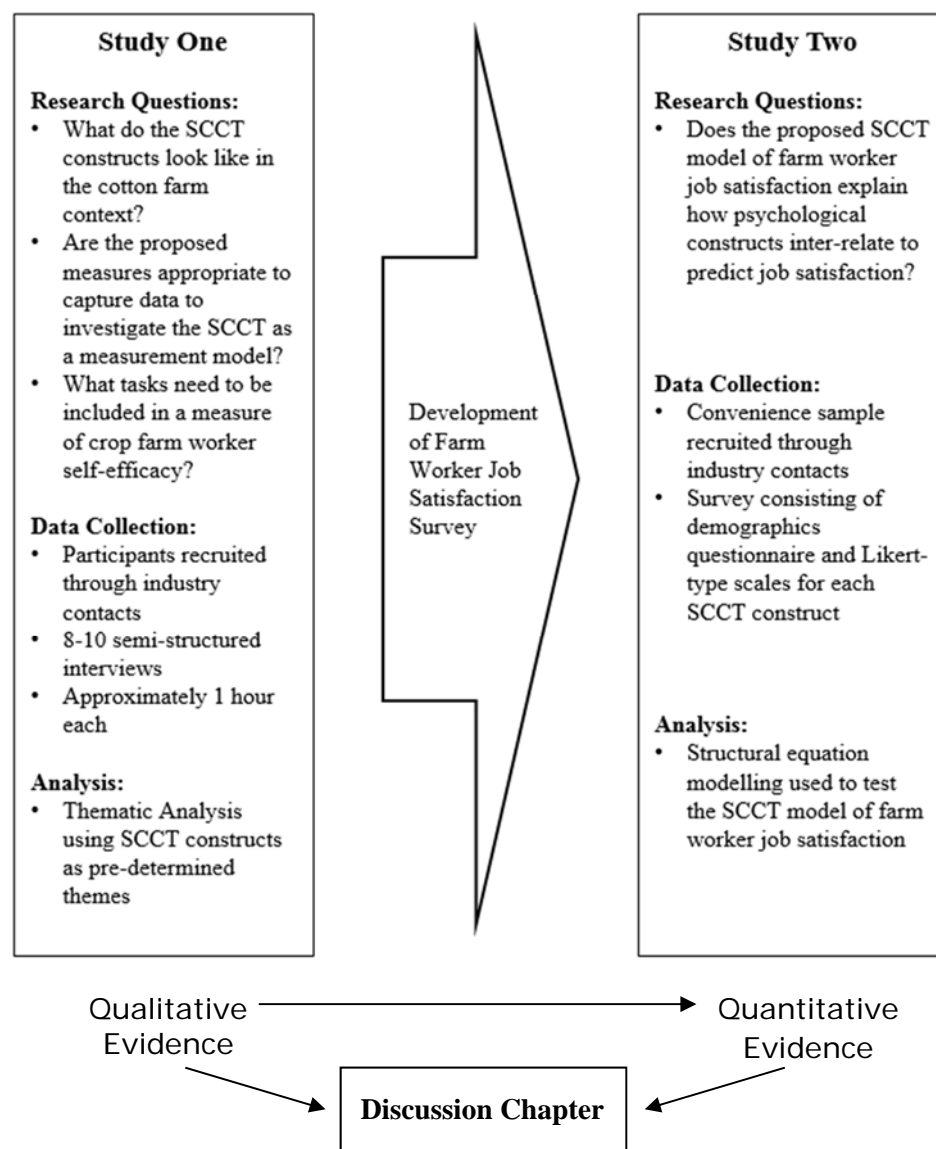


Figure 3.1 Sequential mixed-methods research design for the current research project.

Firstly, qualitative data, collected in semi-structured interviews, will be analysed to address research questions one to three. Once the face validity of proposed measures is established and items for a new measure of farm worker task self-efficacy are identified, the Farm Worker Job Satisfaction Survey will be developed. This survey will capture Likert-type responses to measures of the SCCT job satisfaction constructs. The SCCT Model of Farm Worker Job Satisfaction will then be tested, with the results from Study Two answering research question four.

This sequential mixed-methodology allows for the authentic experiences of cotton farm workers to influence the contextualisation of SCCT prior to quantitative testing, enriching the potential knowledge outcomes and interpretation of results (Vroman, 2015). Both the qualitative evidence from Study One and the quantitative evidence from Study Two will be used to discuss practical and theoretical implications that arise from the current research and to identify areas for future research.

3.6 Conclusion

It has been established that the current research is positioned with the post-positivist paradigm. Epistemological and ontological implications of post-positivism were discussed, as were axiological considerations. An extensive researcher-as-instrument statement outlines the researcher's beliefs and opinions relevant to the project. The work experiences and prior knowledge of the researcher are described the way that these changed during the research project is explained. This reflective exercise was completed and included to make explicit the potential values that could impact the research and by doing so to enable the researcher to set these aside and strive for objectivity in the analysis of data and interpretation of the results. The information contained in this section gives the reader an additional tool to critique the resulting analyses performed and conclusions drawn from the research. The sequential mixed-methods design has been linked to the four research questions. Further description of the proposed methods to be used in Study One and Study Two is presented, along with the results in Chapter Four and Chapter Five.

CHAPTER FOUR: STUDY ONE

This chapter presents the methods and results of Study One. Information about participants, data collection, and the analytic strategy are presented with specific consideration for the trustworthiness and rigour of the research. The results are integrated with preliminary discussion around the findings and implications for the development of the Farm Worker Job Satisfaction Survey to be used in Study Two. More indepth discussion on the overall practical and theoretical implications from the current research project informed by the Study One results are reported in Chapter Six. Before proceeding to the main content of this chapter, a review of the purpose of Study One and the research questions it aims to answer is presented.

It has been established in Chapter One and Chapter Two that ensuring the Australian farm worker population feel satisfied and engaged in their work is important to the continuance of a strong and productive agricultural industry. Understanding more about the workers' thoughts, attitudes, values, and motivations and the interaction of these with the environment to influence job satisfaction is necessary to inform attraction and retention agricultural workforce strategies. Although the SCCT provides a comprehensive and new approach to understanding Australian farm worker job satisfaction, the lack of vocational psychological research into farming in general and specifically in the Australian context means there is little empirical evidence describing the work context in enough depth to confidently quantitatively measure the SCCT. Therefore, the current study will seek to use insider (i.e., farm hands, farm managers, and cotton growers) knowledge to test, adapt, and create measures that best capture the broad constructs of SCCT model of job satisfaction for farm workers and the farm context.

It has been argued that in using the SCCT for farm workers (a) Personality and Affective Traits is operationalised as the Five Factor Model of Personality factors and Positive and Negative Affect, (b) Goal and Efficacy Relevant Environmental Barriers, Supports, and Resources is operationalised as Perceived Organisational Support, (c) Expected and Received Work Conditions and Outcomes is operationalised as Value Congruence, and (d) Goal Directed Activity is operationalised as Work Engagement. It has also been argued that as well as testing the SCCT constructs, the addition of Work Volition to the model may be a useful in understanding the SCCT Model of Job Satisfaction in a diverse workforce such as Agriculture (see Figure 4.1 for the hypothesised model).

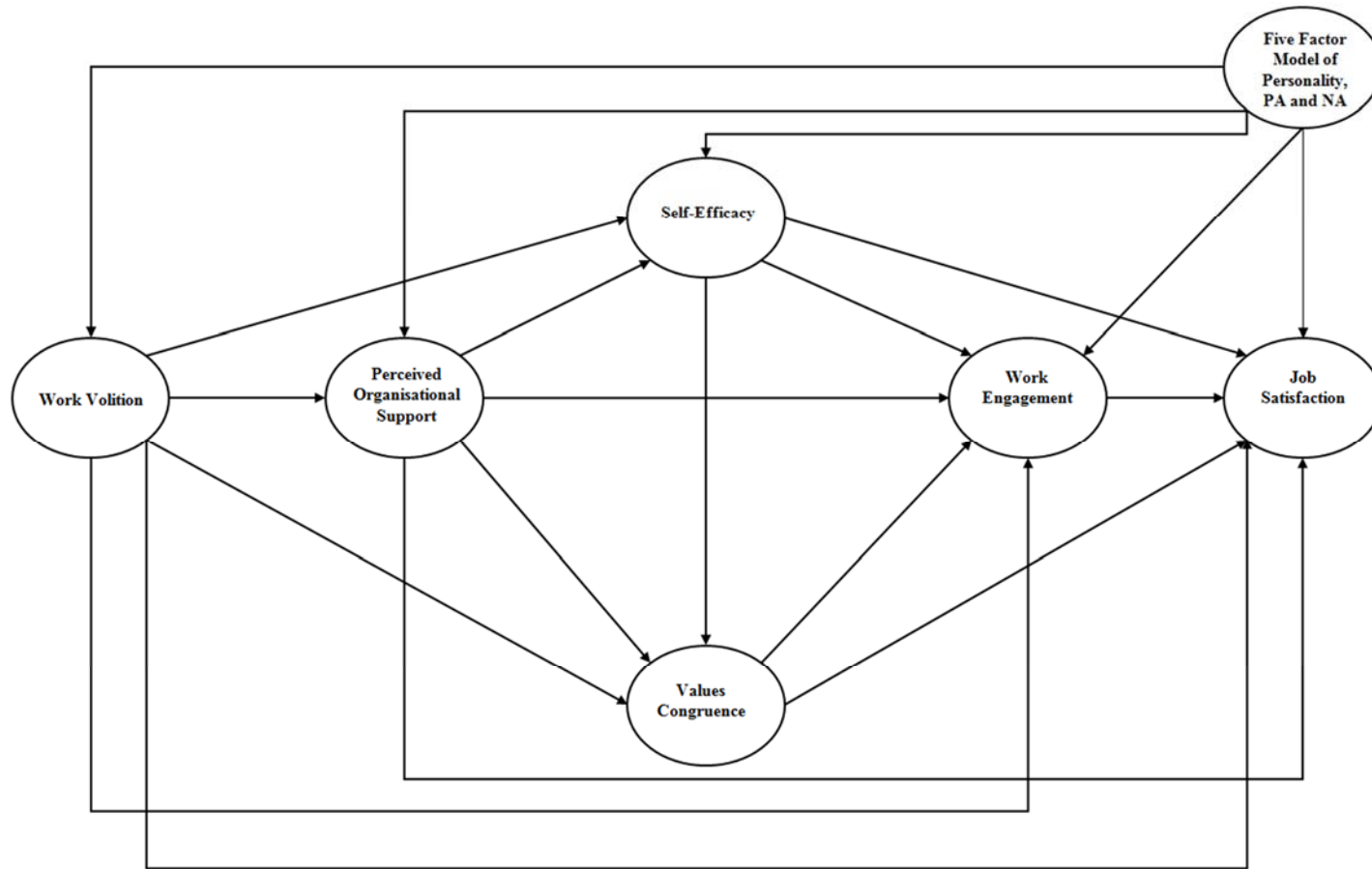


Figure 4.1. SCCT Model of Farm Worker Job Satisfaction. PA = Positive Affect; NA = Negative Affect. Adapted from “Social Cognitive Career Theory and Subjective Well-being in the Context of Work,” by R.W. Lent and S.D. Brown, 2008, *Journal of Career Assessment*, 16(1), p. 10.

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Standardised measures can be used to observe these constructs in the research population but assessing the face validity would help to pre-empt any potential issues that could impact the successful testing of the SCCT measurement model. While O*NET (2010) provides a broad list of tasks performed by crop farm workers in the USA, no such list exists in the Australian career resources that would be able to be adapted into a measure of farm worker self-efficacy. This measure needs to be developed. Furthermore, an understanding of how farm workers talk about their experiences of the SCCT constructs will help illuminate the current research project's aim of determining the usefulness and relevance of using the SCCT to better understand farm worker job satisfaction.

The overall procedure of this study was to ask farm workers to (a) discuss their farm work context, (b) talk about their work experiences, and (c) describe aspects of themselves and their work that contribute to their job satisfaction. Investigation into the responses received will seek to answer the following research questions:

1. What do the SCCT predictor constructs look like in the agricultural context?
2. Are the proposed measures appropriate to capture data to investigate the SCCT as a measurement model?
3. What tasks need to be included in a measure of farm worker self-efficacy?

4.1 Method

The following section details the procedure followed for the current study including (a) participant recruitment, (b) a description of the participants including demographics and their work contexts, (c) source of data, (d) ethical consideration and privacy, and (e) data analysis.

4.1.1 Participant Recruitment

Assistance with recruitment was provided by persons known to the Cotton Research Development Corporation (CRDC) who were well connected and employed in support roles or held leadership roles within the cotton industry. A list of growers and farm workers considered suitable for the research were identified and contacted by the researcher. A brief description of the study purpose was offered. The farm workers approached directly were asked to arrange an appropriate time for an interview. The growers approached were asked to discuss the research project with their farm workers to seek their interest in being interviewed. Continuing conversations were had with these growers in attempting to arrange meetings with

the nominated staff at a convenient time that would not impact their operations. In these conversations some growers expressed that they would like to participate and felt they had information that would be useful to the researcher's understanding of the farming context. The initial selection criterion was expanded to include these perspectives.

4.1.2 Participants

The nine participants were all male, and ranged in age from 18 – 38 years. Positions held on farm included farm owner/grower/general manager ($n = 3$, Participant K, Participant C1, Participant C2), farm manager ($n = 2$, Participant D, Participant E), leading farm hand ($n = 2$, Participant X, Participant M), and farm hand ($n = 2$, Participant A, Participant B). They worked for five different business operations on properties which could all be classed as family farms. The overall operations ranged in size from one property to several under the one business. The properties were located in the Darling Downs near Dalby, the MacIntyre Valley near Goondiwindi, and the Mungindi region (see Figure 4.2).



Figure 4.2. Map of Major Cotton Growing Centres in Australia. Reproduced with permission. Copyright 2013 by Cotton Australia.

All farms grew cotton or other broad acre crops. The owners of the farms were considered highly engaged members of the cotton industry and regularly participated in their local Cotton Grower Associations and implemented training initiatives facilitated by Cotton Australia. Two of the farms had been a finalist in the cotton industry's Grower of the Year award in the last three years. As such the sample consists of workers in farming contexts which implement best practice and align themselves with the cotton industry goals of growing sustainably produced and quality fibre (Cotton Research and Development Corporation, 2013b).

4.1.3 Source of Data

Data collection comprised of semi-structured interviews. Duration was dictated by the participants' desire to talk and ranged from approximately 40 minutes to 90 minutes. All interviews were conducted with participants' one on one, except for one interview for which two of the farm owners/managers attended together at their request. Interviews took place in on-farm offices, or at the workers on-farm places of residence. Interviews were recorded and transcribed for data coding and analysis. Participants were given the option to contact the researcher directly if upon later reflection they wished to withdraw or clarify any of their comments.

Due to the interview being semi-structured in nature, a number of questions aimed to elicit information or commentary around the theoretical and operationalised constructs of the SCCT were devised. The interview schedule is presented in Table 4a. Each interview began with the researcher asking to talk about the participant's work and career history including enquiring about their decision to work in the agricultural industry and to seek work with their current employer, before proceeding to question them about their day to day work experiences. The interviews regularly deviated from the designed structure based on the content of the participant's answers, allowing the researcher to elicit a variety of un-predetermined information that was considered important by the individual. Sometimes their answers to earlier questions elaborated in such a way that further information was not required to answer remaining questions on the interview schedule. Further detail on the information collected in the interviews and the relationship between these and the SCCT constructs are reported in the Results and Discussion section of this chapter.

Table 4a

Interview Schedule for Study One

Topic	Questions
Introduction	1. Age?
	2. How long have you been working on this farm? In the cotton industry?
	3. How did you come to be working here? Have you worked on any other farms?
Personality	4. What sort of person do you need to be to do farm work? To be good at farm work?
Goal and Efficacy- Relevant Environmental Supports, Resources, and Barriers	5. What are challenges are you up against when it comes to succeeding in your job?
	6. What kind of support do you get to be able to do your job well?
	7. Does this support extend to your personal life / beyond your role as a farm worker?
	8. What happens if you make a mistake at work? What do you do? What does your boss do? How do you move on from it and keep going?
Support and relationships with co-workers	9. Tell me about the people you work with?
	10. Do you spend much time with them at work? Outside of work?
Self-Efficacy	11. What are some of the most important tasks you have to be able to do to be a successful farm worker?
	12. Did you know how to do these before you got into this sort of work?
	13. How did you learn to do your job?
	14. How do you know when you are doing a good job?
	15. Do you think you do your job well? What do you need to do a good job?
Work Conditions	16. Do you get any say in how you do your job? How?
	17. Are there times in your job that the pressure is on to get something done? When? How? What?

Table 4a continued

Interview Schedule for Study One

Topic	Questions
Outcome Expectations/Values Congruence	18. Why do you think your employer/work mates have chosen to do what they do? 19. Are these things important to you? 20. What do you think people have to want out of life for farm work to be the right sort of job for them? For you? For others? 21. Tell me about what the farming 'lifestyle' is to you? 22. What is considered the most important thing that you are striving for on the farm? What do you get out of your work? 23. Why is it important? 24. What is important to you in your job beyond what the farm is trying to achieve (i.e. profit)?
Participation in/Progress at Goals and Goal- directed Activity	25. Is looking after the land important? 26. What does a good day at work look like? 27. How do you stay interested in what you do? 28. How do you feel when you're getting stuck into your work? At the end of the day? 29. Do you ever have days when you wake up and don't really feel like going to work? How do you pull yourself out of that mentality? 30. What happens when you're really enjoying your work? What stops you enjoying your work? 31. What can possibly go wrong in your job? What do you do to make sure things go right? 32. Would you say farm work is stressful? Why, or why not?
Work Volition	33. If you could do anything else as a job what would it be? 34. What keeps you working here rather than doing something else?
Conclusion	35. Was there anything else that you think I need to know to understand what is important with regards to your job satisfaction? 36. Have any of the questions I've asked you today made you think about some things that you may not have really reflected on before?

4.1.4 Ethical Considerations and Privacy

The current study was reviewed as part of the complete research project proposal by the University of Southern Queensland Human Research Ethics Committee prior to any participant recruitment (Ethics Project Code: H15REA012). The use of semi-structured interviewing to collect data relied on the inter-personal skills of the researcher to establish rapport with participants at the start and throughout the interview process. Participants were clearly positioned as experts of their experience and asked to share their knowledge and to discuss their work as honestly as possible. They were encouraged to disclose their private thoughts, opinions, and feelings on potentially sensitive topics such as their experiences of challenging and stressful situations, and their relationships with their employer and fellow workers. This information could possibly cause distress to participants or damage their career. Careful consideration of the ethics around collecting data of this nature meant (a) confidentiality of participants was essential and ensured, (b) the opportunity to withdraw any data or information at any stage of the study was offered, and (c) contact details for personal support services (e.g. lifeline) were at hand to be provided to any exhibiting signs of distress. All of this information was provided to workers prior to obtaining their written consent to participate and proceed with the interview and consequent recording.

4.1.5 Trustworthiness and Rigour of the Research

Morrow's (2005) criteria to establish trustworthiness and rigour in qualitative research were referred to in the design and execution of Study One. Participant selection, the interview schedule, and the researcher stance of "naive enquirer" ensured consistent collection and adequate breadth and depth of data to answer the research questions. Researcher reflexivity was practised in several ways including: (a) regular participant checks throughout the interview process to ensure the researcher's comprehension of the conversation was accurate, (b) inclusion of the researcher's personal commentary on the face validity of new and existing measures, and (c) regular discussion and examination of the research design, data, and analysis with the Principal Supervisor. Thick description of the participants' experiences and their work contexts has been provided, and source data has been blended with the analysis.

4.1.6 Data Analysis

Thematic Analysis was used to analyse the qualitative data collected from participant interviews (Braun, Clarke, & Terry, 2015). This allowed the researcher to (a) identify, across cases, detailed descriptions of a wide range of aspects of participants' work experiences, (b) to codify these, and (c) to sort these codes into pre-determined themes. Furthermore, the flexible utility of thematic analysis in terms of the way it is applied to data meant the one method could be used to answer the three identified research questions.

An inductive approach was used for both familiarisation with the data and coding the data. The first transcript was analysed manually to develop initial codes and then all transcripts were coded using NVivo 11. Throughout this process, new codes were added, and some codes were found to align with other codes and the data was consequently subsumed and the original code deleted (see Table 4b for a summary of these codes).

The data assigned to each code was then inspected to establish whether it contributed to understanding the pre-determined themes of the SCCT Model of Job Satisfaction theoretical constructs (Lent & Brown, 2008) and additional variables of interest. These were: (a) Personality and Affective Traits, (b) Goal and Efficacy Relevant Environmental Supports, Resources, and Obstacles (c) Work Conditions and Outcome Expectations, (d) Self-efficacy, (e) Participation in/Progress at Goals and Goal-directed activity, and (f) Work Volition. The outcome variable of Job Satisfaction was not specifically analysed as it is a general attitude and its contextualisation to farming is through the specific predictor variables. Each theme was further analysed using the coded interview data in terms of the relationship to the corresponding operationalised construct proposed in the literature review (see Table 4c for a summary of the themes, codes, and operationalised constructs).

Following this procedure, the theme data were used to assess the face validity of each potential measure prior to inclusion in Study Two, including inspection at item level. Finally, specific tasks identified in the qualitative interviews under the theme of self-efficacy, and the task list sourced for crop farm workers from the O*NET database, were assessed for inclusion in a new unidimensional measure assessing farm worker self-efficacy.

Table 4b

Codes derived from the Participant Interview Data

Autonomy	Pay/Rewards/Benefits
Busy Days	Personal Influence
Career	Physical and Mental Health
Community	Recreation time
Confidence in Ability	Safety Seasonal and Weather
Dedication	Influences
Financial Aspect of Business	Sense of ownership
Energy and Exhaustion	Stability
Environment	Support on Farm
Family and Personal Relationships	Teamwork
Goals/Outcomes at Work	Time Pressure
Job Satisfaction	Variety of Task
Learning/Education/Training	Work as Lifestyle
Mindset	Working on the Land (deleted, subsumed under Environment)
Past Farming Experiences	

Note. Codes are listed alphabetically

Table 4c

SCCT Model of Job Satisfaction Theoretical Construct Themes, Codes, and Operationalised Construct and Measure

Themes		Codes	Operationalised SCCT construct and measure
Personality and Affective Traits	Mindset	Teamwork	Five Factor Model of Personality, PA and NA Proactive Personality ^a Proactive Personality Scale – 6 item (PPS-6) ^a
Goal and efficacy-relevant environmental supports, resources and obstacles	Teamwork Pay, rewards, benefits, and recognition Support on farm	Time pressure Seasonal influences Safety Learning, education, and training	Perceived Organisational Support Survey of Perceived Organizational Support – 8 item (SPOS-8)
Self-efficacy	Mindset Teamwork Past farming experiences Confidence in ability	Variety in tasks Autonomy Sense of Ownership	Farm Worker Self-efficacy (to be developed) O*Net Crop Farm Worker Task list

Table 4c continued

SCCT Model of Job Satisfaction Theoretical Construct Themes, Codes, and Operationalised Construct and Measure

Themes	Codes	Operationalised SCCT construct and measure	
Work conditions and outcome expectations	Goals and outcomes at work	Pay, rewards, benefits and recognition	Farming Values Congruence
	Environment	Economic aspect of business	Landholder Values/Outcomes Scale – 15 item (LV/OS-15)
	Teamwork	Stability	
	Autonomy	Work as lifestyle	
	Variety of task	Recreational time,	
	Busy days	Family and personal relationships	
	Time pressures	Community	
Participation in/Progress at Goals and Goal-directed activity	Teamwork	Physical and mental health	
	Mindset	Personal influence	Utrecht Work Engagement Scale- 9 item (UWES-9)
	Time pressures	Sense of ownership/emotional	
	Dedication	commitment	
	Energy and exhaustion		
Work Volition	Career	Physical and mental health	Work Volition
	Family and personal relationships	Past farming experiences	Work Volition Scale-13 item (WVS-13)
		Recreational time	

Note. ^adenotes new construct and measure considered after the thematic analysis of the SCCT Model of Job Satisfaction theoretical constructs

4.2 Results and Discussion

The results and discussion that are now presented describe the data organised by the constructs of the SCCT Model of Farm Worker Job Satisfaction. This includes (a) Personality and Affective Traits (Section 4.2.1), (b) Goal and Efficacy Relevant Barriers, Supports, and Resources (Section 4.2.2), (c) Self-efficacy (Section 4.2.3), (d) Expected and Received Work Conditions and Outcome Expectations (Section 4.2.4), and (e) Participation in and Progress at Goal Directed Activity (Section 4.2.5). The construct of Work Volition is then presented (Section 4.2.6). Each section firstly uses the participant data to describe the construct of interest and then a corresponding measure for the construct is scrutinised to determine the face validity of the items within the farming context.

4.2.1 Personality and Affective Traits

Data coded as Mindset and Teamwork provided descriptions around inherent person characteristics identified by participants as essential to having a successful career in farming. The ideal farm worker was described as having a strong work ethic, being strong minded, framing challenges as problems to be solved, being open and interested in continuous learning, always thinking ahead, and willing to put the team and farm needs ahead of individual needs. These were considered inherent traits by one leading farm hand. “I think that’s something you have inside of you . . . I can teach you to do anything in the world, but I can’t teach you to be keen. . . self-motivated is the biggest thing here.” (Participant M). Desirable behaviours which would manifest as a result of the worker’s personality included (a) asking questions and learning quickly, (b) thinking independently for themselves, and (c) showing initiative in their day to day work. A leading hand reported, “Common sense and showing initiative, I think are the two most important things.” (Participant X). This was supported by a farm manager: “So you’re looking for someone that – independent, can do a lot of thinking for himself and then call me last resort.”(Participant D). A worker may display their keenness to learn on farm by asking questions or speaking up about their career goals. This could be expected to elicit the focused support of teammates or employers in on-farm training as explained by the SCCT Model of Job Satisfaction, which hypothesises that personality influences efficacy relevant support. As one grower explained, “I want to know what people want when they come – when they come into farming so that it gives me somewhere to go” (Participant C2). This proactive behaviour (asking

questions and speaking up) coupled with the workers' tendency "to have a go" when learning, would build their self-efficacy in the skills required to do the job and give them the confidence to pro-actively participate in the farm workplace in a way which could be described as showing initiative. As such, it would seem a worker's personality influences their self-efficacy and goal-directed activity.

The description of this proactive personality trait in agricultural contexts, as reported by participants, can be viewed through the Five Factor Model of Personality (FFM); however, in this context the description is not broad; instead, the descriptions speak specifically about an ideal worker who is (or is striving to become) an active participant in shaping their workplace. Indeed, the work conditions in agriculture today are such that machinery is replacing many of the tasks that were performed by unskilled labour and it is in the farm worker's tendency and ability to show initiative that demonstrates they are able to add value to farming operations (Roth Rural, 2013). From the qualitative findings, it is thus argued that the personality inputs for the SCCT model of job satisfaction will be operationalised in Study Two as *proactive personality*.

Proactive personality was not identified in chapter two as a potential SCCT construct to be operationalised in the present research project. Consequently, the literature on this construct will now be discussed. Proactive personality is defined as "one who is relatively unconstrained by situational forces, and who effects environmental change" (Bateman & Crant, 1993, p. 105). It has been found that more than 50% of the variance in proactive personality is unrelated to the combined FFM personality traits (Spitzmuller, Sin, Howe, & Fatimah, 2015). In a meta-analysis of the proactive personality literature, 313 correlations from 107 studies were analysed (Fuller, & Marler, 2009). It was found that people with proactive personalities can be expected to; (a) experience greater career success as they have a strong work ethic and are more likely than more passive individuals to engage in activities which contribute to broad problem-solving and improve their workplace, (b) focus on developing new skills and mastering tasks, (c) develop quality relationships and receive career development support from their supervisors, and (d) approach work challenges as opportunities to learn. Consideration of each of these four findings is particularly important to the current research project as they correspond to desirable behaviours for the farming context as identified by the interview participants.

No studies exist exploring the construct of proactive personality with farm workers. Therefore, the literature pertaining to similar Realistic occupations (Holland, 1997) was reviewed and two involving production workers were notable. Parker and Sprigg (1999) found that proactive personality was an important moderating factor of the effects among job demands, job control, and strain. For those production workers who were more proactive, high job demands were associated with strain when control was low, but when they were able to exert some control over the situation, their job demands had a minimal if any relationships to stress. For very proactive individuals, job demands were associated with lower strain suggesting that they enjoyed a challenging work environment. With respect to applying these findings involving Realistic workers, the farming context can have many challenges which may provide an environment for proactive individuals to thrive in terms of experiencing work satisfaction. As one farm manager described: “That’s what I say, it’s a different challenge every day so...you don’t know what you’re going to have to face [laughs] that you always enjoy it. It gives you something to do.” (Participant D).

Parker, Williams, and Turner (2006) explored the effects that proactive personality, in conjunction with the work environment, had on proactive work behaviour through different cognitive-motivational mechanisms. They found that proactive personality positively impacted on production workers’ confidence in completing a range of activities outside of their prescribed tasks (defined as role-breadth self-efficacy), and their taking a flexible role orientation as opposed to a “that’s not my job” attitude to tasks. These two cognitive-motivational states were identified as important in an example given by a Grower when talking about past employees who were less than optimal workers:

We’ve had workmen who are just - we call them steering wheel attendants, because they do, they just - they come to work and you go - they just go and sit on their tractor for 10 hours a day and they just go home again and, you know, they could go past - they could drive past something that needs fixing or - or there could be, you know, a patch of a paddock that someone forgot to spray and to them they don’t care. (Participant C2)

Both these studies’ (Parker & Sprigg, 1999; Parker et al., 2006) findings align with the interpretation of interview data and identify proactive personality as a relevant way to operationalise the broader personality construct in the SCCT for the

agricultural context. The Proactive Personality Scale – 6 item (Bateman & Crant, 1993, as cited in Claes, Beheydt, & Lemmens, 2005) was analysed at the item level with the results presented below in Table 4d.

Table 4d

Face Validity of Proactive Personality Scale – 6 item (PPS-6)

Proactive Personality Scale (6-item)	Interview Data	Comment on Face validity
1. If I see something I don't like, I fix it	Interviewer: Like what do you do if you make a mistake? Participant B: Oh pretty much try and fix it.	While this is not necessarily a perfect fit for this item, it is an example of a worker taking matters into his own hands to fix things as opposed to avoiding it by covering up the mistake
2. No matter what the odds, if I believe in something I will make it happen*	I know it's bad enough here, but particularly when guys out in Western Queensland that have droughts for five or six years without any production and like their mindset, just to get up each day and just to go to work and do what they do...there just must be a drive in there or something that pushes us that say, well bugger you, I'm going to prove that we can get out of it or prove it can be done (Participant K)	This drive is demonstrated by growers and their workers who persist performing farm work even in extremely challenging conditions.
3. I love being a champion for my ideas, even against others' opposition*	If you get your staff into management positions then they can start suggesting to you, like, you know, what you should be doing with your business. They're not telling you what to do (Participant C1)	From the interview evidence, this item is possibly not a great fit for looking at the proactive personality – job satisfaction relationship in the farm work environment. The item has tones of an individualistic orientation as opposed to the more team environment on farm. As explained by this grower, while workers ideas are valued, it may not be appropriate or adaptive for those with proactive personalities to demonstrate the behaviour described in the item as it involves conflict with a superior.

Table 4d continued

Face Validity of Proactive Personality Scale – 6 item (PPS-6)

Proactive Personality Scale (6-item)	Interview Data	Comment on Face validity
4. I excel at identifying opportunities*	...if there's an opportunity to go, [click] go now. Get it done. (Participant E)	An ability to look for when conditions are acceptable to get a particular task done.
5. I am always looking for better ways to do things	He was really keen to learn and asked a few questions – (Participant C2) Interviewer: Do you ever have times where you're just like 'oh I just do not want any more change'? Participant D: Yeah but if you don't keep up with it you're bugged. And a lot of changes are for good, so you can tell with your yields, where the highest yields are in the paddock, where we have to put more fertilizer, where we can use less, you know...	Willingness to learn and looking to improve own knowledge is a practical example of this item
6. If I believe in an idea, no obstacle will prevent me from making it happen*	And the third week you were starting to get a bit stressed and everything, so ...But that's just how it goes, yeah ... you just – you get over that stage and just keep going (Participant A)	The obstacle in this example is working away from family, feeling a bit isolated. A proactive person can withstand obstacles like this and commit to their work and get the job done.

Note. *item included in the Proactive Personality Scale-4 item (Parker & Sprigg, 1999)

4.2.2 Goal and Efficacy Relevant Environmental Barriers, Supports, and Resources

Goal and Efficacy Relevant Environmental Barriers, Supports, and Resources were discussed by the participants in terms of the codes (a) Seasonal and weather influences, (b) Support on farm, (c) Teamwork, (d) Pay, rewards, benefits and recognition, and (e) Learning, education and training.

Seasonal and weather influences were talked about by the participants in terms of their negative impact on goal-directed activity and achievement. This aspect of farming is outside of the worker's control and is crucial to the success of a crop. As one farm manager commented, "It's not my - getting my arse out of bed. I can do that every day, and I can get the machinery there, and I can do the good job. It's the weather that stops you" (Participant E). A leading hand further clarified that a crop develops in stages and the tasks involved at each stage need to be completed within windows of opportunity dictated by the time of season and the weather.

Planting the - we have to plant when there's moisture in the ground and it has to be at the right time of year, at the right - you know, everything has to be done right then and if you're, if you're too slow - we had a - we planted the entire farm this year, but we have only one planter on our farm. So when we're getting towards the end, it was too wet to drive in the field. (Participant M)

The resulting influence of this potential barrier/resource can be seen in the expected work conditions described in the code Time pressure and Busy Days. A young farm hand explained:

Yeah, like - like, say, the spraying. We got a fair bit to spray. And like if there's rain or whatever coming you have to get it done before the rain or like before the wind picks up or - like when we get into planting and harvesting, we just - we'll be going flat out 'til it's done (Interview A)

This supports the SCCT Model of Job Satisfaction theorised path from Goal and Efficacy Relevant Environmental Resources, Supports, and Barriers to Work Conditions and Outcome Expectations.

Seasonal and weather influences may also be a motivating factor for workers to build their self-efficacy and competence to perform work tasks in order to exert as much influence within their control on the potential crop outcome. The anxiety that comes with working in an ever changing and unpredictable work environment can be reduced when workers have a tool box of skills to quickly and effectively deal with

the wide range of situations that can be unexpectedly encountered. Being self-efficacious and competent in their work roles, also allows farm workers to plan and be ready for when weather events give a short window in which to complete tasks.

As a grower explains:

If the agronomist comes and says that we need to spray five of our paddocks and, you know, it's three days' work and you've got rain coming in three and a half days, you can't afford to have something break and you can't afford to be in the workshop for a day because you've just lost - that's - that's top end profit that you've just lost off the end of the crop. (Participant C2).

Increased task self-efficacy and a belief that they can manage these adverse environmental conditions may allow farm workers to adaptively function in a work environment that contains threats or barriers to their goal achievements (Bandura, 1997, p. 144).

One young grower explained the persistence and effort applied in pursuit of a goal and the experience of frustration if a barrier to success like an adverse weather event thwarts the attainment of this goal.

But in saying that, it doesn't mean you don't put any less - like especially in a dry land situation, it doesn't mean you don't try any less, like, you know, you still give - you still give a fair bit to the crop and it's not from your fault that it doesn't produce. If it doesn't rain it doesn't yield and - and that is, yeah, that's pretty shitty when you say, you know, I've busted my arse for the last six months and endless nights and, yeah, tireless weeks. (Participant C2).

The disappointment that comes when the influence of environmental conditions results in failure can have impacts on work engagement, with exhaustion and disappointment also negatively impacting job satisfaction. To withstand the demands of the environment, it is important that workers have a range of resources to improve their resilience and persist in their work efforts. While personal resources are the focus of the rest of the SCCT model, environmental resources found in the interviews included support from employers, co-workers and industry bodies.

When examining the environmental supports and resources, through the theoretical lens of Perceived Organisational Support (POS; Rhoades & Eisenberger, 2002) the code, Support on Farm, described the attitudes of the owner of the farm and the worker's relationship with the owner and other workers. When this

relationship is based on respect for the worker's contributions and an understanding of the challenging conditions on farm, the owner supports the worker to continue in their goal-directed activity and withstand conditions that stem from the obstacle of seasonal and weather influences. One grower explained the necessity of keeping an eye on his worker's abilities to sustain long work hours and halting operations, if required, to help them maintain their health.

Well cotton's a real interesting one because you're irrigating so much over summer, doing stupid hours, um, like you could be well and truly doing 14, 15 hours a day for um, yeah, six, seven days a week, like for a period of three or four weeks and you can just, well you know within yourself, you're burning out that quickly and you can just see other guys, so you just have to pretty much stop the whole operation and just say, well let's all just have a day off or have a couple of days off and recharge the batteries and um, look after yourselves. Because yeah, just end up being a disaster if you kept up that many hours. (Participant K).

Owners can also act as a protective factor for the worker's self-efficacy in how they respond when workers make mistakes. When workers make mistakes, instead of blaming the employee for the mistake they can treat it as a learning opportunity and help them keep focused on mastering the current goal. The type of feedback given from an employer can persuade a worker to continue in their efforts or create self-doubts that damage their tasks self-efficacy (Bandura, 1997). For example:

(The owner's) a very easy going fellow who um - and I guess that's the two attitudes of the world. There's the people who say who did this and the people who say what do we need to do to make that go again? And um so (the owner's) not a fingerpointer at all. With the large company that was the opposite, so you had 20 managers in a management meeting. They'd all be pointing at each other: wasn't my department. You know and then you get the, the suck up ones that would say look what he did, or - you know? That just ruins morale... We don't have any of that here. (Participant M)

The owner as the overarching influence on environmental supports and resources is evident in their establishment of structures and workplace culture illustrated in the codes (a) Learning, Education and Training, (b) Pay, Rewards, Benefits and Recognition, and (c) Teamwork.

Learning, education, and training was a feature of the work environment as most learning was experiential and took place on farm. Some formal courses offered through the industry body Cotton Australia were utilised by employers but these were sometimes accessed to provide qualifications for staff in recognition of prior learning or to bolster worker's workplace health and safety knowledge (Participant B). These courses were valued by workers as they gave them evidence to demonstrate to others their competence and learnt a sense of legitimacy to their job as a skilled career (Participant D). The investment and effort made in training workers was influenced by the perceived value of the employee. For example, a backpacker that would only work for three months could expect the minimum training required for them to complete a limited set of work tasks, whereas a worker who showed potential long-term commitment to agricultural work may expect more in depth training in developing a wider skill set (Participant C2).

And I'm sure - I'm sure not everyone is the same, but that's just - yeah, that's just what I'm finding at the moment, and (Worker A) is probably the first employee that I've had under me for long - for a full-time purpose. Like we've had - we've had backpackers and, you know, like I - as (Participant C1) said, I fully understand that they're just there for a money grab and they just want their money and they just want to get out into the day and so for that you don't care. You just say, look, I want you to go and sit on the tractor for a week, see ya, and they just go and do it. But with (Worker A) he's different, you've got to sort of take a different approach to him because I want him to care about what we're doing. (Participant C2).

In other words, growers must make a decision between who is the best candidate to provide return on investment when it comes to allocating time and effort to training on farm. In identifying his worker as a viable long-term employee, the grower (Participant C2) described his different training approach in providing support compared to the temporary backpackers. The desire to care for his employee and to demonstrate this in their interactions and the training delivered on farm is motivated by wanting to communicate the value of the worker's contributions to the farm and eliciting more care and dedication from the employee. In this way, it is not simply workers' task self-efficacy and competence that is the aim of on-farm training. This grower's statement also illustrates the relationship between perceived organisational support, values congruence, and work engagement on farm.

Farm owners and growers further demonstrate that they value their employees through recognition of the worker's efforts. This took the possible form of both vocal gratitude and monetary bonuses from farm owners and this reinforced the positive outcomes for the farm associated with workers goal-directed activity (Participant C1, C2, E, X). A farm manager explained the feedback given to him by his employer when he first started as a farm hand:

He said to me the first year I got it all into order and grew, grew reasonably good cotton that year. He come up to me and said it's a credit to you. Because he knew I done most of it by myself (Participant E)

This grower/owner verbalised the value of the worker's efforts in a show of support for his employee.

The teamwork taking place on farm described as; (a) everyone lending a hand, (b) looking out for each other, and (c) learning from each other; was also attributed as a resource which improved self-efficacy and goal achievement. This can also be linked back to POS coming from the owner as the responsibility for the number of employees and quality of people that make up the work team ultimately rests with the employer.

Um, oh I think like, um, it's good having like a good owner to start with, like someone who's pretty supportive, um, but yeah pretty much just - yeah I think the team's the main thing, like having people there like to help out with different things and yeah - like it's good having extra people here that can help out and do things instead of having - uh, being understaffed and struggling the whole time. So that's probably the biggest supporting thing, just having enough workforce, yeah. (Participant B)

In trying to ensure that his backpacker employees were cared for and have a positive work experience while completing their three months work in rural Australia, a grower (Participant K) explained his policy of hiring temporary staff in pairs:

I'd normally get, um, two backpackers at a time...to keep them company, um, if they were travelling by themselves or um, even if a couple were travelling together... um, yeah, obviously I didn't really want a backpacker living out here by themselves and obviously it is isolated, um, but you know, we are close to (town) as a community, but it's always easier to live with someone else and have that company.

This grower demonstrates care for workers, prioritising their wellbeing potentially

above the financial cost of hiring two workers instead of one.

From the thematic analysis it would appear there is sufficient evidence that the employer is the fundamental source of Goal and Efficacy-Relevant Environmental Supports on farm. This aspect of the SCCT model is the most useful to explore as it is potentially something that can be changed through interventions. The demands from the seasonality and the weather cannot be changed; what can be changed is the way workers are supported to meet these environmental challenges. Furthermore, the farm workers interviewed indicated that a major contributing factor to whether they enjoyed their work and the main influence on turnover intentions was their employer, in terms of how their employer treated them personally and created a supportive, positive work environment (Participants A, M, B, and E). Therefore, operationalising this construct as perceived employer support, using the Survey of Perceived Organisational Support (SPOS) but substituting the word organisation for employer, is considered a useful measure for Study Two. The word employer, as opposed to organisation, is more flexible in terms of the many different farm structures and keeps the items relevant for not only those employed on large corporate farms, but also those employed on smaller family farms. The face validity of the items of the adjusted SPOS – 8 item is further supported by the interview data as seen in table 4e.

Table 4e

Face Validity of the Adjusted Survey of Perceived Organizational Support – 8 item (adjSPOS-8)

SPOS-8item (Adjusted)	Interview Data	Comments on Face validity
1. My employer values my contribution to the wellbeing of the farm	And you sort of just go, well, is it [laughs] - like is it worth putting in the effort, because for someone who's fresh it is a lot of effort and the - and the last three months we've had a lot of stuff-ups and a lot of stuff that if I did it myself wouldn't have happened. But in saying that, I wouldn't - we wouldn't have got as much done in the last three months if he wasn't around. So you've sort of got to - you - you've got to learn to realise that there are going to be stuff-ups that if you - yeah, sure, if you did it yourself wouldn't have happened, but if he wasn't here you would be behind the eight, you know, you would be behind the eight ball because you wouldn't have that extra set of hands, so. (Participant C2)	Values the contribution; having an extra set of hands on the farm; even though the worker has made mistakes appreciates the workers contributions. May or may not be clearly communicated to their employee
2. My employer fails to appreciate any extra effort from me	The last farmer I got nothing at all. Three years of not even a thanks or a nothing in three years of being there.....Um, but yeah, previous farms and this farm, yeah, it's just - and sometimes it can be the littlest things. When I got here - I swept the tractor out which is something that you do because you got dirt on your feet or whatever and you get out and I said thanks and it just blew me out of the water. [Pheff]. Three years of not getting anything and he says thanks for sweeping the tractor out so it was quite good. (Participant X)	Appreciation does not need to be costly, or made a big deal; small, genuine gestures are noticed

Table 4e continued

Face Validity of the Adjusted Survey of Perceived Organizational Support – 8 item (adjSPOS-8)

SPOS-8item (Adjusted)	Interview Data	Comments on Face validity
3. My employer would ignore any complaint from me	Not really, because it's um - ah with a big company you do, but with someone like (<i>current employer</i>) it's ah - he understands there's only so much you can do. If the machine's broken and it doesn't work for a day and I can't do anything about that past a certain point, you know? Whereas um with a big company they're definitely much more um results orientated. We'd have to sit down at the end and explain why we only did x amount of hectares a day. (Participant M)	This quote does not match the content of the item but it matches the sentiment. A closer distance between the employer and worker in terms of the relationship makes the worker feel more understood in terms of setbacks/complaints.
4. My employer really cares about my wellbeing	And they're very family oriented at this farm...Even that it is a cotton farm and it's no different to anything else but they make the time. They give you the time. If there's something to go in your family life, it comes first....They'll shift people around to give you the time....That's why I'm still in the industry now because of - if it wasn't like that I probably would have went to the mines. (Participant E)	Part of the employee's wellbeing is the ability to have time off for family if need be, this was a direct impact on the decision to continue working in agriculture or to leave for another industry that could offer an acceptable level of work/life balance.
5. Even if I did the best job possible, my employer would fail to notice	Not everybody's the same though. Like a lot of managers somewhat expect it....so you don't get a lot of, um, appreciation unless it's something that they can see – I guess it's weighted money that they can see...that they've gained while you're doing whatever you've done and you'll probably get a little appreciation. The last farmer I got nothing at all. (Participant X)	Workers may feel that their everyday efforts are not appreciated; they may feel the owner only cares about the bottom line and does not care about the worker

Table 4e continued

Face Validity of the Adjusted Survey of Perceived Organizational Support – 8 item (adjSPOS-8)

SPOS-8item (Adjusted)	Interview Data	Comments on Face validity
6. My employer cares about my general satisfaction at work	Oh, it comes back to like the people you work with, like they're good to work for and everything, and, um, yeah, just if you're in a good spot there's no point changing (Participant A)	While this does not directly relate to the item, the participant clearly links his general satisfaction and turnover intentions to his perception of how his employer treats him.
7. My employer shows very little concern for me	Well the last farm was just - it was pretty much gung ho. It was go. Like don't matter about anything else as long as the job gets done it doesn't matter. But different - um a different set up to here completely. Like, I think it's a lot more relaxed here than what it is there. Like there, there was a lot more stressful. Very much so. (Participant X)	When the employer is too focused on a goal, it may come at costs to the workers health. Worker's stress may go unnoticed on farms as demanding situations are considered the norm.
8. My employer takes pride in my accomplishments at work	He said to me the first year I got it all into order and grew, grew reasonably good cotton that year. He come up to me and said it's a credit to you. Because he knew I done most of it by myself.....That's what he said to me. He said it's a credit to you, the place looks a million dollars. I had the neighbour come over that had been a neighbour to the farm previously. He said to me he said, in front of (<i>the owner</i>). (<i>The owner</i>) had him with him at the time and he said the place is a credit to you. It's a million dollars and that's a lot to me.....And you get that back from your boss. That's better than most pay rises. For them to acknowledge what you do. (Participant E)	Pride in accomplishments and appreciation for their efforts can mean more to a worker than a monetary bonus.

4.2.3 Self-efficacy

Data coded as (a) Mindset, (b) Teamwork, (c) Past farming experiences, (d) Variety of tasks, (e) Autonomy, (f) Confidence in ability, and (g) Sense of ownership, contributed to a thorough understanding of farm workers' self-efficacy for their job. Self-efficacy for work tasks influences adaptive processes including motivation, commitment, and effort which help translate individuals' knowledge and skill into action and in this way affects their competence at work (Bandura, 1997). From the interview data, all workers and owners described needing to be proficient in a wide variety of tasks that could change daily depending on the current seasonal and crop demands. Furthermore, continuous innovation through research and development investments in agriculture means the technology and approaches used in performing of tasks continue to change season to season and worker's need to be confident in their ability to regularly adapt to these new developments on farm (CRDC, 2016).

In terms of skill development on farm, discussions with leading farm hands and managers revealed that "new comers" and those with little experience were assigned what were considered straight forward tasks such as tractor driving. Nonetheless, the completion of these tasks could be problematic if the worker's confidence levels were not supported with a realistic assessment of their competence and adequate on-farm training provided. A leading farm hand described his initial meeting with a casual short-term backpacker worker:

So he comes out to the farm to get three months. He got no experience at all. He don't even drive a car. And that's what he said to me. He said driving tractors, it's a bit like driving a car. I said, no [laughing] not even close. (Participant X).

In this example, the backpacker has underestimated the difficulty of the tractor-driving task, which, if left uncorrected, could see him misjudge his capabilities. The faulty appraisal and inflated self-efficacy could potentially lead this worker to underestimate the effort required to perform the task (Bandura, 2012). Too over confident, and the less experienced worker may not seek help or take the care to complete the task with the precision required or take actions that are erroneous. However, with good supports, training, and on farm experiences, a young farm worker's strong self-efficacy could be a factor in their ongoing dedication and engagement at work. A mastery approach to learning difficult tasks is buoyed by a

sense of self-efficacy (Bandura, 1997). As a young farm hand reported:

Oh, you sorta - like just say with spraying, I know I'm not the best at it yet, but it's, um, it takes a fair bit to get used to it ... and you can tell when you are doing a good job, or like you're doing a good enough job, but you can still improve. Like that's just your learning thing...you'll get better. Like more practice makes perfect. (Participant A).

An accurate self-assessment of competence and appreciation for the complexity of the task combined with self-efficacy ensures effort is invested by this young farm worker in learning new skills. Being able to sense his own improvement potentially impacts his job satisfaction as progressive mastery of tasks have been shown to contribute to a sense of satisfaction (Bandura & Schunk, 1981; Locke & Latham, 1990).

On the job training contributes to farm hands growing self-efficacy for their job by providing modelling opportunities through vicarious experience, verbal persuasion and performance accomplishments which they can draw on when eventually left to self-manage their work (Bandura, 1997). A lack of adequate training can create anxiety in the new farm worker and their self-efficacy will determine whether they will persist on their own. The negative experience when ambiguity surrounds expectations of task performance is explained by a farm owner/manager:

And it's just that and what I found was it's just that hand-down knowledge, so um, the older guy I was talking about before, he - he showed me step by step, okay this is what I have to do and just - a series of steps and tasks um, soon get you through the operation. And then once you've - obviously do it a couple of times, you start building up confidence. But yeah, some farm managers say, well off you go and do it and like [laughs] you say, well where the hell do I - where do you start?... And then it's a confidence thing, that you don't want to go and ask them or, um, like they've told you to go do it, so you don't want to go back and ask them how to do it. (Participant K).

The trust placed in individual farm workers to do their job, and the expectation for them to be self-efficacious and to do their work competently is reflected in Participant A's response when asked how he could tell if he was doing a good job: "I suppose if the boss comes over and doesn't say anything." In this instance, the absence of feedback indicates good performance. It is standard for farm workers to

be given a large amount of autonomy in their day-to-day work. They are expected to monitor their own progress and be responsible for their contributions to the farm. Having confidence in their knowledge, ability, and skills is essential for the farm worker to experience this aspect of the farm context as enjoyable.

The ongoing influence of past performance experience on more experienced worker's self-efficacy was evident in discussions around learning new technology and approaches to farming. The workers' confidence in their current abilities to perform a wide range of tasks translated to confidence to adapt and persist in their jobs. As one farm manager explained, "So I can get on most things and if I'm shown the basics, I'll pick it up because I've had it in my life...yeah and you just carry on." (Participant E). Furthermore, for experienced farm workers, high levels of self-efficacy to perform their jobs acted as a protective factor against experiencing anxiety when considering their job security in two ways; they perceived themselves as (a) more valuable to the industry due to their high levels of knowledge and (b) the confidence in their knowledge raised their sense of agency to achieve desirable outcomes on farm. As a leading hand noted:

And then over the last probably five or six years ... I'm starting to understand more of the technical side of it. And if it's not seed placement is not in the right spot and all of that side of things. The moisture's not there or whatever, then you don't get the good crop and - which affects the owner of the farm, which affects your wages and the time that you spend on the farm, and the hours you get on the farm. (Participant X).

In the above explanation, the leading hand touched on an aspect of outcome achievement outside of their control; having sufficient water. Rather than this factor leading to learned helplessness, it is appreciated as a challenge; for those who are efficacious in their work, it seems to inspire an increased dedication to influence any possible aspect of farming activities within their capabilities. When asked what the most important thing that he was striving for on the farm, a leading hand answered:

We need to grow crops but that's really nature dependent, so ... We do that when we can; to be ready I guess. Um I have to be ready to do it if it, if it is right to go I need to be ready to do it now, because it has to be done now. (Participant M).

Successful past performance reinforces the farm workers self-efficacy. Knowledge about how their actions affect the crop at the end of season motivates

workers to become confident and competent in their ability to exert as much control over the crop outcomes as possible. Their confidence in their ability (self-efficacy) and belief in the impacts of their actions (outcome expectations) influences the effort applied to their work (goal-directed activity). Participant M explained:

We've just had a really good start to the season, so you drive round and everything is beautiful and straight and green and [claps his hands] I love that um order and, and um I guess achievement, especially when you're harvesting it. It's a - it's hard to do in your first couple of years because it is a long time, like there's six months between when we plant now and I don't really do much to the crop if it - until six months time. It's hard to see that reward there but um yeah, the longer you stay here I guess you see that longer term, the ups and downs of it. So you see the, the reward in starting a crop well like that.

Feeling confident that they performed their tasks to the best of their ability, and thus exerting what control is possible in striving for the outcome of producing a high yield crop, may contribute to a worker's pride and satisfaction with their work and help them to maintain interest, enthusiasm and a desire to continue working in agriculture even in the face of experiencing crop failures.

As a majority of training occurs on farm in a worker's specific work context, an employee's self-efficacy can be associated with their current employer and work situation. From the interviews it would seem self-efficacy can also influence the workers perceptions of worth in terms of their contribution to the farm. When a worker feels confident in their skills and their knowledge, this may make them feel integral to the farm business, contributing to a sense of loyalty to their current employer. As one farm hand explained:

I do like it here and ... like I've been here longer than anyone else has been here and pretty much yeah like got a lot of knowledge on the farm so like if I was to leave then yeah it would leave - that would leave - like (co-worker) is only new and apart from (co-worker), cos the manager's left now, we've got no one else at the moment. So that would leave him in a predicament of having, you know, to teach - teach someone else a whole lot of stuff to be able to run the farm and do all the things. So yeah I dunno, yeah it's - I know it and it's - I know what's going on. (Participant B).

Adding to this sense of loyalty, derived from his confidence in working on farm and consequent organisational specific knowledge, is that Participant B

had been with the same employer for the entirety of his farm work career and that overall he was happy with his place of work. For those workers who had experienced a range of work environments, task self-efficacy could potentially add to a workers sense of volition in terms of being able to choose their place of employment. In these instances, workplace loyalty is influenced by sources other than self-efficacy. Participant M, a worker with extensive past experience on a number of properties spoke about the lack of appropriately skilled personnel in agriculture and linked the confidence in his own skills to his ability to pick and choose his place of employment. The relationship between his task self-efficacy and corresponding confidence in his employability is further explored in the analysis of Work Volition.

To measure farm worker task self-efficacy, a scale was constructed listing tasks which were considered most relevant for farm workers exerting influence over the crop and their work. The data from the interviews were compared with the O*NET position description list and items either retained or rejected. The new Farm Worker Tasks Self-efficacy Scale items are reported in the table 4f.

Table 4f

*A summary of Farm Worker Tasks taken from O*NET OnLine (2010) and adapted for a measure of Farm Worker Task Self-efficacy*

O*NET task list	Task mentioned in interviews	Retained or Rejected	Farm Worker Task Self-efficacy Scale Item
Set up and operate irrigation equipment.	Yes	Retained	(6) Set up and operate irrigation equipment
Operate tractors, tractor-drawn machinery, and self-propelled machinery to plow, harrow and fertilize soil, or to plant, cultivate, spray and harvest crops.	Yes	Retained	(2) Operate heavy machinery (e.g. tractors, tractor-drawn machinery, and self-propelled machinery) (3) Ploughing and harrowing soil (4) Planting and seeding of crops
Repair and maintain farm vehicles, implements, and mechanical equipment	Yes	Retained	(1) Repair and maintain farm vehicles, implements, and mechanical equipment
Harvest fruits and vegetables by hand	No	Rejected then reworded. Cotton and other broad acre crops are not harvested by hand. This item was reworded to reflect the use of harvesting machines	(9) Harvest crops by machine

Table 4f continued

*A summary of Farm Worker Tasks taken from O*NET database (2014) and adapted for a measure of Farm Worker Task Self-efficacy*

O*NET task list	Task mentioned in interviews	Retained or Rejected	Farm Worker Task Self-efficacy Scale Item
Apply pesticides, herbicides or fertilizers to crops.	Yes	Retained	(8) Apply pesticides, herbicides, or fertilisers to crops
Inform farmers or farm managers of crop progress	Yes	Retained	(10) Inform farmers or farm managers of crop progress
Identify plants, pests, and weeds to determine the selection and application of pesticides and fertilizers	Yes	Retained	(7) Identify plants, pests, and weeds to determine the selection and application of pesticides and fertilisers
Direct and monitor the work of casual and seasonal help during planting and harvesting	Yes	Rejected – this task is more specific to managerial duties which is not the desired demographic	
Clear and maintain irrigation ditches	Yes	Retained	(5) Clear and maintain irrigation ditches
Record information about crops, such as pesticide use, yields, or costs	Yes	Rejected – this task is more specific to managerial duties which is not the desired demographic	

4.2.4 Expected and Received Work Conditions and Outcomes

In the interviews, participants reflected on the unique combination of work conditions and outcomes (either directly or indirectly) received in the pursuit of farm work. These expected and received work conditions and outcomes are a result of the pursuit of goals specific to the farming context. The information coded as Goals and outcomes at work revealed two main objectives being worked towards on farm, these were (a) to grow a high yielding crop, and by doing so to, (b) make a profit for the farm.

The biggest challenge is to run it to the best of your ability...so you get the best performance for the money you put in... So, you know, we're always striving for the highest yields that we can achieve in the cotton. The more you can achieve the more money that's coming back into the farm. (Participant D, Farm Manager).

The expected and received work conditions and outcomes of a farm worker can be categorised according to these two on farm goals and described in the codes (a) Autonomy, (b) Environment, (c) Busy days, (d) Time pressures, (e) Variety of task, (f) Pay, reward, benefits, and recognition, (g) Economic aspect of farming, and (h) Stability.

A third personal goal that impacts the engagement and satisfaction of farm workers describes the intersection of work conditions and personal life in pursuit of "living a good life". As described by a leading hand, "It's not so much the farm work that I find rewarding. I think it's um the lifestyle that it brings with it, like I couldn't afford to own 40,000 acres and on the weekend this is mine, you know? Me and the kids have quad bikes and bows and all the rest of it" (Participant M). The expected and received lifestyle outcomes of farm workers were discussed in terms of how they are directly and indirectly related to their work context and are described in the codes (a) Environment, (b) Work as lifestyle, (c) Recreation, (d) Family and personal relationships, and (e) Community.

Underpinning both the goals of the workplace and the work conditions and outcomes experienced on farm are the values that influence the pursuit of farm work. Maybery et al., (2005) identified three value categories that Australian landholders have for their farms which can be linked to the major goals identified by the participants. These are conservation values (linked to "growing a good crop"), economic values (linked to "making a profit"), and lifestyle values (linked to "living

a good life”). The personal importance that individual farm workers place on each of these workplace values indicates a level of congruence and fit with the farm as an organisation.

4.2.4.1 Conservation values and “growing a good crop” outcomes.

Conservation values congruence and “growing a good crop” outcomes are linked to the rise of sustainable farming practices. Agriculture is a constantly evolving industry with new technology and approaches being introduced to improve the protection of natural resources and management of the environmental impacts that result through farming. In recent years, more sustainable farming approaches have become normalised through the increased uptake of better practice management initiatives championed by the cotton industry (Cotton Australia, 2017). To identify with the conservation values of Australian farms—such as “the most important thing is leaving the property in better shape than when I found it” (Item 11) and “I like to look after the land, making it work for the farm, without destroying it” (Item 15)—is to identify with the values which now underpin the ideal quality of everyday work that farm employees do in pursuit of “growing a good crop” outcomes. In the interviews, it was clear there was an affinity with the natural surroundings and an acknowledgement that the environmental impacts of farming have been markedly improved over the years which was an excellent outcome for all.

And a lot of changes are for good... I think we sprayed about three times last year just for weeds and two times for insects where it used to be 12, 14 times with deadly insect sprays, so all that's been cut out of it now....But it's better for the environment. Like.....under the old insecticides they had - ... you'd spray and there'd be dead fish everywhere. Yeah, so it's a lot better on the waterways, better for the birds, better for everything. (Participant D, farm manager).

Participants also acknowledged that sustainable farming practices, when natural resources are responsibly managed, were consistent with making a profit and ensuring a good life for those living on farm. In this way conservation values can complement both economic values and lifestyle values:

They don't want to poison that land because that's where their money comes from. So they're going to take the best care of it they can. They're going to stop the erosion when they can because it wrecks their money making

potential. They're not gonna spray harmful chemicals out because their kids live right there. (Participant M)

Valuing environmental and farming practice improvements has the additional benefit of creating better work conditions.

As conservation values now underpin day-to-day farm work in pursuit of growing a good crop, to identify with these values requires workers to embrace the work conditions and appreciate the outcomes of engaging in farm work. The work conditions and outcomes on offer in pursuit of the primary goal of farm work – to grow a high yielding crop - were identified as a major aspect which contributed to the participants' pursuit of a career on farm. While not all aspects of work conditions are desirable, all participants with extensive experience (i.e. employed in a leading farm hand role or higher position) agreed that the cotton industry had come a long way in improving work conditions. Work conditions discussed by the participants included (a) working outdoors, (b) autonomy, (c) continuous learning, (d) health and safety risks, (e) long work hours, and (f) challenges requiring hard work.

Being able to work outdoors and working on the land was a consistent attractive work condition discussed by the participants. "Oh, it's being out on the land and just, um, just always liked the work or - whether you're on the tractor or you're fixing them or just - yeah.....just all different things in agriculture" (Participant A, farm hand). Furthermore, farm workers could expect to receive an increasing amount of autonomy in their tasks as they gained more skills, but even those at the entry-level stage could expect to work without a lot of supervision. As a leading hand explained:

It's not a highly supervised job. We're not in a factory where your supervisor's just there and you're forced to continue going until the buzzer sounds...there's one other fella here with me today and there's 30,000 acres so...I don't know where he is. That's [laughs]...well I'm hoping that he's doing his job. (Participant M).

The continual advancements in the industry gave workers the opportunity to be in a work environment which provides even the most experienced people the opportunity to constantly learn. "Every year there's a different variety, or different machinery, or different programs or, you know, it just changes every year." (Participant D, farm manager). Unlike other manual labour jobs, workers do not specialise in a particular trade but instead have an opportunity to be able to develop

competence in a wide skill base. Different skills needed to be used at different times of the season, and this variety coupled with a level of unpredictability of what they would need to do on a daily basis (due to the strong influence of season and weather) kept workers challenged and interested.

So yeah like there's, um - I think it's just the - like just being out in the open, yeah just the freedom and yeah it's hard work but I don't know it's the, um, the challenges too I suppose and it's - yeah most of the time when you're not like on a tractor or whatever it's - yeah you're doing different things so learning different things. Yeah I'd never - if I hadn't come out here I wouldn't be able to do a lot of things that I can do now so it's good in that way. (Participant B, farm hand).

Some tasks performed by farm workers can carry higher health and safety risks compared to other work professions. One worker spoke specifically of his dislike for handling chemicals due to exposure in his younger years and past health problems he has experienced related to his handling of chemicals (Participant X, leading farm hand). When asked whether he would ever refuse to do this task because of his health concerns or to speak up to his boss about what his limits were, he was hesitant to do so saying:

I probably wouldn't mention that to him. Just for the fact it (using chemicals) was more of a fear factor for me, and maybe losing my job. Oh if you can't spray well that's - I'm not having you farm because that's a part of farm life.

Throughout this discussion and conversations with other farm workers it was clear that workplace health and safety practices to manage risk, like that which is present in handling of chemicals, are more widely implemented in modern farming than in the past (Participant X, Participant M). As previously mentioned in the analysis, due to scientific advances, chemicals are not used in cotton farming as much as they used to which has been confirmed by other workers on other farms (Participant D).

Farm workers can expect to work long hours at different times of the season, when management of the crop requires an increased labour effort. At these times, the crop needs to become the worker's priority which limits their ability to request holidays. It can be hot, repetitive, and less than ideal work conditions. Workers can sometimes struggle with these hours, experiencing lack of adequate rest, stress and exhaustion, if not managed properly. These conditions represent some of the more challenging aspects of the job. For example, one farm hand (Participant B) spoke

about the tiredness he experienced when watering the crop over a period of approximately 10 days, needing to work nights and waking every few hours, but he also clarified that he still enjoyed this aspect of his job stating, “Oh I do enjoy - even the irrigating you enjoy it but it's probably the worst part of the job”.

While past research has understandably raised concerns over the long hours worked on farms and the potential for burnout, workers are not expected to always operate at this level and the working conditions change as the season progresses. As a leading hand explained:

So you know that once this is done you know you're going to have at least a week or two weeks or whatever.... You're still working but you're nowhere near the stress levels...you start at seven o'clock in the morning. You know you'll be finished at five. (Participant X).

There is a sense that the effort required to get the work done in the challenging conditions experienced during peak times is satisfying in and of itself. The experience of past successful goal attainment can help workers maintain motivation in the face of these challenging conditions and they accept and even enjoy them, taking pride in the commitment they've made to their work, expecting it to pay off in the growing of a good crop.

And all the hard work you've put into it. That's rewarding I reckon...And you can, yeah, that's what I get out of it. I like to get the reward of knowing that all that hard work that I've done...and that's – (the owner) said to me, what are you going to do next year. How are you going to beat that? I said well all I've got to do is do my best. I said I mightn't - I said I'll probably never grow [laughs] six point three like that again. But I said I know it's doable. (Participant E).

From the interviews, it is clear that conservation values and the farming practices associated with caring for the land and managing the natural resources used to grow a good crop are present on cotton farms. Furthermore, to identify with these values, is to embrace key aspects of the work environment found in farming, including: (a) working outdoors, (b) working with a considerable amount of autonomy, (c) use of a wide range of skills, (d) continuous learning, and (e) performing challenging work. The conservation values subscale of the Landholder Values/Objectives Scale (LV/OS; Maybery et al., 2005) contains items which are the most proximal to the work experiences of farm workers compared to the economic

values subscale or the lifestyle values subscale. As such, it is considered the most likely to capture the relationships between outcome expectations and the other constructs hypothesised in the SCCT Model of Farm Worker Job Satisfaction.

The Landholder Values/Objectives Scale (LV/OS; Maybery et al., 2005) contains three subscales that measure three values that influence farming businesses, including (a) conservation values, (b) economic values, and (c) lifestyle values. The items included were originally worded to be read from a farmer/grower's perspective. As farm workers may not have control over the way the farming business operates these items have been reworded to reflect the individual's alignment with these values in terms of importance and ideal workplace practices. For example, the conservation values subscale original item "Managing environmental problems on my farm is a very high priority for me" was changed to "Managing environmental problems on the farm is important and should be a very high priority". The core value is kept but the wording has been changed to meet the requirements for a measure of farm worker values congruence in the current study. Further analysis of the face validity of the conservation values congruence subscale at the item level is reported in Table 4f.

Table 4g

Face Validity of the Conservation Values Congruence Subscale

Conservation Values Congruence Item	Interview Data	Comments on Face validity
11. Good farmers regularly make land care improvements to their property	When I first got back home, it was all about production, all about trying to do everything I could to get the highest yield and the rest of it. Now I've had time to sit back and watch the whole system work, um, I realise that land care and conservation and doing things right for the environment plays a huge part of your business because the more things you get right there, the more productive your soil and land becomes. So I've - I've, yeah, definitely changed my views on that. (Participant K)	Land care improvements are important and are valued by growers as they are considered beneficial to production.
12. The most important thing is leaving the property in better shape than when I found it	I get out of bed every morning to improve this farm (Participant E)	This item in particular taps a value and an expected outcome that seems to act as an antecedent to worker engagement and improved production on farm.
13. Good land management by farmers is more important than anything else about farming	Oh no, I think that they should be regulated because it's um, ah - we're talking about the biggest part of our landmass, so - like I would affect more land than 500 people in the city every day. Like my actions would affect more you know, as far as erosion and, and um escaping chemicals and stuff like that (Participant M)	Farm workers are environmentally conscious and understand the control and influence they have on the environment in their daily tasks.

Table 4g

Face Validity of the Conservation Values Congruence Subscale

Conservation Values Congruence Item	Interview Data	Comments on Face validity
14. Managing environmental problems on the farm is important and should be a very high priority	I think we sprayed about three times last year just for weeds and two times for insects where it used to be 12, 14 times with deadly insect sprays, so all that's been cut out of it now. So we try to use a lesser - not such of a hard chemical because there's so many insects that are beneficiaries to us now... Now we get like ah food sprays to spray the whole crops with the entire - the good bugs. But it's better for the environment. Like... ..under the old insecticides they had - fuck you'd spray and there'd be dead fish everywhere. Yeah, so it's a lot better on the waterways, better for the birds, better for everything. (Participant D)	The example given here with pest management shows that 'good' pests can be identified and distinguished from pests that are problematic to the crop. Different ways are used to eradicate problem pests so as not to destroy the farm ecosystem and preserve natural resources that benefit crop production.
15. I like to look after the land, making it work for the farm, without destroying it	With a cotton farm, if you make a mistake at planting or ripping up the ground at the start even, it can be as far back as that. It affects the whole season and it's nearly 10 fold all the way through the whole season until you finish. So everything at the start of the season, or everything through your cotton nearly has to be perfect. Because if it's not perfect then it'll be an issue right throughout the whole watering season or whatever you're doing. Like if you've got a wobble in your rows and you don't back back and fix that wobble up then your water's going to jump over rows and there's going to be wheel tracks where they're not supposed to be, and your crops not going to grow as strong because it's been - the soil's been compacted. It's not light and fluffy. (Participant X)	While this does not explicitly refer to land conservation, it does demonstrate a commitment to working with the land and ensuring the optimum soil and environmental conditions are met at each developmental stage for the crop. This item recognises the influence that the individual worker has on the land and the land's ability to produce a good crop.

4.2.4.2 Economic values and “making a profit” outcomes. Being concerned about making a profit is something that employees are made more aware of as they move into positions of greater responsibility on farm. But even when they are in charge of managing budgets, their ultimate concern is not to think about their work in terms of making money but to produce the best crop possible. There is an appreciation for the goal of making a profit but it tends to be a secondary consideration. “My job is to get the product to them so they can sell it.” (Participant D, farm manager).

One grower (Participant K) indicated that he purposely does not want his employees to be concerned with the economic aspect of the business as he was worried that it would motivate them to try and take short cuts to reduce costs of resources or to shoulder more of the labour responsibilities to save the business money.

I don't want to burden the employees with the financial load of obviously the farming business, um, because I don't want them - I want to get their mindset in that they want to produce the highest yield or um, profitable crop...and as soon as you start thinking of a financial burden or if, um, I know they would probably start cutting corners.

This is one way that placing a strong value on profit could drive an individual to over-commit their efforts, working increased hours, or stretching resources (e.g. trying to repair machinery themselves rather than alerting the grower to the issue) that would ultimately lead to dissatisfaction and burnout.

A lack of satisfaction was expressed by one worker who perceived that economic values informed the only goal of the grower. This singular focus meant the worker's effort displayed in commitment to growing a good crop went unrecognised unless the profit was realised. “I guess it's weighted money that they can see...that they've gained while you're doing whatever you've done and you'll probably get a little bit of appreciation” (Participant X, Leading farm hand). But when these economic values are held in conjunction with either of the other values (e.g. making money is related to increased resources to grow a good crop, or conditions that look after the employee lifestyle) there seems to be no negative effect on job satisfaction. “At the end of the day the more money I make for the owner, the more he spends on the farm. The more he looks after me.” (Participant E, Farm manager).

Economic values were important for ensuring job security and stability for farm workers. In discussing cost cutting, that happens during times of drought, Participant M (Leading farm hand) noted that wages for a worker who is unable to be productive due to weather conditions seems an obvious way for growers to reduce expenditure on farms. However, as workers became more experienced, they became more valuable to a farming operation which increased their chances of retaining their jobs during tough seasons. In this way, economic values motivated farm workers to be dedicated and become indispensable parts of the farming business. As explained by Participant X (Leading farm hand), “You got to make sure you got yourself in a pretty good position on farm when there’s a drought.”

From the interviews it was apparent that farm workers do understand the economic values driving the pursuit of profit on farm, but the work conditions, and received and expected outcomes that come from these economic values can be mixed in terms of their benefit for the worker. Analysis of the face validity at the item level for the economic values congruence subscale adapted from the Landholder Values/Objectives Scale (LV/OS; Maybery et al., 2005) is reported in table 4g.

Table 4h

Face Validity of the Economic Values Congruence Subscale

Economic Values Congruence Item	Interview Data	Comments on Face Validity
1. Dollars and cents is what farming is all about	When most people see \$60 to \$80,000 a year coming out of the bank account and they don't really need the bloke right now, they get rid of him.(Participant M, Leading farm hand) They just want to see the bottom dollar and see the job getting done. (Participant X, Leading farm hand)	At the core of it, farms are businesses and reducing expenses while maximising profits is perceived as a main motivational factor behind grower decisions, sometimes to the farm workers detriment.
2. I view the farm first and foremost as a business enterprise	So the cost of chemicals and labour and everything you've really got to balance everything so everything's working as a well-oiled machine (Participant D, Farm manager)	Farm workers in higher positions of authority, such as farm managers are responsible for managing economic factors, this value underpins their work
3. When future farming activities are planned the only focus should be on how profitable they will be	So with the wheat you might average – on dry [unclear] you might only average like \$800 to \$1200 a hectare even when the cotton drops down and you're producing say – well this year was 6.4 bales to the acre so 15 to the hectare you're making around \$4500 per hectare considering to the eight. (Participant D, Farm manager) If you put the – if you add it up, what's that other working going to cost you. To what it's going to cost you if you don't get it in (Participant E, Farm manager)	The profits that can be made by choosing to grow cotton are a clear indication of values that underpin future farming activities. The costs of operations are considered by farm workers, particularly farm managers

Table 4h continued

Face Validity of the Economic Values Congruence Subscale

Economic Values Congruence Item	Interview Data	Comments on Face Validity
4. A maximum annual return from the property is the most important aim	If I was to go and say to him you've got to do more. You're, you're not doing enough hours or something, it wouldn't be because I want the farm to make more profit. But it need – my crop needs to look better, so I guess it's the farm making more profit but at the end of the day (Participant M, Leading farm hand)	Aiming to make a profit is the ultimate goal, but it can only occur if the worker focuses on the closer goal of growing a good crop. This farm workers statement would seem to indicate the more proximal goal of growing a good crop is personally more important than aiming for profit.
5. Money and profit are not the most important things about farming	Yeah, this is your - this is your - you treat it - as much as it's a family - you - you look at it as a family farm but you've got to treat it as a business. You've got to treat it as any old business in - in town and if you don't make money you're not going to - you're not going to be there in five years or 10 years or... or two years. So you've got to look at it as do I want to live here for the rest of my life because, yeah, it's not just a business, it's your house, it's your home. (Participant C1, Grower).	For growers who are emotionally connected to their land, (as it is not just their business, it is their home) have to ensure the farm is financially successful to keep the family home. The most important thing may be to continue the family tradition of farming but money and profit are inextricably linked to this priority. This item is the one item that is negatively worded and may not fit particularly well with the rest of the items.

4.2.4.3. Lifestyle values and “living a good life” outcomes. The appraisal of the lifestyle that was attainable and on offer when engaged in farm work was a major contributor to job satisfaction and the continued retention of farm workers. Furthermore, descriptions of lifestyle encompassed both work and leisure time and the environment and conditions that are experienced in work, home and community domains. The distinction between being at work and being away from work is less clear than other professions as it is common for farm workers (and their families, if they are at that stage of life) to live in accommodation provided to them on the farms where they are employed. This was the case for all participants, although not all of their co-workers held the same arrangements.

The open space, lack of congestion, freedom to make noise or enjoy the peace and quiet, and enjoy the outdoors and recreational activities such as fishing, quad bike riding, and shooting were some of the environmental aspects workers appreciated about this arrangement and that they otherwise may not be able to easily access in other jobs. As leading farm hand, Participant X explained:

When you get home in the afternoon you play up pretty much. You got the whole farm, 10,000 acres to muck around on. So it's like a huge backyard. It's just great, you know. Investigating and different things and seeing you know just different things.

The desirable environmental aspects of living on farm were contrasted with the less ideal aspects of the city lifestyle which included congestion, noise and a lack of space and privacy. As farm manager, Participant E explained:

Well lifestyle wise. You live in the city so you walk out your backdoor. You've got someone - you're looking at someone. I walk out my backdoor. I've got nothing. I've got trees. I've got the river right behind me. I've got me animals. I've got me sheep. I've got me - I've got the horses. I've got the pony for the kids. You know. I can sit on my veranda in the afternoon, if I knock off early, and you just sit there and you say that - you can't hear nothing. It's quiet. It's peaceful.

Aspects of farm work were also encompassed by the concept of lifestyle, in that work offered people a chance to break out of the perceived repetition of more traditional white collar jobs and enjoy some spontaneity; responding to their work demands with different tasks as required moment to moment. As explained by grower, Participant C2:

I guess it's not the nine to five, wake up, throw a suit on, go and sit in front of your - in - in front of your computer and then, you know, jump on the train and go home and have dinner and go to bed, wake up, throw a suit on. It's not that. You do, some days you wake up and someone goes, what are you doing today and you're like, I have no idea, but I'm pretty sure it's going to be busy..... I guess the life - I guess the lifestyle that they talk about really is, is just the - the waking up and not knowing what you're doing each day.

For some, the work is the lifestyle for them – in terms of it is an extension of their own interests and their identity. In this way they strongly identify with the lifestyle values on offer as the farming context allows them to spend time on activities they personally find worthwhile and meaningful. It allowed them to be their genuine selves as opposed to adopting a work ‘role’.

It's very much a blurred - and you'll find that if you were to come round my house on a Saturday or go round (his co-worker's home) on a Saturday, we'd be doing something very similar to what I do for work. I, I'd be outside putting up a fence for the chickens or building a motorbike for the kids, or we'd - that's the, that's part of the lifestyle. This job is very much um how we all like to live I guess. (Participant M, leading farm hand)

In considering their pursuit of farm work as a career and their current place of employment, one important aspect for farm workers is what it means for their family. Salary packages which provided a decent wage, accommodation, utilities, vehicles and fuel meant the male farm workers with families could afford a lifestyle that may not be possible in a city where costs of living were higher (Participant D, X, M). They also valued what living rurally meant for their children, including: (a) a slower pace of life, (b) raising them in an environment where they could be “free range”, and (c) instilling in them values that they viewed as important and synonymous with living on farm, such as developing a conscientious work ethic, being able to take responsibility for themselves, and common sense around potentially dangerous machinery (Participant M, E, X). Career decisions to stay with a particular employer or to leave and find work opportunities elsewhere was also influenced by adequate time given to enjoy family life (Participant E, M).

It was acknowledged that while work was able to provide many positive supports for their family, reciprocally workers' family support in terms of both practical support (having their domestic work taken care of) and emotional support

(understanding absences at times of the year), meant they were able to commit to working long hours, which otherwise may have been untenable (Participant M). Extending on the impact of the presence of personal support away from work; the perception of the lifestyle on offer as desirable was impacted by the participant's relationship status, distance from their social network, and also the location of the farming community. For young, single men, the lack of a partner or living away from their friends and family could result in loneliness and a desire to leave their current employer. Participant A, a young farm worker reflected on living and working on a property that was about a one-hour drive away from friends and family:

I still get lonely and that out there, but, like some people like being alone...I can for a bit, but then it gets a bit much...Like you miss everyone, but, um, that's the down side of lifestyle, isn't it? If your family were with you out there, it – yeah it would be all good.

Participant K, a grower/owner/general manager, explained the influence of proximity of family and friends on the retention of farm workers:

I had a really good young bloke working with me for the last, um, two years and he left um, at the start of the year, to go back to Dalby to work on a farm, um, for personal reasons and that's where his friends were and that's where he grew up.

Connecting with a welcoming, supportive, rural community was also seen as a benefit to being a farm worker. Local sport such as football games, birthdays, school events and agricultural industry days brought people together (Participant B, E, X). The benefits of the closeness of these communities were perceptions of safety and a feeling of “comradeship” that extended beyond the farm gate and this was considered unique to the rural location in comparison to city living (Participant M). As farm manager, Participant E described:

I can walk down the main street and everyone will say g'day. Don't matter if you're a bar of soap. You walk in the city, people'll walk over the top of you before they said g'day to you. Yeah. You know it's just a different lifestyle.

Concerns about the changing community aspect of lifestyle were raised with one farm manager explaining that this could be under threat by technological advancements in agriculture. The example technology discussed was the round bale pickers now used in cotton which are estimated to have reduced the labour

requirements by eight people per 1000ha. (Bennet, Woodhouse, Keller, Jensen & Antille, 2015). The depletion of the workforce resulted in the reduced community population. In discussing the uptake of new technology on farm, farm manager, Participant D explained:

It's better for the owners but it bugged a lot of smaller towns up. (Town A) used to be twice the size that it was. (Town B was) a population of 500 people. I think there's about 80 there now.

In this way, economic values potentially negatively impacted lifestyle values.

The importance of identifying with the lifestyle offered by farm work was found to be particularly important to attracting workers. One grower (Participant K) noted the challenge that someone coming from the city to work on farm could face:

If I was looking through the paper and ...and saw a farmhand job, if you're - if you've been working construction or doing - be really hard to ah, pick up that lifestyle and dump you into a farmhand job, because you really - I think the actual work involved, people would be very good and um, pick it up straight away, it's, I guess it's that, um, how you live or how you interact with that ah, work.

From the interviews it was clear that identification with the lifestyle that is synonymous with farming is influential to the attraction and retention of people to farm worker roles. Given the evidence presented, it would appear that lifestyle values have some links to work satisfaction but are expected to have stronger ties to overall life satisfaction. The closeness between the work and home environment means the potential for spill over between job and life satisfaction may be greater than other professions. Analysis of the face validity at the item level for the lifestyle values congruence subscale adapted from the Landholder Values/Objectives Scale (LV/OS; Maybery et al., 2005) is reported in table 4h.

Table 4i

Face Validity of the Lifestyle Values Congruence Subscale

Lifestyle Values Congruence Item	Interview Data	Comments on Face Validity
6. The lifestyle that comes with being on the farm is very important to me	Honestly I wouldn't change a thing. The lifestyle. This is what it's all about. (Participant X)	The lifestyle when valued is clearly a source of satisfaction but whether it may be more influential on overall life satisfaction as opposed to job satisfaction
7. Farming communities are a great place to live	Yeah. I don't know, I think it's just the people, not the ones that you just work with but like a lot of the other farmers around here, um, young people that work on farms and that I'm good friends with and, um, it's the community as well that's round here. Yeah you meet a lot of people and everyone knows everyone which can be good, can be bad. But yeah that's pretty much just it, like you can – yeah I don't know, it's like this little farming community and everyone talks and what not. So it's pretty good. (Participant B)	The small, familiar community that is found in farming is generally supportive. There are opportunities to meet people and other young people working on farms who may have similar interests to each other as they identify with the lifestyle that comes from farming.
8. I enjoy the peace and quiet that comes with farm work	But that's what I mean though...it's those sort of little things um, sitting down having a beer of an afternoon out on the veranda and looking at the sunset which you saw before. (Participant X)	The peace and quiet that comes with farming is a part of living and working in a natural environment setting. It is appreciated.

Table 4i continued

Face Validity of the Lifestyle Values Congruence Subscale

Lifestyle Values Congruence Item	Interview Data	Comments on Face Validity
9. A rural environment is a great place to raise children	<p>We've always been brought up on a property. So we were always, you know. And I like it for my kids too (Participant E)</p> <p>But it's hard to beat a country kid over a city kid. No offences to anybody but...It's really - it is really, they're just grounded. There not no - they got more common sense because they're around quad bikes and tractors (Participant X)</p>	<p>There are aspects about the rural environment, including the opportunity for children to be quite active and outdoors which appeals to people who do farm work (potentially as one aspect they personally enjoy about their work is being outdoors). People who are second generation farm workers and raised in this environment may want similar experiences for their children.</p>
10. I do not make a fortune from farm work but the lifestyle is great	<p>It's just the security of everything out here's the main thing. So... So I don't have to pay rent, I don't have to pay power, I don't have to pay for phone, the vehicles supplied plus on a big salary... I just like it out here. Nice house, good setup, it's peaceful. Yeah. I can just go and do my thing. It's a good school for (my son) so that's – everything's pretty cruisey out here at the moment (Participant D)</p>	<p>What is considered a 'fortune' is very subjective, and generally all the workers reported being satisfied with their remuneration packages. Furthermore, it was clear the overall lifestyle was considered favourably. The "but" in this sentence may not be needed in the cotton farming context and may confuse the person rating the item. The juxtaposition of extrinsic vs intrinsic factors may not be useful as potentially both conditions can be satisfied and it is not necessarily an either/or scenario.</p>

4.2.5 Participation in and Progress at Goal-directed Activity

In terms of goal-directed activity, the workers interviewed indicated a commitment in their work activities to doing things properly and thus ensuring that at each stage of the crop they were having the greatest affect possible on achieving the end goal of growing a high yielding crop. The quality of this goal-directed activity is understood through the psychological construct of work engagement. Work engagement is proposed to be characterised by experiences of (a) dedication (affective component), (b) vigour (physical component), and (c) absorption (cognitive component) in the performance of work tasks (Eldor et al., 2016). An understanding of farm workers' experiences of work engagement can be drawn from examining aspects of interview data coded as (a) Teamwork, (b) Mindset, (c) Time pressures, (d) Dedication, (e) Energy and exhaustion, and (f) Sense of ownership/emotional commitment.

In terms of how work engagement is experienced, it most commonly was represented in interviews through descriptions of behaviours which demonstrated the dedication of farm workers to their job. This was inferred by depth of detail given around examples of what they did in their day to day jobs, and their description of what a good farm worker "looks like"; which was someone who would work hard and go above and beyond the minimum effort required to get the job done. Dedication was conveyed in the way farm workers effectively worked towards goals on farm and completed their tasks, ensuring they were done properly the first time.

A sense of enthusiasm was associated with dedicated work behaviour. Participant C1 described hiring a recent employee, contrasting this worker's enthusiastic attitude towards work with past employees who were not as invested in their work and consequently cared little about getting the work done to a high standard. This enthusiasm and dedication at work was underpinned by experienced farm workers' appreciation for the impact their efforts can have on achieving farm goals. As Participant M explains, a farm worker's dedication at work is essential for the crops' success

With the cotton it's, it was ah um every single part of it could be changed by you. It's a - what you put into the field, if the machine wasn't set up right or if the planting wasn't done to the right depth or - all of that affects your crop. This enthusiasm and passion for farming was described as a key motivator for farm workers to dedicate effort to learning and improving their execution of

work tasks and goal-directed activity. Participant X explained, “Well I love the job. So that makes me want to, ah, really get into it and learn.”

Having a sense of ownership in their work was a factor that was described in conjunction with some farm worker’s descriptions of dedication. This was a potential motivational influence on the performance of their job. Workers that conveyed a personal attachment to the work; describing their work in ways that conveyed it was meaningful and important (intrinsically motivated), and indicated a strong sense of responsibility in their roles; displayed this emotional commitment to their jobs. They viewed their work contribution as significant to the farms success. As Participant E succinctly stated, “I take my job as heart-to heart. With my job everything's important to me so I can - like I treat it like my own.” Participant M elaborated on this sense of ownership and explained how this increased when he took a Leading farm hand role and went back to actively doing farm work tasks as opposed to managing workers on a corporate farm:

You even state my farm, not their farm because...And that comes back to this smaller farm is um - much more of it's up to me. I drive the tractor. Before I used to show you how to drive the tractor and walk away and come and check on you twice a day.

One grower (Participant C1) discussed how due to his financial ownership of the business he believed that more care was taken when he performed tasks compared to his workers. This belief potentially influenced the financial incentives that he offered workers to elicit more dedication in their work. Other motivating factors to be a dedicated and engaged worker included (a) not wanting to let the team down, (b) needing to fulfil high performance expectations they placed on themselves, (c) needing to establish a good professional reputation, and (d) maintaining job security in their current role (Participant D, E, M, X, B). Furthermore, engaged workers described finding the effort and dedication they applied to performing their jobs as a positive experience, it was seen as rewarding in and of itself (Participant E).

Workers expect to invest a significant amount of time and energy into their work and the expectation of a good worker is one who will “just work really hard” (Participant B). Depending on the task requirements on the day, they “can come home with energy to spare, but also can come home exhausted” (Participant M). In this way, the vigour component of engagement fluctuates in response to work

demands. Work can be perceived as stimulating and challenging through to repetitive and boring. Struggling to stay engaged when performing repetitive tasks was discussed but it did not seem to impact on overall job satisfaction as it was acknowledged that every job would have undesirable aspects to it. As explained by Participant X:

There's no matter whether you've had 12 hours, 10 hours, 24 hours sleep. You're still going to get drowsy. Um, but with the machine, um, you know if you get out and check it every two hours just to make sure everything's right. That sort of gives you a bit of a wake up... Whereas if you were sitting in an office, you go outside I suppose and get a cup of coffee if you start getting drowsy or whatever. Whereas I get out and I walk around the machine and make sure the press wheels are okay and nothing needs to be changed or you know.

In this way, when the farm worker is feeling less engaged he will stop the task and deliberately try and refocus his attention on aspects of the machine to break the monotonous action which can feel draining on energy resources.

Much of the discussion around the expenditure of energy at work, was not framed in terms of vigour but talked about in terms of risk of burnout. Burnout was considered something that even the most dedicated and engaged employee can experience if aspects of their work, including time pressure, busy days, and having appropriate recovery from work, are not adequately managed. One young farm hand explained the satisfaction that came with the progress made when applying effort as opposed to exerting energy but feeling like he had made no headway in his work.

If you've had a good day and you [laughs] - you've achieved some - a lot of stuff then yeah you don't feel too bad. But like the other days it's yeah ... And you get days where you're just running around and yeah the day goes quickly but you get home and you're just absolutely buggered. (Participant B).

The importance of being able to let go of work when at home, especially if it was a long and difficult day, was integral for workers' being able to come to work the next day with the right attitude and ready to direct their energy back into the tasks being performed that day. One farm manager (Participant E) explained the reasoning behind his workplace's policy of limiting shifts to twelve hours a day in order to stay engaged at work:

If you wear yourself into the ground at the end of the day, you're not going come - you, you, you're tired, you're at work you're not giving 100 per cent. Because you're bugged in yourself. So you're working but your mind's not there properly. You're not physically - you're still working but you're not getting - you can do more in 12 hours than you can do in 16.

When experiencing the exhaustion and frustration of tough, long days at work, it was having a positive attitude and then focusing on the present moment that was identified by workers as helping them put a bad day behind them and to get up and get back to being engaged at work the next day. “You get over it sometimes but yeah then it's a new day and [laughs] like that's it. Like I dunno, just take each day as it comes I think.” (Participant B).

All farm workers described being busy at work. Perceptions of time could change, often days were described as passing quickly, “Yeah, my day [laughs] always goes too fast” (Participant M), and that being busy was a positive experience “I don't, don't mind being busy. You just feel good” (Participant A). Participant B described keeping an eye on the time while racing against the clock to get tasks finished:

When it's like a busy day like sometimes you're watching the clock and hoping for it to go slower so you can get things done. Like if you've got to get stuff done but yeah no it's, um - yeah you do get stuck in your days sometimes and they just - which is good, like you can achieve a lot

Alternatively, sometimes seasonal tasks felt like little gains were made compared to the time put in, and work could drag:

Picking time pretty - goes pretty quick. Watering seems like it's never going to get there. But you're always every seven days when it's through summer and you get no in crop rain. You're always - as soon as you finish you're starting again. But it seems like geez this is never going to end. But it probably drags out more than anything. (Participant E).

When discussing the cognitive effort that was made in farm work, the subject of attention was discussed. Farm work can be a very laborious job requiring focused attention but there are also times that workers can afford to relax this attention. Absorption in tasks in terms of quality of attention also varied based on the technical difficulty of tasks and the skill level or past experience of the worker. A beginning farm hand (Participant A) noted “You've got to be on the ball. There's no mucking

around or anything.” Although those with more experience explained “you’ve always got to be sort of paying attention but at the same time you don’t have to be 100 per cent focused the whole time” (Participant B).

Being engaged at work, in terms of the attention applied is important to avoid workplace accidents. “There's so many different things; people can get run over crushed behind rigs, you know....so virtually you've got to be on the ball all the time.” (Participant D). Deliberately focusing attention on the present moment and the aspect of the task at hand is an intentional strategy used by engaged workers when experiencing obstacles to their goal-directed activity. As Participant X explains:

If it's a bad day ... you just got to go along slow and steady, slow down and take time. Like what would normally take me five minutes to do I might take 15 minutes to do just to make sure I've got it right...you slow down a bit and take more time to look at it when you're having a bad day and that gets you through it

Furthermore, one farm worker (Participant B) clarified that simply being busy and expending energy is not necessarily engagement unless you are paying attention to your work. He stated “It just comes like down to checking things ... checking the job that you're doing and not just, you know, going gung-ho and not looking back.” In order to be productive it is essential to ensure effort is focused.

Aspects of teamwork were spoken about with one farm manager (Participant D) noting the influence an individual could have on a team’s attitude and engagement on the farm. If a farm worker is particularly disengaged this can have a negative effect on other individuals who otherwise would be happy and dedicated workers. Those good workers may be left to pick up the slack when a disengaged worker fails to complete jobs properly. As Participant B explained, “You get some people who just come in and just don't do things properly and yeah it's sort of they do a whole day's work doing something and then it's pretty much just made more work for everyone.”

Speaking of his experiences managing farm workers, Participant D noted: “virtually if you've got a bad lemon in the bunch you're better off getting rid of it before they all start getting sour, yeah. You're better off dealing with it quicker than - sooner than later because they can just upset the whole team”.

The UWES-9 is a widely used measure of work engagement, and each dimension, dedication, vigour, and absorption, was represented in the interviews

with farm workers. From the interview data it would appear that positive work experiences and satisfaction with work are particularly associated with work engagement in the form of dedication at work. Dedication in goal-directed activity seemed to be consistently associated with goal progress. Vigour was experienced, as physical exertion is a requirement of the job, and farm workers reported attempts to manage burnout with adequate recovery from work. Absorption in tasks does occur but the scale of some tasks can make work drag and some repetitive tasks may not require full attention. Farm workers may display vigorous activity due to the physical nature of the job but this could be unproductive unless they were enthusiastic about farming, focusing their attention and dedicating personal effort to complete tasks properly and thoroughly. Further analysis of the face validity of the UWES-9 at the item level is presented in Table 4i

Table 4j

Face Validity of the Utrecht Work Engagement Scale – 9 item (UWES-9)

UWES – 9item	Interview Data	Comment on Face Validity
1. At my work I feel bursting with energy	“The first year I grew at (the farm) and it was - had a lot of floods over it and it was an absolute brothel, the farm. I worked hard. I done a lot of hours to get it back. Because I'm a fussy bugger and I lead the example” – Interview E	I'm not sure if the word ‘bursting’ may be seen as an overstatement for farm work (where it is laborious). However there is an energetic attitude that is brought into a work situation, such as that described in this quote, which requires hard work to change it.
2. At my job, I feel strong and vigorous	“We have hard days ... so at the moment we're in machines so I've got an air conditioner, a radio and I come home and I'm bored in the afternoon so I want to do something. But um say irrigating is - so you do 12 hour shifts in the middle of summer, 45 degrees outside, so you come home and you fall in a heap.” – Interview M	Working in a manner that involves vigorous action is desirable, perhaps more so than the easy days. If work is unchallenging it can be perceived as boring and workers will look for other ways to expend excess energy.
3. I am enthusiastic about my job	“...well I love the job. So that makes me want to, ah, really get into it and learn more and just picking up stuff from looking at other people is the general trick of things, you know. And remembering.” – Interview X	An enthusiastic attitude influences a worker’s professional development in the way they apply themselves at work. They see learning opportunities in observing and working alongside more experienced colleagues.

Table 4j continued

Face Validity of the Utrecht Work Engagement Scale – 9 item (UWES-9)

UWES – 9item	Interview Data	Comment on Face Validity
4. My job inspires me	“See just in farm work you can set so many different goals and, um - and different achievements and once you hit them it's a good thing.” – Interview D	There are many small goals that need to be achieved in pursuit of the larger goal (of growing a good crop), and this can inspire dedication at work.
5. When I get up in the morning, I feel like going to work	“I don't know just if you look forward to going to work every day or not, but... Most days. Like sometimes you're - you don't look forward to it, but then like you get to work and like you are happy.” – Interview A	Farm workers may not wake up feeling enthusiastic about getting to work, but dedication to the job gets them there and then they enjoy engaging in their daily tasks.
6. I feel happy when I am working intensely	I don't, don't mind being busy. You just feel good, - Interview A	Workers feel good about working hard in the pursuit of the farm goals.
7. I am proud of the work that I do	“I was starting to see the last paddock coming up - the end of the last paddock. You know, that's quite an achievement. We've done a lot of country.” – Interview X That made me stick me chest out and think, yeah, [click] all that hard work. All those sleepless nights out starting pipes and pulling out cotton weeds and doing that sort of stuff. I did it all on my own bat – Interview E	Pride is experienced when challenging tasks are completed successfully.

Table 4j continued

Face Validity of the Utrecht Work Engagement Scale – 9 item (UWES-9)

UWES – 9item	Interview Data	Comment on Face Validity
8. I am immersed in my work	Some parts of it. Um some parts of it are technically difficult, so um like driving the grader at the moment. That's a very focussed job but ah the casual that we have, he drives behind me on the tractor and that's a very unfocussed job. Like he could wander off and look at the sky and play with his iPod and - but yeah, so there is definitely some very un-focussed parts – Interview M	Workers can find themselves immersed in tasks, particularly technically difficult tasks which require effort to complete. Other tasks do not demand this focus and workers' attention may wander.
9. I get carried away when I'm working	And I like that idea of having - I like that idea of being organised for the next day. But not - I have organised myself, over organised myself where there's no way I can complete it. But the day before it looked like I could do it easy because I was still charged up in the afternoon – Interview X	Workers can get carried away in setting their own goals (in line with the farm goals) and feel driven to achieve them.

4.2.6. Work Volition

Work volition is defined as the perception an individual has of their agency in making career choices despite constraints (Blustein, 2006). When examining the experience of this phenomenon in the current study it is important to note the potential bias of the participants due to the selection process. The farm businesses from which participants were recruited are considered industry leaders, and it is fair to say they attract quality workers who are highly employable and therefore have their pick of potential employers. Also at this time cotton production levels were at a peak due to favourable environmental and economic conditions and there was a demand for experienced workers. Consequently, the workers interviewed all spoke about their work in a way that would indicate they would be considered high on the work volition spectrum. For example, one leading hand, who walked away from a farm manager's job on a corporate farm, did so before securing employment elsewhere as he was confident in his ability to find suitable employment.

I just had enough and - the - there is such a lack of um personnel in farming, but if I wanted to leave here today there could be 10 - well I've - when we left that job we were 80 kilometres from town. And so I said right, we're going to draw a line 15 kilometres round Goondiwindi and knocked on the first door and got a job here you know? (Participant M)

Most people interviewed were clear that this job was what they wanted to be doing. But in saying that, a number of impact factors on career choices were identified by workers. These could, depending on circumstances, lead to varying appraisals of overall work volition. These were discussed in data coded as (a) Career, (b) Past farming experiences, (c) Family and relationships, (d) Physical and mental health, and (e) Teamwork.

Perceptions of work volition can be understood taking into account the participant's age and their circumstances related to the developmental stage of life defined by Super's (1980) life-span, life-space theory. Three participants were in the exploration stage of career development (Participant A, C1), two were on the cusp of entering the establishment stage (Participant B, C2) and five were in the establishment stage of career development (Participant M, X, K, D, E).

The exploration stage (ages 14-24), is categorised by learning about the opportunities available in the world of work, experimenting with different work roles, and developing a vocational self-concept (Hartung, 2013). Participants saw

their current roles as stepping stones to future career development, in similar interest areas. One young participant described future aspirations to pursue work opportunities in other agricultural areas “I'd like to go up north next year... Like if I did go up north I'd prefer to work with cattle and like sugar cane and all that sort of stuff” (Participant A). Even at this early stage there was an acknowledgement of financial constraints on future career aspirations. “I'm not going stay here forever ... if I had a lot of money I'd probably start a business of some sort. I don't know what [laughs]” (Participant B).

While work on farm does not require any sort of formal qualification, participants at this stage of life expressed an expectation that they should be getting a vocational or university qualification regardless of the relevance to their current career interests. One participant who had begun an apprenticeship described his decision to abandon this pathway to pursue farm work and then later mentioned considerations for future study.

I only wanted to have a trade, to - just something to back up - like have behind you, but I wasn't ever planning on using it. So I had a good think to myself: I'm not going to use it. Why am I doing it?

I sort of don't really like the business side of everything, but I'm looking at doing my Diploma in Agriculture, so it's just like a qualification they have in the agriculture area because there's not many like...qualifications out there for ag sort of thing. (Participant A)

Obtaining a vocational or university qualification not associated with on farm work was not always seen as a stepping-stone to immediately change direction in their careers. Workers explained it was more a safety net to protect their future career choices if they either later decided they wanted to exit their vocational role of their own volition, or economic and environmental influences resulted in them needing to seek work elsewhere.

I said, I'm going to do uni and I'm going to go and do marketing and, yeah, going to go and buy and sell your commodities instead of make them for you. And then, um, and yeah, I was - I was - I wasn't 100 per cent if that's what I wanted to do but I just wanted to have something else behind me and - and, you know, make sure that if - if things did go pear shaped here I had something to fall back on. (Participant C2)

As seen in the previous quote, having certifiable skills was seen as useful to diversify

future opportunities for work. This is potentially a strategy to ensure continued work volition as it may reduce the perceived strength of future unforeseen career constraints. This is consistent with the evidence that suggests higher educated people experience increased levels of work volition (Blustein, 2006)

This future guarding of career choice by obtaining qualifications outside of their current vocational role is especially relevant to those employed in the agricultural industry due to the potential volatility of environmental forces that effect on farm jobs. For example, when reflecting back on his career at the exploration stage, one older participant described how these constraints had affected his ability to pursue his initial career aspirations in the wool industry. “So I was doing a wool classing course... to be a wool classer. So I finished all that. At the same time, I finished school and then the arse fell out of wool so there was no sheep anymore” (Participant D).

The longer a worker stays in the industry the more likely they are to live through times when weather events like drought affect the availability of work. As such, those that had entered the establishment phase of the life span spoke about the impacts of this constraint. One grower framed this in terms of his volition in seeking alternative income streams, such as managing a property for another owner, as his own property was no longer profitable to solely support his family.

At the time, last year was very dry, no irrigation water at home, so things were looking pretty tight and I just, well said, we have to look for outside opportunities or outside work and all this came along at the same time. So got very lucky and - and obviously people say, what the hell are you trying to run two properties for or why do you put that much stress on yourself or the rest of it, but until you put your hand up and give it a go and work out what works and what doesn't work, well you don't know. (Participant K)

The establishment stage (ages 25 – 44) involves more stability with career pursuits, committing to a work role and seeking growth in that vocational path (Hartung, 2013). One participant on the cusp of this stage noted his initial hesitation to commit to working on the farm, questioning whether his decision was of his own volition:

I got to the stage where I was sort of like do I love this because this is all I know and it's been shoved down my throat or do I love it because this is actually what I want to do for the rest of my life? (Participant C2)

There was a sense from the farm workers in their mid to late thirties that the time of choosing a different career has passed and that they are committed to what they know. Some statements seemed to frame this in terms of missed opportunities.

Oh sometimes I wish I stayed at school longer [laughs]. I was going to be a policeman, I was going to be this and going to be that, and I ended up being a cowboy and went rodeoing instead. Sometimes you think fucking hell [laughs] why didn't I just stay - yeah, I had a lot of opportunities when I was younger to do different things and I went the opposite way [laughs]. (Participant D)

Others felt working on farm was an extension of who they are, and a genuine and meaningful expression of their self-concept.

I've never - I've did, um, throughout my life I've tried two different jobs. Um. Car detailing. Car salesman. All those sort of stuff. When you're young and think you know everything so. But yeah, no. It always comes back to farming because it's just something that's built into me so I know it. (Participant X)

These two different perspectives can be linked to either low work volition (regret for missed opportunity and confined to limited work) or high work volition (identification with work role).

Super's (1980) notion of the integration and balancing of self-concept in farm workers' vocational roles and personal roles (including spouse, parent, and community member) can give rise to different constraints on work volition as identified by participants at this stage of development. The impact of family responsibilities as potential career constraints was discussed both in terms of financial responsibilities and family role responsibilities.

Financial responsibilities were a motivator for participants to continue engaging in work during challenging conditions, and to seek job opportunities that could provide enough money in areas that living costs were low that would allow the farm workers to provide their family with a good lifestyle:

That happens a lot, don't worry about that. You've still got to get up and face it so... If I didn't have a family I probably wouldn't be getting up (Participant D)

Oh all of our families um are - this - the main reason I'm here is because it's - we don't need my wife to work (Participant M)

If I got a good enough job somewhere in the city or town or whatever then and I had that job then we'd just make do (Participant X)

When family responsibilities are considered, there is potential for conflict with farm

work roles, particularly in terms of long work hours. This constraint could impact work volition in terms of an individual's degree of choice of farm workplace, or whether to remain working in the agriculture industry. One worker described the conversation he had with his wife when offered his current job in terms of balancing his career choices versus making the best choice for his family.

And I said well I love farming. She (his wife) said as long as it's not under the circumstances that you're going to be working seven days a week, big hours and not having anything to do with the kids. (Participant E).

This farm worker had priorities away from work and needed a job that could provide adequate time for him to participate in his family life. If a cotton farm could not offer these conditions, then this worker was ready to exit the agriculture industry even though the farm hand position was his preferred job.

On farm jobs require good physical and mental health and working while experiencing ongoing health issues could impact appraisals of work volition. One farm worker interviewed described persisting in his job while managing chronic pain resulting from an injury (it was unclear whether this occurred at work or not).

“[Laughs] Oh, it's hard. At the moment I'm on painkillers...so - but I try not to take them. They knock me around a fair bit. But, yeah, so it's hard but you've got to do it” (Participant D). Another worker (Participant B) described the forced retirement of a farm manager due to health problems that were exacerbated by the stress that came with the job. “He's got like heart problems...so he ended up taking some time off and the doctor told him to...yeah just take it easy. So he's doing that for a while I think. And it's a pretty stressful job [laughs].” It would appear the farm manager continued working even while his health deteriorated to a life threatening level. He may have kept working as he felt he had no other choice of job and needed the money (low work volition due to financial constraint). Alternatively, he may have ignored his health as he wanted to work on farm, finding enjoyment and a sense of purpose in his work role (high work volition). In this way, health intersects with the individuals need to earn a living or to experience meaningful work, and could be an impact factor on work volition appraisals.

Due to the seasonal nature of agriculture, at peak times more workers are required to fill temporary positions. These roles are now largely performed by 417 visa holders, commonly referred to as backpackers. Part of the conditions for these workers to extend their visa for a second year is to work for at least three months in

select rurally located jobs, of which on farm work is one. In discussions on teamwork, the interviewees described the challenge of working with people employed in these short-term positions that either may not have the skills to immerse themselves in farm work or may be overqualified or not interested in the work that is taking place on farm. It was also acknowledged that sometimes you would find a good backpacker.

They want three months so they can stay for another 12 months then. What they do in those three months, they don't care as long as they get that three months. It doesn't matter. If they have to shovel dirt for three months and while we're irrigating or something like that they don't care because they start counting down the day they start on the farm... some of them. And then you get other people like [man and woman] that were out at the last place I was on. Well, they ended up staying for the two years working on the same farm. You know, then the last two months I think they went up north to see Cairns. They come to Australia to see Australia and then they got working and a relatively good crew of people and they hung around, they didn't really get to see much of Australia at all. (Participant X).

The two scenarios described by the leading hand clearly delineate between: (a) backpackers who have low work volition and are working on farm out of obligation to meet visa extension requirements; and (b) those who have high work volition and who could be doing other things such as travelling but choose to stay on because they want to be working on farm.

The participants' discussions of work volition, in particular the factors that are antecedents to this belief, revealed unanticipated information that impacts the integration of work volition into the SCCT Model of Farm Worker Job Satisfaction. While, as expected, perceptions of constraints were linked to work volition, it was also apparent that appraisals of self-efficacy were influential on the farm workers' assessment of their capacity to make career choices. Furthermore, farm workers' conscious effort to build self-efficacy for a wide range of skills was a strategy to achieve greater levels of work volition. To illustrate these aspects, consider the following quote from Participant X: "You got to make sure you got yourself in a pretty good position on farm when there's a drought" It is clear that drought can limit work opportunities for farmhands. This constraint would impact a farm worker's sense of volition. However, it is more complex than that, because if a farm

worker is skilful enough that they are indispensable to a farming operation, they have more likelihood of being able to have the opportunity to choose to stay working where they are employed. Their confidence in their ability to perform the tasks required of a farm worker may make them more optimistic about their capacity to have choices in their career.

The current measures used to capture the work volition construct allows the distinction between work volition as a contextual affordance that precedes the cognitive components of the SCCT Model of Farm Worker Job Satisfaction, and work volition, as an agentic outcome influenced by farm worker task self-efficacy. The Work Volition Scale (WVS; Duffy et al., 2012) consists of 13 items which measure the participant's perceptions of the three components of overall work volition; (a) volition, (b) structural constraints, and (c) financial constraints. It captures both an individual's capacity to make career choices (volition subscale), and perceptions of volition despite constraints (structural constraints and financial constraints). Analysis of the face validity of the WVS at the item level is presented in Table 4j. From the interview data, the integration of work volition into the SCCT Model of Farm Worker Job Satisfaction has been updated from what was originally proposed following the literature review. The work volition construct will be split into two constructs. The items from both the structural constraints subscale and the financial constraints subscale measuring an overall work volition constraints factor, and the items from the volition subscale loading on a separate work volition factor. The proposed SCCT Model of Farm Worker Job Satisfaction including work volition is presented in Figure 4.3.

Table 4k

Face Validity of the Work Volition Scale

Work Volition Scale Items	Interview Data	Comment on Face Validity
1. I've been able to choose the jobs I have wanted	I, I had a chance to do, be an electrician. My cousin's got an electrician thing in - they offered me the apprenticeship. I just didn't want it. (Participant E)	This participant had alternative careers offered to him but chose to pursue a career on farm.
2. I can do the kind of work I want, despite external barriers	I probably wouldn't mention that to him. Just for the fact it was more of a fear factor for me and maybe losing my job. Oh if you can't spray well that's - I'm not having you farm because that's a part of farm life. (Participant X)	Farm work does include some undesirable tasks, including handling chemicals which pose a safety risk. While this participant overall was very happy with his choice of career this does highlight why people may not want to work on farms and feel they have to because they need the income that comes from having a job.
3. The current state of the economy prevents me from working in the job I want	Yeah, but I went to get into the mining industry. I went and paid all me inductions. Cost me bloody \$3500 to get me tickets to be able to walk in the gate... ..and then	Mining was an attractive alternative for many farm workers, but as the mining boom slowed it limited the positions available and it became more
11. I feel that outside forces have really limited my work and career options	didn't even look like getting a start. I applied for about 29 different jobs; didn't get anywhere. So... ..yeah, I wasted all me money for nothing. (Participant D)	competitive to get jobs in that industry. A potential career change for this participant was not possible.

Table 4k continued

Face Validity of the Work Volition Scale

Work Volition Scale Items	Interview Data	Comment on Face Validity
4. The jobs I would like to pursue don't exist in my area	You know, most kids will take over the farm but there's no opportunities at Walgett. (Participant X)	One farm worker, whose father owned a property, explained that weather events in that area prevented him from pursuing a farming career there.
5. Due to my financial situation, I need to take any job I can find	The job come up in the mines and then I had this (job opportunity) and I said I've always loved farming. I was born and bred at it. So I was only taking the job in the mines more or less because of the money side of things (Participant E)	Financial position does seem to be a consideration for workers seeking employment. Potentially trading off a more personally satisfying job for higher pay.
6. When looking for work, I'll take whatever I can get	I left Brisbane early and went fruit picking and, and I guess it takes a certain type of personality to do that. (Participant M)	When this participant left school in his teen years he was looking for any sort of decent paying job he could get, which happened to be fruit picking. It is expected this item would also describe some backpackers experiences with finding work on farms.
7. In order to provide for my family, I often have to take jobs I do not enjoy	Interviewer: What keeps you doing it then? Participant E: My family. My kids. I want to give my kids the best.	The workers interviewed that had wives and children are the primary source of income for their family. Earning a living is a potential constraint to work volition.

Table 4j continued

Face Validity of the Work Volition Scale

Work Volition Scale Items	Interview Data	Comment on Face Validity
9. I feel able to change jobs if I want to	I couldn't work for someone on a farm like this forever. Like if you did I'll, I'd like, either like work for yourself on your own farm (Participant A)	This young farm hand shows his belief that he will be able to change job positions in the future
8. I don't like my job, but it would be impossible for me to find a new one	So ah I spent seven years before that on a – for corporate farming ah on cotton, so that is – they're more of a conglomerate. They had 20 odd farms and.....yeah, so I've come here to relax. Get back into the family farms type situation. (Participant M)	This participant took a pay cut to take up his current position, leaving his previous job before he had even secured new employment. He is not experiencing the financial constraints that others may in seeking this work life balance.
10. The only thing that matters in choosing a job is to make ends meet		
12. I feel total control over my job choices	Interviewer: Um if you could - I think I asked you if you could do anything else as a job what would it be? Participant M: No, this is what I chose to do	The conviction of this participants statement about his choice of job conveyed a strong sense of control
13. Negative factors outside my personal control had a large impact on my current career choice	At the same time I was going to school I was doing a – the sheep industry was doing a bit back then...so I finished all that. At the same time I finished school and then the arse fell out of wool so there was no sheep anymore. They virtually – they shot 'em all. Yeah. Yeah, so I didn't end up following that industry and I just stayed on the cotton then.” (Participant D)	This participant could not pursue his original career preference because of the impacts drought had on the sheep industry.

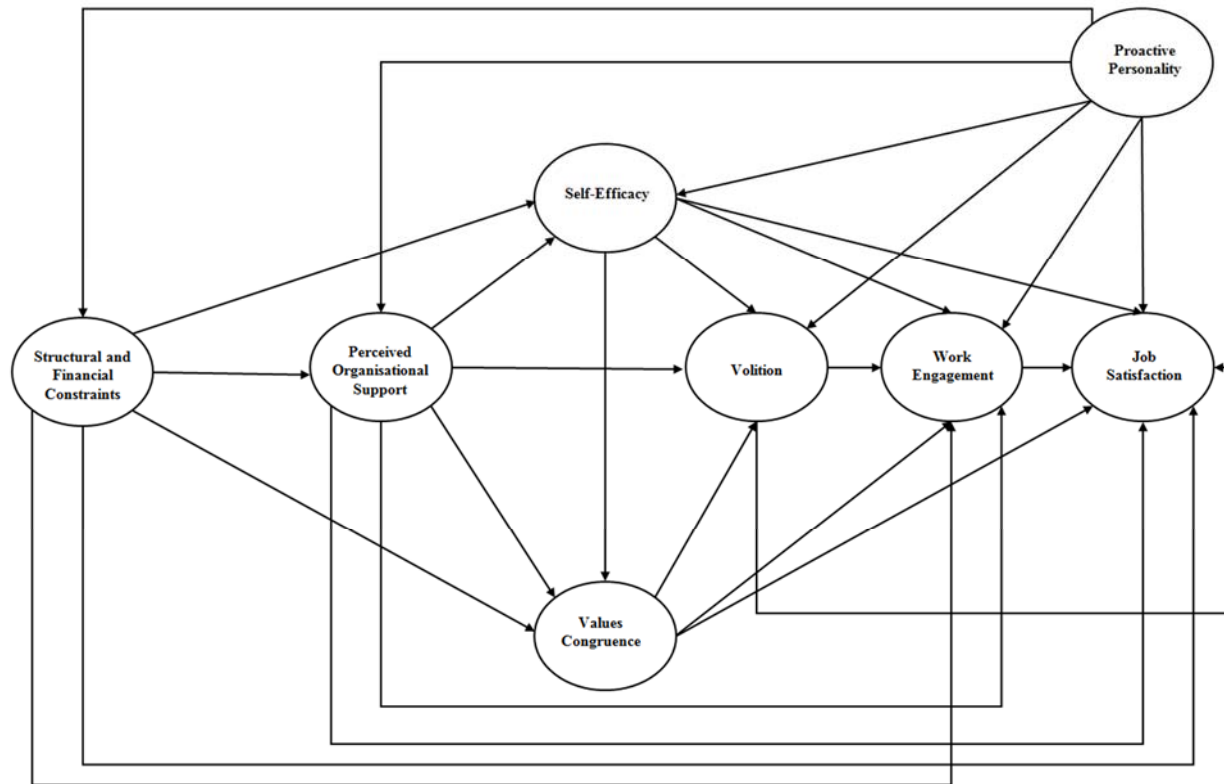


Figure 4.3. SCCT Model of Farm Worker Job Satisfaction including work volition. Adapted from “Social Cognitive Career Theory and Subjective Well-being in the Context of Work,” by R.W. Lent and S.D. Brown, 2008, *Journal of Career Assessment*, 16(1), p. 10. Copyright 2008 The Authors

4.3 Conclusion

The thematic analysis of the participant interview data supported the proposed operationalisation of the SCCT Model of Job Satisfaction constructs as (a) Goal and Efficacy Relevant Environmental Barriers, Supports and Resources as perceived organisational support, (b) Self-efficacy as farm worker task self-efficacy, (c) Expected and Received Work Conditions and Outcomes as farming values congruence, and (d) Participation in/Progress at Goal Directed Activity as work engagement. Farm workers were clear in their description of the ideal worker as someone who demonstrates initiative and looks to add value to farming operations. Therefore, it was decided that the personality variable for farm workers would be better captured by using the more specific construct of proactive personality as opposed to the broader Five Factor Model of personality. Farm workers' accounts of work volition revealed the construct to be both an antecedent and an outcome of the cognitive variables of the SCCT. This information led to changes made to the proposed SCCT Model of Farm Worker Job Satisfaction including work volition.

While the data was not analysed specifically for the theme of job satisfaction, as this is the outcome variable; job satisfaction as an overall appraisal of the participants' work situation was referred to or implied as a consequence or related to each of the above mentioned constructs to be included in the SCCT Model of Farm Worker Job Satisfaction. This was to be expected as the sample was selected to represent farm workers employed in farming businesses that are productive and by owners/growers that are highly engaged in cotton industry initiatives that foster best practice management. Participants described feeling satisfied at work in explaining (a) the value of the work they do (values congruence), (b) their dedication to their job (work engagement), (c) that their current job is their chosen profession (work volition), (d) their good relationships with their employer and colleagues (perceived organisational support), and (e) their confidence in their ability to get the job done (self-efficacy).

The interview data has been used to support the selection, adaptation, and development of measures to best contextualise the SCCT Model of Job Satisfaction to become the SCCT Model of Farm Worker Job Satisfaction. Overall testing of the face validity for all proposed measures of the operationalised constructs was found to be satisfactory for inclusion in the Farm Worker Job Satisfaction Survey. The data

gathered from this survey will be used to test the SCCT Model of Farm Worker Job Satisfaction which forms the basis of Study Two.

CHAPTER FIVE: STUDY TWO

This chapter reports the method and results from Study Two, which forms the main focus of the research project and was developed in response to a need to test the relevance and usefulness of the SCCT in the farming context. It has been designed to answer the fourth research question: Does the proposed SCCT Model of Farm Worker Job Satisfaction explain how psychological constructs inter-relate to predict job satisfaction? This chapter reports the empirical tests of the SCCT Model of Farm Worker Job Satisfaction and a second model integrating work volition which was specified at the end of Chapter Four. The findings from study one informed the selection of existing measures, adaption of existing measures and the development of a new measure of self-efficacy to operationalise the theoretical models.

The first model to be tested is the SCCT Model of Farm Worker Job Satisfaction which draws directly on the SCCT Model of Job Satisfaction (Lent & Brown, 2008). This model maps the pathways between (a) personality (proactive personality), (b) goal and efficacy-relevant environmental supports and resources (perceived organisational support), (c) self-efficacy (farm worker self-efficacy), (d) work conditions and outcome expectations (conservation values congruence), (e) goal-directed activity (work engagement), and (f) job satisfaction. Variations on this model, including the addition of a pathway from personality to goal-directed activity, are tested to assess the potential for improvement of the model's fit to the data.

The second model integrates the construct of work volition (Duffy et al., 2012) and aims to understand the influence that the work volition construct has on the theorised predictors and outcome of job satisfaction. From the literature, work volition was firstly proposed to be a unidimensional construct and added as a singular factor to the SCCT model of job satisfaction. According to this formulation, work volition may be positioned as an environmental factor beyond the current workplace impacting the cognitive factors that influence both how the individual approaches their on-farm job and their interpretation of work experiences. However, from the interviews in Study One, it was clear that work volition, in particular individual's perceptions of their own capacity to choose their work environment, was not simply an antecedent of the malleable cognitive variables in the SCCT.

The work volition scale distinguishes between two important aspects of this construct, which are an individual's perception of career choices despite constraints

(i.e., financial constraints and structural constraints), and an individual's perception of their own capacity to make career choices (i.e., volition) (Duffy et al., 2012). Although the interview data supported that perceptions of constraints remain a predictor of the core constructs of the SCCT Model of Job Satisfaction, it was proposed that the volition aspect was an outcome that may occur due to an individual's interaction with the current work context and a consequence of the cognitive variables in the SCCT. It is with this new perspective that work volition is separated into two distinct constructs: a constraints factor and a volition factor. Therefore, the second model positions the constraints factor and the volition factor in the SCCT Model of Farm Worker Job Satisfaction, such that; (a) perceived organisational support, (b) self-efficacy, and (c) values congruence mediate the relationship between constraints and volition. Furthermore, it is proposed that volition mediates the relationship of (a) perceived organisational support, (b) self-efficacy and (c) values congruence with work engagement. In other words, an individual's perceptions that they are not constrained by financial or structural barriers, the more likely they will be to find work that they are confident performing and which offers conditions that align with their values, but also, the more confident an individual feels in carrying out their duties and the more they feel supported and identify with the workplace values, the greater their sense of control in their choice to commit and dedicate effort in their current job and career.

5.1 Models and Corresponding Hypotheses

5.1.1. SCCT Model of Farm Worker Job Satisfaction (Models 1.1 – 1.3).

Model one encompasses the key constructs of the SCCT Model of Farm Worker Job Satisfaction (see Figure 5.1). Model 1.1 will test the following direct effect hypotheses.

1. Proactive personality positively predicts self-efficacy
2. Proactive personality positively predicts job satisfaction
3. Proactive personality positively predicts perceived organisational support
4. Perceived organisational positively predicts self-efficacy
5. Perceived organisational positively predicts conservation value congruence
6. Perceived organisational positively predicts work engagement
7. Perceived organisational positively predicts job satisfaction
8. Self-efficacy positively predicts job satisfaction
9. Self-efficacy positively predicts work engagement

10. Self-efficacy positively predicts conservation values congruence
11. Conservation value congruence positively predicts work engagement
12. Conservation value congruence positively predicts job satisfaction
13. Work Engagement positively predicts job satisfaction

The indirect relationships as specified by Model 1.1 will test the following hypotheses:

14. Proactive personality is indirectly associated with self-efficacy through perceived organisational support
15. Proactive personality is indirectly associated with job satisfaction through perceived organisational support
16. Perceived organisational support is indirectly associated with conservation values congruence through self-efficacy
17. Perceived organisational support is indirectly associated with work engagement through self-efficacy
18. Perceived organisational support is indirectly associated with job satisfaction through self-efficacy
19. Proactive personality is indirectly associated with job satisfaction through self-efficacy
20. Perceived organisational support is indirectly associated with work engagement through conservation values congruence
21. Perceived organisational support is indirectly associated with job satisfaction through conservation values congruence
22. Self-efficacy is indirectly associated with work engagement through conservation values congruence
23. Self-efficacy is indirectly associated with job satisfaction through conservation values congruence
24. Self-efficacy is indirectly associated with job satisfaction through work engagement
25. Conservation values congruence is indirectly associated with job satisfaction through work engagement
26. Perceived organisational support is indirectly associated with job satisfaction through work engagement

Model 1.2 will add the auxiliary variable total relevancy to predict aspects of missing data on the Farm Worker Self-Efficacy Scale (FWSES) (see Figure 5.1). The

decision to keep or exclude this variable from future analyses will be made based on any reduction of the standard error terms for paths associated with farm worker self-efficacy.

Model 1.3 will add a pathway from proactive personality to work engagement to the SCCT Model of Farm Worker Job Satisfaction (see Figure 5.1). This pathway was not included in Lent & Brown's (2008) original SCCT Model of Job Satisfaction, but recent studies have added it, noting that conceptually it is a plausible inclusion and has the potential to improve the fit of the model to the data (Lent et al., 2017). Recent literature also supports a direct relationship between proactive personality and work engagement and the indirect effect of proactive personality on job satisfaction through work engagement (Jawahar & Liu, 2017). The additional hypotheses corresponding to this pathway are listed below:

27. Proactive personality positively predicts work engagement.
28. Proactive personality is indirectly associated with job satisfaction through work engagement
29. Proactive personality is indirectly associated with work engagement through perceived organisational support
30. Proactive personality is indirectly associated with work engagement through self-efficacy

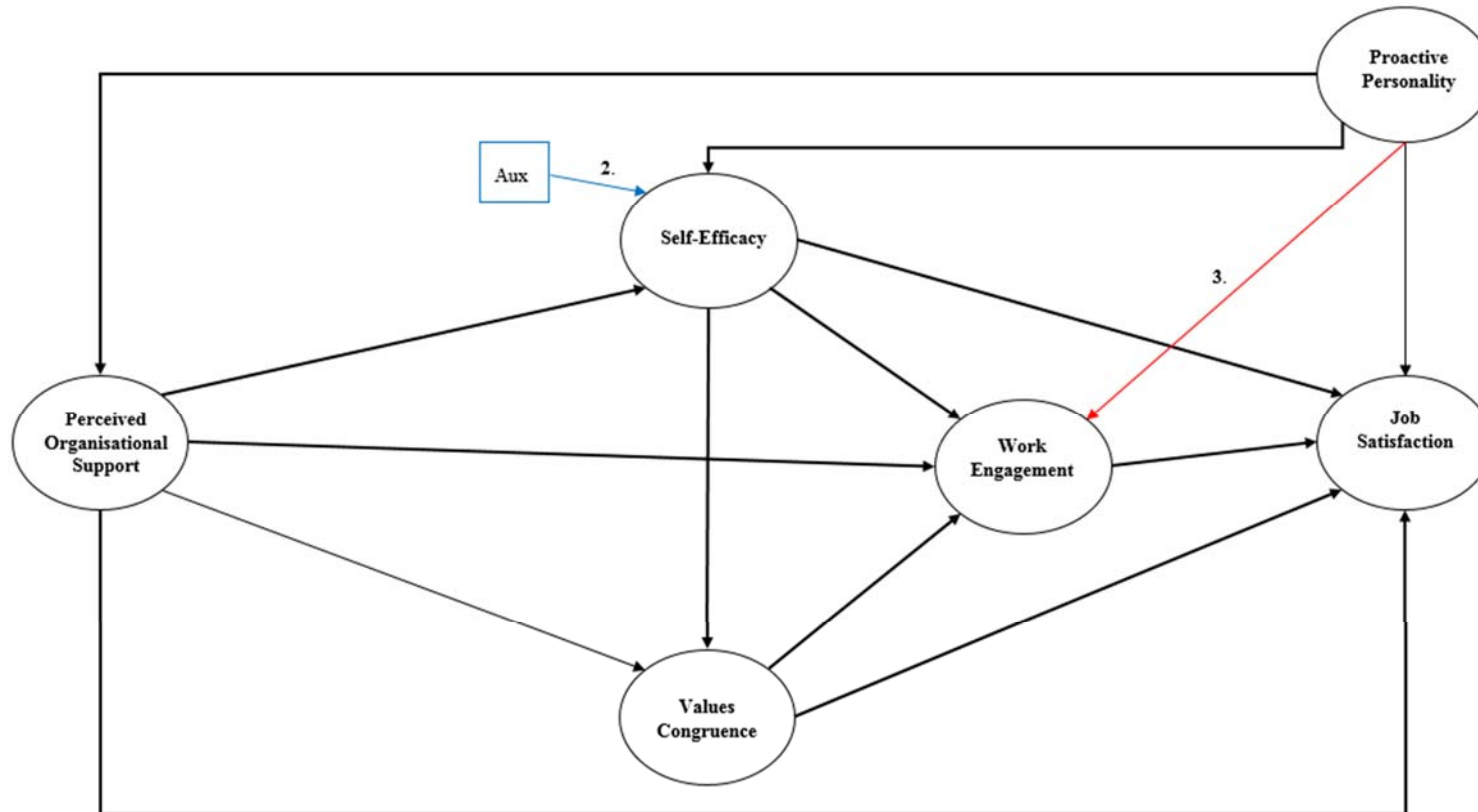


Figure 5.1. Model 1.1 SCCT Model of Farm Worker Job Satisfaction. 2 = pathway added for Model 1.2, Aux = auxiliary variable total relevancy. The auxiliary variable is not regressed directly onto the self-efficacy latent construct but is instead regressed onto each observed indicator for self-efficacy. 3 = pathway added for Model 1.3.

5.1.2 SCCT Model of Farm Worker Job Satisfaction including Work Volition

Model 2.1 includes the work volition factors of constraints and volition. The constraints factor is positioned as a broad environmental appraisal and perspective individuals initially bring into their work context. As such this is entered at the beginning of the SCCT Model of Farm Worker Job Satisfaction (see Figure 5.2). The volition factor is positioned as a consequence of an individual's interactions with the current work environment and is central to the SCCT Model of Farm Worker Job Satisfaction. This model will test hypotheses 1-30 detailed for Model 1.3, as well as the following hypothesised direct and indirect relationships:

31. Proactive personality positively predicts volition
32. Proactive personality positively predicts no constraints
33. No constraints positively predicts self-efficacy
34. No constraints positively predicts perceived organisational support
35. No constraints positively predicts work engagement
36. No constraints positively predicts conservation values congruence
37. Perceived organisational support positively predicts volition
38. Self-efficacy positively predicts volition
39. Conservation values congruence positively predicts volition
40. Volition positively predicts work engagement
41. Volition positively predicts job satisfaction
42. No constraints is indirectly associated with self-efficacy through perceived organisational support
43. No constraints is indirectly associated with work engagement through perceived organisational support
44. No constraints is indirectly associated with conservation values congruence through perceived organisational support
45. No constraints is indirectly associated with conservation values congruence through self-efficacy
46. No constraints is indirectly associated with volition through conservation values congruence
47. No constraints is indirectly associated with volition through perceived organisational support

48. No constraints is indirectly associated with volition through self-efficacy
49. Proactive personality is indirectly associated with volition through perceived organisational support
50. Perceived organisational support is indirectly associated with volition through self-efficacy
51. No constraints is indirectly associated with work engagement through self-efficacy
52. No constraints is indirectly associated with work engagement through conservation values congruence
53. Perceived organisational support is indirectly associated with volition through conservation values congruence
54. Self-efficacy is indirectly associated with work engagement through volition
55. Self-efficacy is indirectly associated with volition through conservation values congruence
56. Conservation values congruence is indirectly associated with work engagement through volition
57. Perceived organisational support is indirectly associated with work engagement through volition
58. Proactive personality is indirectly associated with work engagement through volition
59. Conservation values congruence is indirectly associated with job satisfaction through volition
60. Perceived organisational support is indirectly associated with job satisfaction through volition
61. Self-efficacy is indirectly associated with job satisfaction through volition
62. Proactive personality is indirectly associated with job satisfaction through volition
63. Volition is indirectly associated with job satisfaction through work engagement

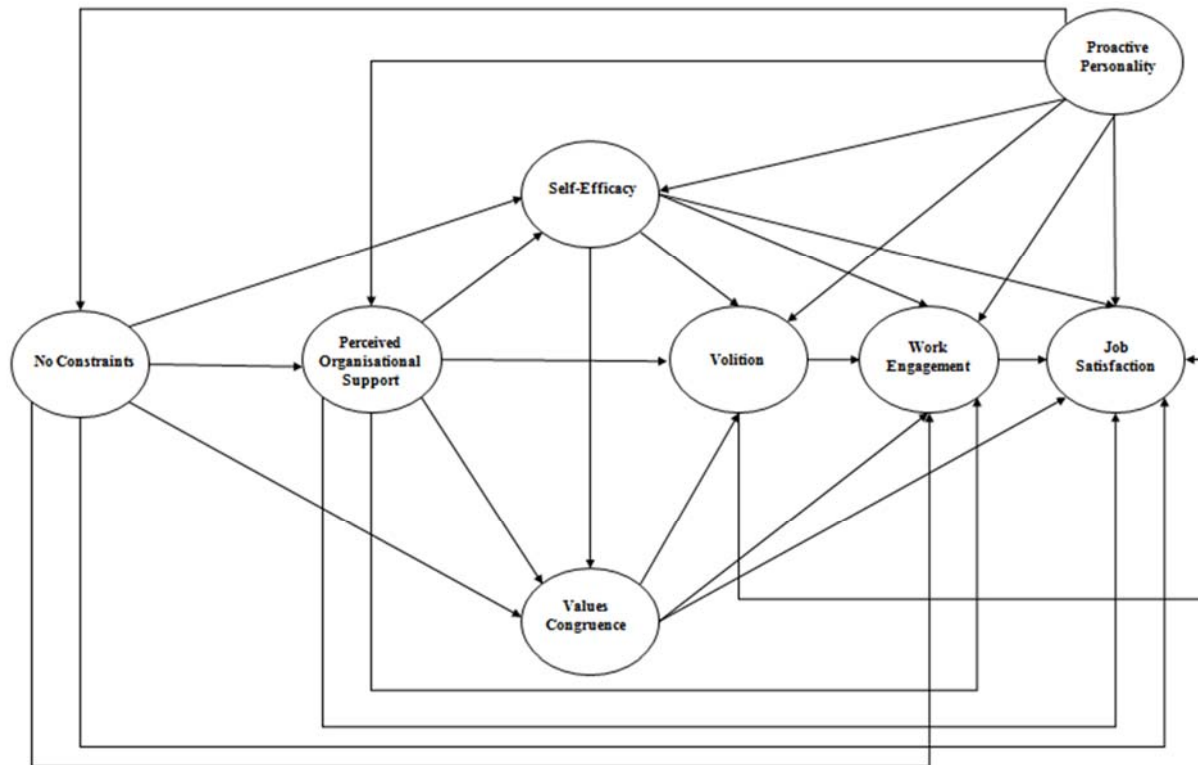


Figure 5.2. Model 2.1 SCCT Model of Farm Worker Job Satisfaction including Work Volition. The constraints factor was reverse scored such that a higher score indicates a greater work volition due to lower perceived presence of constraints. For clarity this is listed in the model as No Constraints.

5.2 Method

This section presents an overview of the procedure followed for recruitment of participants and data collection. A description of the participants, including eligibility criteria and demographic data, is given, as well as a summary of the instruments used to measure the SCCT Model of Farm Worker Job Satisfaction constructs.

5.2.1 Participants

Direct access to participants was challenging and often not possible, with employers (growers, and a labour hire company) acting as gatekeepers to reaching respondents. In considering the potential bias in the convenience sample of participants, it is necessary to understand the recruitment methods and potential barriers to farm workers' participation. The online survey was viewed by 889 people and approximately 25% of these entered a response in the email address consent box ($n = 228$). It is likely several of these views were by people who were ineligible for the study, e.g. the survey shared on the researcher's personal Facebook page was available to the general community, not just people who work in agriculture ($n_{viewed} = 106$; $n_{started} = 7$; $n_{first\ survey} = 4$). It is also possible, for those who sourced the survey through the cotton industry newsletter, or that were contacted through a cotton industry email list, that the survey was viewed by growers who either did not think it suitable for their employees, did not want their employees to participate, or forgot to pass it on to their employees ($n_{viewed} = 351$; $n_{started} = 27$; $n_{first\ survey} = 21$). The large attrition rate for the data collected through the labour hire company ($n_{viewed} = 446$; $n_{started} = 190$; $n_{first\ survey} = 130$) could be in part due to the number of seasonal workers for whom English is a second language, as indicated by one participant in the free response section "...your questions very detailed. But if it's possible to make the Chinese version is more suitable for the Asia people to fill this form" (Response ID 42541211). With regards to the paper surveys ($n_{distributed} \approx 380$; $n_{returned} = 2$), it is possible that the Cotton Australia regional managers did not find appropriate channels to distribute them, or when distributed workers did not wish to participate. A total of 176 online surveys in which the participant had completed at least the first questionnaire were collected, and two paper surveys were returned ($N = 178$).

To retain the most data from this convenience sample, the broadest definition of farm worker was used, with the only eligibility criteria imposed being that participants needed to have current employment in the agricultural industry. Four

cases did not meet this criterion and were deleted. Inspection of email addresses revealed one person that had participated in the initial questionnaire twice through different distribution channels, the case with the least completed responses was deleted (Response ID 452227788), leaving the final sample of 173 participants. A number of participants ($n = 38 - 53$) did not complete the demographic questions at the end of the survey. Those that did ranged in age from 18 years to 73 years ($M = 31$ years, $n = 131$) and were predominantly male ($n = 83$; female, $n = 50$). A range of nationalities other than Australian and New Zealander ($n = 42$) were represented including South East Asian ($n = 65$), European ($n = 17$), Indian ($n = 5$) and other ($n = 4$). Fifty-one people indicated English was their first language (first language other than English, $n = 83$; no response, $n = 39$). A majority were backpackers or held other temporary visas ($n = 86$), and 49 participants indicated they were citizens or permanent residents of Australia. The number of years' participants had been employed in the agricultural industry ranged from less than one year to fifty-five years ($n = 129$). The sample was skewed such that approximately half of the responding participants had been employed in the agricultural industry for one year or less ($n = 62$). Participants reported employment in a range of roles, including 61 people in unskilled entry level jobs (e.g. fruit picker/packer), 29 people in skilled on-farm jobs (e.g. farm hand, farm mechanic), 24 people in farm supervisor/manager roles (e.g. farm manager), 5 people employed as agronomists and 5 performing other roles on farm (e.g. office administrator). Only forty-nine people reported they were in permanent positions, with most responding participants employed on a contract or casual basis ($n = 84$). Less than 17% ($n = 29$) of respondents worked on properties that grew cotton.

5.2.2 Procedure

The project received human ethics approval through the University of Southern Queensland (Project Code: H15REA012). The Farm Worker Job Satisfaction Survey was developed from the findings of Study One and is included in appendix A. Initial recruitment of participants was conducted through an online survey sent to cotton growers in October 2015 through the CRDC's email database. The growers were asked to pass the survey on to their employees to complete of their own volition in their personal time. When this returned only two responses within the first six weeks of the survey being distributed, the recruitment strategy widened. The participant eligibility criteria expanded from being cotton farm workers to farm

workers with no specific production category targeted. This was necessary given the lack of survey response and it is argued the findings are still relevant to the cotton industry as the sample is taken from a talent pool of current farm workers which have the potential to be employed in cotton.

Throughout the 2015-2016 summer crop season, the online survey was promoted and distributed through a cotton industry newsletter, Cotton Grower Association (CGA) Facebook groups, the researcher's personal Facebook page and professional network through LinkedIn, and an agricultural labour hire company. Furthermore, a paper version of the survey (approximately 50), was distributed at industry field days in three different production valleys and a total of 330 paper surveys were sent to Cotton Australia regional managers for distribution. Different allocations depended on the number of growers in their production valleys.

Both the paper and online survey contained the same instructions. Participants were advised they would be contributing to a study seeking to understand farm workers' beliefs, values and attitudes about their jobs to inform strategies to create satisfying careers in agriculture. They were advised this would involve completion of a 20-minute survey at two time points, 12 weeks apart. To partake in the research project, participants were required to provide consent to be contacted via email 12 weeks after their initial response to the survey. Participation was voluntary and confidentiality assured with no information that would identify the participant's employer collected. Informed consent was indicated by provision of an email. Incentives offered for participation included entry into a raffle draw for each completed survey with prizes such as a mini iPad or a clothing store voucher. These prizes were selected after consultation with the Cotton Australia communications manager who had used similar incentives for survey participation in the past.

The first wave of data collection began in October 2015 and ceased in March 2016. Consequently, the second wave of data collection began in January 2016 and ceased in June 2016. While collection of the second wave of data was completed it has not been included in the current study as it consisted of insufficient responses to draw any meaningful conclusions ($N = 21$).

5.2.3 Measures

The operationalised constructs of this study were measured as latent variables. These were: (a) proactive personality; (b) perceived organisational

support; (c) self-efficacy; (d) values congruence; (e) work engagement; (f) job satisfaction; and (g) work volition. Additional measures beyond those that have been reported for the current study were included in the Farm Worker Job Satisfaction Survey but have been omitted with only one measure selected for each construct. The items of each measure were utilised as observed variables acting as indicators of the models' latent constructs. The measures are described below.

5.2.3.1 Proactive Personality. Proactive Personality was measured using an abbreviated version of the Proactive Personality Scale (PPS; Bateman & Crant, 1993). The four-items included were selected from those which had the highest loadings on the PPS (Parker & Sprigg, 1999). Items including "I excel at identifying opportunities" and "If I believe in an idea, no obstacle will prevent me from making it happen" were rated on a 7-point Likert scale from (1) *strongly disagree* to (7) *strongly agree*. Respondents were asked to consider each item in terms of their behaviour in all areas of their life (not just work) to avoid responses reflecting bias from potential situational constraints in the workplace that result in the suppression of proactive personality traits.

Concurrent validity for the original 17-item scale was evident with the unidimensional construct of proactive personality shown to be related to the traits of conscientiousness, extraversion, the needs for achievement, and dominance. Furthermore, discriminant validity was demonstrated between the Proactive Personality Scale and neuroticism, openness, agreeableness, intelligence, and locus of control (Bateman & Crant, 1993). Previous studies found the scale to have good internal consistency reliability ($\alpha = .74$; $\alpha = .85$) (Claes et al., 2005; Parker & Sprigg, 1999), although Claes et al. criticised the 4-item scale as being too narrow an operationalisation of the construct of proactive personality as the mean inter-item correlations in their study exceeded the recommended cutoff of 0.4 (Briggs & Cheek, 1986). For the current study the 4-item PPS possessed adequate internal consistency reliability for a limited item measure ($\alpha = .613$; (Carmines & Zeller, 1979). The mean inter-item correlation was also acceptable at .319. With these results, and in seeking to reduce the number of parameters in the proposed models to be tested, the current study will proceed using the 4-item PPS. Further scrutiny of the 4-item PPS factor structure using CFA prior to SEM will be undertaken.

5.2.3.2 Perceived Organisational Support. Perceived Organisational Support (POS) was measured using an adjusted version of the 8-item short version of

the Survey of Perceived Organizational Support (SPOS; Eisenberger et al., 1986). Past research using the 8-item SPOS found it to have good internal consistency reliability ($\alpha = .89$ to $.94$; Eisenberger, Rhoades, & Cameron, 1999; Settoon, Bennett, & Liden, 1996). As described in Study One, the agricultural industry consists of diverse range of farming businesses that can range from small family farms to large operations owned by corporations. For this reason, it was determined that the measure would be more flexible if the word “organisation” was replaced with “employer”. The word “employer” is considered a broader term and can apply to the direct supervisor/manager responsible for hiring the worker, or the corporation that is responsible for work structures that impact the perception of workplaces as caring for and valuing their staff.

The adjusted scale consisted of four items that measure an individual’s appraisal that their organisation values the employee’s contributions, such as “My employer takes pride in my accomplishments at work”. The remaining four items measure workers’ perceptions that the organisation cares about their wellbeing, such as “My employer would ignore any complaint from me”. All items were rated on a 7-point Likert scale ranging from (1) *strongly disagree* to (7) *strongly agree*, with negatively worded items reverse scored such that higher scores indicate greater levels of POS. Studies on the validity of the SPOS have found that it performs as a unidimensional scale and measures a construct that is distinct from other related constructs including organisational commitment, organisational dependability and perceived supervisory support (Shore & Tetrick, 1991; Hutchison, 1997). The adjusted SPOS-8item (adjSPOS-8item) was found to have good internal consistency reliability ($\alpha = .902$).

5.2.3.3 Self-efficacy. Self-efficacy was measured using a previously untested measure: the Farm Worker Self-efficacy Scale (FWSES). The scale consists of ten items describing typical activities that are performed by farm workers throughout the crop season. The content for the items was sourced from the O*NET Online (2010) database description of crop farm workers’ and labourers’ tasks and the face validity of these items was analysed and confirmed by the farm worker and cotton grower participants in Study One. Workers were instructed to consider each activity (which require the use of many skills and the performance of a range of tasks) and asked to rate each item on a 5-point Likert Scale from (1) *no confidence* to (5) *complete confidence*. The FWSES scale also allowed for workers to select (N/A) *task not*

relevant. The ability for participants to opt out of rating an item was necessary to capture accurate data. Within the agricultural industry there are a wide variety of job descriptions that can be categorised as farm worker and depending on the position and farm organisational structure some tasks may not be performed by each worker completing the survey. Example items included “Operate heavy machinery (e.g. tractors, tractor-drawn machinery, and self-propelled machinery)”, “Apply pesticides, herbicides, or fertilisers to crops” and “Inform farmers or farm managers of crop progress”. The FWSES showed good internal consistency reliability ($\alpha = .931$).

5.2.3.4 Conservation Values Congruence. Outcome expectations and work conditions was operationalised as values congruence for farm workers and was measured using the 5-item Conservation Values Congruence Subscale (CVCS) which was adapted from the Landholder Value/Objective Scale (LV/OS; Maybery et al, 2005). This subscale was selected, instead of using the complete LV/OS, in order to limit the parameters in testing the hypothesised models of the current study. This set of items also represents the values that are most proximal to the work experience and the goal of “growing a good crop” that was identified as the primary goal for farm workers in Study One.

Workers were asked to consider the personal importance of each statement. Items, such as “the most important thing is leaving the property in better shape than when I found it” and “I like to look after the land, making it work for the farm, without destroying it”, were rated on a 5-point Likert type scale from (1) *strongly disagree* to (5) *strongly agree*. No studies have been found that empirically test the construct validity of this measure, therefore this is the first research done to apply this measure. The original subscale in the LV/OS possessed adequate internal consistency reliability for a limited item scale ($\alpha = .65$; Maybery et al., 2005). For the current study, the internal consistency reliability of the CVCS was found to have good internal consistency reliability ($\alpha = .805$).

5.2.3.5 Work Engagement. Goal-directed activity operationalised as work engagement was measured using the Utrecht Work Engagement Scale 9-item short version (UWES-9, Schaufeli & Bakker, 2004b). This instrument has been widely validated across cultures and professions with the total 9-item scale showing good internal consistency reliability ($\alpha = .85$ to $.92$; Schaufeli, Bakker, & Salanova, 2006). In addition to a total general work engagement score, the UWES-9 item can be

further divided into three subscales; vigour (3 items), dedication (3 items), and absorption (3 items); which reflect the different dimensions of work engagement. These subscales have demonstrated acceptable internal consistency reliability and are highly correlated (Schaufeli & Bakker, 2004b). Example items include “At my work, I feel bursting with energy” (vigour), “I am enthusiastic about my job” (dedication), and “I am immersed in my work” (absorption). Each item is rated on a Likert-type scale from (0) *almost never* to (6) *every day*.

There has been some dispute in the literature on the factor structure as to whether the UWES-9 performs best using a single factor structure (work engagement) or a three factor structure (vigour, dedication, and absorption) (Schaufeli & Bakker, 2004b). De Bruin and Henn (2013) evaluated a single factor, three factor and a bi-factor model for the UWES-9 item, and argued that the vigour, dedication, and absorption subscales lacked discriminant validity and it was preferable to use a total score to measure general work engagement. This study will follow Balducci, Fraccaroli, & Schaufeli’s (2010) recommendation to use all nine observed items to load onto a single work engagement latent factor. In the current sample, the UWES-9 item showed good internal consistency reliability ($\alpha = 0.888$).

5.2.3.6 Job Satisfaction. Job Satisfaction was measured using the three positively worded items from the Job Satisfaction Scale (Judge, Locke, Durham & Kluger, 1998). The Judge et al. (1998) five item Job Satisfaction Scale was proposed as a short form of the Brayfield & Roth (1951) Index of Job Satisfaction and has since been used in other studies testing predictors of job satisfaction in a range of cultural contexts (Duffy, Bott, Torrey, et al., 2013; Lent et al., 2011; Badri et al., 2013). Duffy, Autin, and Bott (2015) argued for the use of the 3-item version of the Job Satisfaction Scale which consisted of “I feel fairly satisfied with my present job”, “Most days I feel enthusiastic about my work” and “I find real enjoyment in my work”. These items were rated on a 7-point Likert type scale from (1) *strongly disagree* to (7) *strongly agree*. The validity of the Job Satisfaction Scale has been determined as it has been shown to correlate strongly with other job satisfaction measures and core self-evaluations (Judge et al.; Duffy et al., 2015). This measure demonstrated acceptable internal consistency reliability ($\alpha = .91$, Duffy, Autin, et al., 2015). In attempting to reduce the parameters for the models to be tested, the current study will also use the 3-item Job Satisfaction Scale measure. Internal consistency reliability of the measure was evident ($\alpha = .885$).

5.2.3.7 Work Volition. Work Volition was measured using the Work Volition Scale (WVS; Duffy et al., 2012). The scale consists of 13 items which measure three underlying factors: (a) volition (4 items), (b) financial constraints (5 items), and (c) structural constraints (4 items). These three factors contribute to an overall appraisal of work volition. Items, including “I feel able to change jobs if I want to”, “due to my financial situation I’ll take any job I can find”, and “the jobs I would like to pursue don’t exist in my area”, are rated on a 7-point Likert scale ranging from (1) *strongly disagree* to (7) *strongly agree*. Items measuring the constraint factors are reverse scored, therefore higher scores indicate greater levels of work volition. Construct validity has been established with the measure shown to be related to, yet distinct from, constructs including locus of control, career barriers, and core self-evaluations (Duffy et al., 2012). Past research has shown the WVS to have good internal consistency reliability across a variety of adult working populations ($\alpha = .84$ to $.93$; Duffy et al., 2012; Duffy, England, Douglass, Autin & Allan, 2017; Duffy, Autin, et al., 2015; Duffy, Jadidian, Douglass, & Allan, 2015). The current study found the WVS to have good internal consistency reliability ($\alpha = .861$). At the subscale level, volition had adequate internal consistency reliability when allowing for limited items ($\alpha = .615$), financial constraints had good internal consistency reliability ($\alpha = .821$), and structural constraints had good internal consistency reliability ($\alpha = .791$).

5.2.4 Analytic Strategy

Analyses in the current study were conducted in the following stages: (a) preliminary diagnostic analysis; (b) testing factor structures for each scale; (c) testing the SCCT Model of Farm Worker Job Satisfaction; (d) evaluation of the the SCCT Model of Farm Worker Job Satisfaction including Work Volition; and (e) testing the indirect relations of both models.

5.2.4.1 Preliminary diagnostic analysis. In the first stage of the analytic strategy, the Statistical Package for Social Scientist (SPSS v23.0) was used to screen the data; (a) detecting univariate and multivariate outliers, and (b) evaluating and treating missing data (McDonald & Ho, 2002).

Univariate outliers were detected as observations with standardised scores (i.e., z scores) exceeding ± 3.29 ($p < .001$) (Tabachnik & Fidell, 2007). Multivariate outliers were examined using the squared Mahalanobis distance (D^2) estimate, which is central χ^2 distributed with df equal to the number of observed

variables, and a stringent alpha level ($p < .001$; Kline, 2011; Tabachnick & Fidell, 2007).

Following this, the data was scrutinised to detect missing data. It was expected there would be two potential sources of missing data. The first was due to participant dropout while completing the questionnaires of the survey. The online survey was designed so a response was required for each item on a questionnaire in order for participants to submit the data and move onto the next questionnaire in the survey (e.g., participants needed to respond to all items in the Conservation Values Congruence Scale (CVCS) before moving on to the UWES-9 items). The second type of missing data was present in the self-efficacy measure and occurred as participants may have opted out of responding to certain items on the Farm Worker Self-Efficacy Scale (FWSES) scale. When considering missing data handling options, consideration was given to the classification of the current studies missing data as either missing completely at random (MCAR), missing at random, (MAR), and missing not at random (MNAR) (Little & Rubin, 2002). MCAR refers to when there is no systematic explanation for the missing data and missingness occurs due to reasons completely unrelated to any of the variables of interest in the study (Baraldi & Enders, 2010). An example for the current study would be if a participant was interrupted when partway through the survey, having to direct their attention elsewhere and then forgetting to complete and submit their responses. MAR occurs when the missingness is related to other variables of interest in the study but not to the incomplete observed responses (Baraldi & Enders, 2010). In the current study, an example could be that someone who is disengaged or dissatisfied in their work, may perceive little value in investing time and effort in completing the survey about their work, dropping out before completion. Finally, MNAR occurs when the likelihood of missing data is directly related to the specific items that remain unanswered and the probable scores that would be given on these missing responses (Baraldi & Enders, 2010). For example, workers asked to complete the self-efficacy questionnaire may be hesitant to admit a lack of confidence to perform certain tasks, as they perceive that revealing this could impact perceived suitability for employment on farms. Even though confidentiality was assured and de-identification of data had been disclosed to participants, it is possible that some were sceptical of this and at this stage ceased participation in the survey. Following discussion of

classification of missing data, potential strategies for handling the missing data were identified.

5.2.4.2 Primary statistical analysis. Firstly, descriptive statistics for the final data set are reported including proportion counts and polychoric correlations for each observed item. The primary statistical analysis in the present study involved Confirmatory Factor Analysis (CFA) and Structural Equation Modelling (SEM).

CFA was used to interrogate the factor structure for each measure in the current study. This was determined as a priority due to the use of a previously untested measure of self-efficacy (FWSES), the adaptation of two existing measures specifically for the current study (CVCS; adjusted Survey of Perceived Organizational Support, adjSPOS-8 item), and the use of existing measures (WVS, UWES-9, PPS-4) in a new context - the Australian agricultural industry. Secondly, the hypothesised SCCT Model of Farm Worker Job Satisfaction and the SCCT Model of Farm Worker Job Satisfaction including Work Volition was tested using SEM.

All observed items are measured on Likert-type scales which contain between 5 and 7 discrete categories and are treated as ordered categorical variables. As such no test for normality is required (an assumption which must be met for continuous observed items) and instead univariate proportions and counts were inspected (Rhemtulla, Brosseau-Liard, & Savalei, 2012). In considering potential estimation approaches, it was decided to use a robust diagonal weighted least squares means and variance adjusted estimation approach (WLSMV). WLSMV assumes that the observed ordinal variables stem from a set of underlying latent continuous variables. Furthermore, WLSMV is considered superior to other estimation approaches used for categorical data such as weighted least squares (WLS) given the small sample size ($N < 200$) (Beauducel & Herzberg, 2006).

To assess the data-model fit for both the CFA and SEM, five fit statistics are inspected. Absolute fit is assessed using (a) the chi-square test (χ^2), (b) the chi-square test/degrees of freedom, and (c) the root mean square error of approximation (RMSEA) including the 90% confidence interval width (90% C.I.). Relative fit is assessed using (a) the comparative fit index (CFI), and (b) the Tucker Lewis index (TLI). No measure of parsimonious fit will be assessed as the current analysis will not be using the maximum likelihood method (Meyers, Gamst, & Guarino, 2013).

Ideally, the chi-square test will be non-significant, indicating no difference between the predicted and the observed relationships in the model. When interpreting the chi-square test, consideration needs to be given to the test's sensitivity to sample size such that larger samples increase the ability for the test to detect a small difference and return a statistically significant result (Meyers et al., 2013). It has been suggested that one way to account for the influence of sample size is to inspect the chi-square test divided by the degrees of freedom in the model, with values less than 2 indicating good fit, and values between 2 and 5 indicating acceptable fit (Byrne, 2010; Bollen, 1989).

RMSEA scores are reported including the 90% confidence interval. Suggested cutoffs for the RMSEA scores are that less than .05 indicates good fit, less than .08 indicates acceptable fit, and values exceeding .10 are considered unacceptable (Browne & Cudek, 1992; Meyers et al., 2013). The effects of sample size may also impact the RMSEA value, such that samples less than $N = 200$ may result in an inflated score resulting in rejection of an adequate model (Paxton, Hipp, Marquart-Pyatt, & Marquart-Pyatt, 2011). The CFI & TLI scores can be assessed as indicating good model fit if they exceed a cut off of 0.95 (Hu & Bentler, 1999). Acceptable fit is indicated by values exceed 0.90 (Bentler, 1990). Values between .80 and .89 are said to demonstrate adequate but marginal fit, and scores below 0.8 indicate poor fit (Meyers et al., 2013).

5.2.4.3 Testing indirect relations. Empirical significance tests of indirect relationships were conducted for model 1.3 and 2.1. The bootstrapping method with 5000 resamples was used and 95% bias-corrected confidence intervals constructed around the point estimates. This approach has been argued to be superior to that of NT-product coefficient strategies (Perera, 2014).

5.3 Results

5.3.1 Preliminary Results

5.3.1.1 Outliers. The Statistical Package for Social Scientists (SPSS 23.0) was used to screen the data for univariate outliers. Using a criterion of $z > \pm 3.29$, $p < .001$ (Tabachnick & Fidell, 2007), one case was identified with an extremely low score on the Conservation Values Congruence Scale ($z = -4.70$, Response ID 43470289). This was removed from the dataset. After the deletion of this case, the data was screened for multivariate outliers using square Mahalanobis distance

statistics. No multivariate outliers were identified. The remaining data was 172 cases.

5.3.1.2 Missing data. There were two types of missing data identified in the data set. The first was missing data due to attrition. For unknown reasons, some participants ceased answering the questionnaires throughout the survey. In trying to classify the type of missingness that occurs due to attrition we are unable to be certain and can only speculate on the causes for dropping out after completing certain questionnaires. The biggest decrease occurs immediately after the first questionnaire, the Work Volition Scale. Out of these, 11 participants were recruited through the labour hire company, 3 through LinkedIn, and 1 through an agricultural industry networking event. Perhaps these participants dropped out because: (a) they lost interest after completing one questionnaire and did not want to continue (MCAR); (b) the time commitment required after completing one questionnaire was judged as excessive (MCAR); (c) those that spoke English as a second language found continuing too laborious (MCAR); (d) those that are not satisfied in their jobs did not care to continue their participation (MAR); (e) they viewed the Farm Worker Self-Efficacy Scale and felt none of the tasks related to their job on farm and they considered themselves unsuitable candidates to participate in the study; or (f) they did not feel confident to reveal a low self-efficacy score for fear of impact on their employment (MNAR). Mplus (Version 8, Muthen & Muthen, 2017) will use pair wise deletion to handle this missing data when running the SEM analyses. The number of participants completing questionnaires is presented in Table 4a.

The second source of missing data was on the Farm Worker Self-Efficacy Scale (FWSES) when participants opted out of responding to items because they determined the tasks listed as not applicable (N/A) and therefore not relevant to their current job. This missing data is presented in Table 4b. The lack of response to certain items, (or a not applicable score), does not reflect the self-efficacy of the participant but it does provide data that can be used to explain the self-efficacy observed scores that impact the latent self-efficacy construct in both proposed models to be tested. Whether participants have opted to respond for (1) to (5) or selected (N/A) indicates the relevancy of the item. Therefore, in considering handling the missing data, an auxiliary variable to measure the total relevancy of tasks has been calculated. For each observed item that received a response from (1) to (5), participants were given a score of (1) relevant. If they had selected (N/A),

they were given a score of (0). Participants were then assigned a total relevancy score that ranges from (0) *no items relevant*, to (10) *all items relevant*. A total of 157 participants received a total relevancy score ($M = 7.62$, $SD = 3.63659$, $Mdn = 10$, skewness = -1.205, kurtosis = -.211) The frequencies of the total relevancy scores are reported in Table 4.3.

It is proposed that missingness in the models to be tested can be in part explained by the auxiliary variable total relevancy. The total relevancy score will be incorporated into the models to be tested and regressed on each observed indicator for self-efficacy.

Table 5a

Completed responses to each subscale on the Farm Worker Job Satisfaction Survey

Survey	WVS	FW-SES	CVCS	UWES-9 item	JSS – 3item	adjSPOS-8item	PPS-4 item
<i>N</i>	172	157	152	147	147	142	141
% missing	0	8.72%	11.63%	14.53%	14.53%	17.44%	18.02%

Note. WVS = work volition scale, FWSES = farm worker self-efficacy scale, CVCS = conservation values congruence scale, UWES-9item = Utrecht work engagement scale-9 item, JSS-3item = job satisfaction scale – 3 item, adjSPOS-8item = adjusted survey of perceived organizational support – 8 item, PPS-4 item = proactive personality scale – 4 item. *N* = number of participants. % missing = percentage of participants that had completed the WVS but then did not complete subsequent measures.

Table 5b

Summary of relevancy scores for self-efficacy observed items (N = 157)

Farm Worker Self-Efficacy Scale Items	Relevant (<i>n</i>)	Relevant (%)	Not Relevant (<i>n</i>)	Not Relevant (%)
1. Repair and maintain farm vehicles, implements, and mechanical equipment	116	67.4	41	23.8
2. Operate heavy machinery (e.g. tractors, tractor-drawn machinery, and self-propelled machinery)	125	72.7	32	18.6
3. Ploughing and harrowing soil	119	69.2	38	22.1
4. Planting and seeding of crops	127	73.8	30	17.4
5. Clear and maintain irrigation ditches	115	66.9	42	24.4
6. Set up and operate irrigation equipment	114	66.3	43	25.0
7. Identify plants, pests, and weeds to determine the selection and application of pesticides and fertilisers	118	68.6	39	22.7
8. Apply pesticides, herbicides, or fertilisers to crops	117	68.0	40	23.3
9. Harvest crops by machine	123	71.5	34	19.8
10. Inform farmers or farm managers of crop progress	122	70.9	35	20.3

Note. Relevant (*n*) = number of people that rated item 1-5. Relevant (%) = proportion of people that rated item 1-5. Not Relevant (*n*) = number of people that rated item (N/A) not applicable. Relevant (%) = proportion of people that rated item (N/A) not applicable.

Table 5c

Frequency of total relevancy scores

Total Relevancy Scores	<i>n</i>	%
0	15	8.7
1	7	4.1
2	5	2.9
3	4	2.3
4	4	2.3
5	5	2.9
6	1	0.6
7	4	2.3
8	11	6.4
9	6	3.5
10	95	55.2
Missing – did not complete	15	8.7
Total	172	99.9

Note. A total relevancy score indicates the number of items on the FWSES that the participant gave a valid response (i.e.) rated item from (1) to (5). A total relevancy score of (0) indicates the participant completed the FWSES scale but rated all items (N/A) *not applicable*. Missing – did not complete indicates the participant had dropped out of the survey by this stage. *N* is the number of participants that received the corresponding relevancy score. % is the proportion of participants that received the corresponding total relevancy score.

5.3.2 Descriptive statistics

Descriptive statistics for the categorical observed variables were computed using Mplus (Version 8, Muthen & Muthen, 2017). The proportion counts are presented in Table 5d. The polychoric correlations between all categorical variables are presented in Table 5e.

Table 5d

Proportion counts for categories rated on each observed variable

Observed Items	Category 1	Category 2	Category 3	Category 4	Category 5	Category 6	Category 7
WV 1	0.017	0.012	0.047	0.227	0.227	0.262	0.209
WV 2	0.012	0.041	0.070	0.186	0.238	0.244	0.209
WV 3	0.134	0.145	0.180	0.151	0.087	0.105	0.198
WV 4	0.087	0.145	0.134	0.221	0.116	0.087	0.209
WV 5	0.163	0.157	0.169	0.151	0.070	0.081	0.209
WV 6	0.151	0.163	0.221	0.105	0.110	0.087	0.163
WV 7	0.087	0.099	0.140	0.209	0.163	0.093	0.209
WV 8	0.012	0.017	0.116	0.186	0.192	0.174	0.302
WV 9	0.041	0.058	0.081	0.203	0.192	0.227	0.198
WV 10	0.070	0.099	0.105	0.326	0.145	0.122	0.134
WV 11	0.070	0.116	0.128	0.209	0.157	0.128	0.192
WV 12	0.035	0.093	0.122	0.209	0.203	0.209	0.128
WV 13	0.058	0.041	0.174	0.285	0.116	0.110	0.215
PP 1	0.007	0.007	0.028	0.142	0.312	0.312	0.191
PP 2	0.057	0.043	0.121	0.199	0.234	0.227	0.121
PP 3	0.000	0.007	0.043	0.270	0.319	0.248	0.113
PP 4	0.000	0.014	0.028	0.277	0.319	0.206	0.156
POS 1	0.021	0.021	0.049	0.254	0.232	0.197	0.225
POS 2	0.049	0.070	0.204	0.282	0.127	0.092	0.176
POS 3	0.021	0.035	0.063	0.232	0.211	0.218	0.218
POS 4	0.056	0.056	0.085	0.183	0.211	0.204	0.204
POS 5	0.035	0.042	0.127	0.275	0.169	0.148	0.204
POS 6	0.028	0.056	0.063	0.268	0.232	0.169	0.183
POS 7	0.035	0.077	0.134	0.211	0.183	0.113	0.246
POS 8	0.028	0.035	0.077	0.317	0.225	0.134	0.183
SE 1	0.233	0.172	0.224	0.224	0.147		
SE 2	0.168	0.160	0.192	0.176	0.304		
SE 3	0.185	0.185	0.218	0.134	0.277		
SE 4	0.071	0.150	0.228	0.283	0.268		
SE 5	0.148	0.174	0.226	0.278	0.174		
SE 6	0.175	0.158	0.254	0.202	0.211		
SE 7	0.136	0.246	0.254	0.203	0.161		
SE 8	0.162	0.179	0.248	0.205	0.205		
SE 9	0.098	0.154	0.252	0.187	.0309		
SE 10	0.090	0.107	0.303	0.205	0.295		

Note. For Observed Items: WV = work volition, numbers 1-13 correspond to the items of the work volition scale (WVS). PP = proactive personality, numbers 1-4 correspond to the items of the Proactive Personality Scale – 4item (PPS-4). POS = perceived organizational support, numbers 1-8 correspond to the items of the adjusted Survey of Perceived Organizational Support – 8 item (adjSPOS-8). SE = farm worker task self-efficacy, numbers 1-10 correspond to the items of the Farm Worker Self-Efficacy Scale (FWSES). All variables were rated for seven categories, except farm worker self-efficacy, which was rated for 5 categories.

Table 5d continued

Proportion counts for categories rated on each observed variable

Observed Items	Category 1	Category 2	Category 3	Category 4	Category 5	Category 6	Category 7
CVC 1	0.007	0.026	0.171	0.454	0.342		
CVC 2	0.000	0.053	0.270	0.401	0.276		
CVC 3	0.000	0.046	0.270	0.487	0.197		
CVC 4	0.007	0.000	0.151	0.493	0.349		
CVC 5	0.007	0.013	0.118	0.487	0.375		
WE 1	0.014	0.014	0.034	0.333	0.279	0.204	0.122
WE 2	0.007	0.000	0.034	0.340	0.299	0.197	0.122
WE 3	0.000	0.014	0.048	0.224	0.313	0.211	0.190
WE 4	0.020	0.027	0.129	0.238	0.286	0.129	0.170
WE 5	0.020	0.020	0.061	0.259	0.299	0.170	0.170
WE 6	0.020	0.007	0.075	0.245	0.224	0.224	0.204
WE 7	0.020	0.027	0.048	0.204	0.170	0.204	0.327
WE 8	0.014	0.034	0.088	0.238	0.272	0.204	0.150
WE 9	0.027	0.048	0.143	0.367	0.184	0.143	0.088
JS 1	0.020	0.020	0.041	0.259	0.204	0.224	0.231
JS 2	0.014	0.020	0.054	0.245	0.190	0.265	0.211
JS 3	0.020	0.048	0.027	0.238	0.245	0.238	0.184

Note. CVC = conservation values congruence, numbers 1-5 correspond to the items of the Conservation Values Congruence Scale (CVCS). WE = work engagement, numbers 1-9 correspond to the items of the Utrecht Work Engagement Scale – 9 items (UWES-9). JS = job satisfaction, numbers 1-3 correspond to the items of the Job Satisfaction Scale – 3 item (JSS-3). All variables were rated for seven categories, except conservation values congruence which was rated for five categories.

Table 5e

Polychoric correlations between categorical variables

	WV1	WV2	WV3	WV4	WV5	WV6	WV7	WV8	WV9	WV10	WV11	WV12	WV13
WV 1													
WV 2	.696												
WV 3	.180	.027											
WV 4	.245	.146	.627										
WV 5	.274	.103	.586	.618									
WV 6	.150	.009	.517	.487	.691								
WV 7	.303	.242	.206	.351	.603	.581							
WV 8	.353	.151	.366	.483	.497	.339	.421						
WV 9	.200	.235	.178	.282	.249	.252	.172	.367					
WV 10	.060	.007	.413	.530	.634	.561	.390	.384	.213				
WV 11	.347	.253	.466	.484	.529	.391	.456	.512	.293	.519			
WV 12	.404	.314	.255	.145	.073	.155	.120	.291	.220	-.029	.279		
WV 13	.357	.324	.460	.476	.388	.204	.322	.520	.250	.279	.639	.385	
PP 1	.181	.297	.056	.043	-.114	-.211	-.182	.105	.164	-.051	.167	.102	.220
PP 2	.038	.034	.292	.126	.218	.159	-.043	.097	.191	.321	.128	-.007	-.102
PP 3	.276	.297	-.126	-.018	-.057	-.046	-.004	.146	.168	-.033	.231	.151	.094
PP 4	.107	.182	-.078	-.010	-.064	-.127	.035	.131	.024	-.093	.195	.178	.134

Note. WV = work volition, numbers 1-13 correspond to the items of the work volition scale (WVS). PP = proactive personality, numbers 1-4 correspond to the items of the Proactive Personality Scale – 4item (PPS-4).

Table 5e continued

Polychoric correlations between categorical variables

	WV1	WV2	WV3	WV4	WV5	WV6	WV7	WV8	WV9	WV10	WV11	WV12	WV13
POS 1	.356	.327	-.005	-.004	.036	-.104	.095	.351	.010	.062	.289	.382	.320
POS 2	.177	.119	.153	.174	.101	.044	.086	.287	-.017	.018	.256	.112	.279
POS 3	.246	.202	.249	.218	.142	.033	.240	.472	-.003	.191	.505	.257	.379
POS 4	.248	.179	.210	.099	.102	-.022	.060	.299	.100	.053	.201	.200	.352
POS 5	.311	.254	.305	.231	.154	.131	.218	.443	.069	.187	.460	.291	.418
POS 6	.462	.405	.125	.177	.124	.046	.192	.323	.036	.092	.317	.294	.267
POS 7	.273	.188	.227	.189	.170	.122	.245	.422	-.064	.175	.418	.256	.428
POS 8	.333	.308	-.063	.087	.014	-.082	.065	.193	-.003	.014	.130	.304	.302
SE 1	.067	.068	.202	.315	.157	.216	.020	-.019	.111	.227	.057	.137	-.064
SE 2	.106	.015	.372	.385	.289	.343	.050	.151	.249	.321	.116	.130	.067
SE 3	.137	.025	.307	.365	.210	.307	.083	.138	.071	.313	.151	.108	.095
SE 4	.101	.081	.246	.275	.057	.123	-.001	.109	.060	.137	.059	.181	.047
SE 5	.239	.134	.013	.109	.004	-.077	.021	.056	.023	-.070	.131	.221	.109
SE 6	.103	.042	.248	.339	.184	.125	.110	.013	.092	.137	.091	.046	.003
SE 7	.287	.276	.017	-.010	-.072	.003	.056	.030	-.069	-.103	.122	.351	.040
SE 8	.086	-.039	.424	.402	.316	.226	.071	.129	.160	.318	.153	.128	.059
SE 9	.225	.166	.159	.189	-.021	.021	.025	.141	.043	-.062	.218	.339	.188
SE 10	.246	.225	.124	.061	.040	.031	.113	.245	.089	-.053	.114	.371	.129

Note. WV = work volition, numbers 1-13 correspond to the items of the work volition scale (WVS). POS = perceived organizational support, numbers 1-8 correspond to the items of the adjusted Survey of Perceived Organizational Support – 8 item (adjSPOS-8). SE = farm worker task self-efficacy, numbers 1-10 correspond to the items of the Farm Worker Self-Efficacy Scale (FWSES).

Table 5e continued

Polychoric correlations between categorical variables

	WV1	WV2	WV3	WV4	WV5	WV6	WV7	WV8	WV9	WV10	WV11	WV12	WV13
CVC 1	.344	.265	-.087	.099	.037	-.044	.050	.148	.070	-.027	.111	.124	.094
CVC 2	.410	.282	.109	.155	.227	.113	.084	.211	.089	.028	.248	.313	.250
CVC 3	.084	.077	-.202	-.125	-.162	-.303	-.137	.000	-.093	-.232	-.022	.077	.130
CVC 4	.313	.208	-.039	.132	.000	-.118	.008	.181	.093	-.004	.212	.189	.190
CVC 5	.302	.206	-.097	.036	-.006	-.188	.028	.138	-.024	-.028	.166	.136	.170
WE 1	.273	.270	-.051	-.047	.034	-.087	.090	.190	-.017	-.062	.156	.211	.230
WE 2	.329	.364	.087	.067	.107	-.045	.241	.259	-.035	-.023	.249	.289	.331
WE 3	.305	.328	.139	.226	.022	-.005	.183	.295	.117	.070	.342	.345	.355
WE 4	.427	.413	.190	.169	.085	-.009	.194	.213	-.046	-.013	.277	.305	.283
WE 5	.401	.349	.062	.204	-.004	-.041	.235	.336	.058	-.006	.267	.230	.241
WE 6	.444	.393	.230	.275	.172	.038	.218	.260	-.064	.032	.297	.294	.314
WE 7	.530	.389	.234	.303	.223	.112	.224	.363	.071	.187	.457	.315	.337
WE 8	.412	.384	.192	.129	.104	.059	.147	.118	-.106	.075	.269	.349	.251
WE 9	.413	.368	.154	.126	.001	.109	.134	.023	-.148	.077	.229	.510	.250
JS 1	.495	.426	.131	.289	.213	.058	.261	.398	.046	.113	.312	.380	.470
JS 2	.491	.366	.159	.235	.131	.028	.217	.405	.065	.098	.356	.328	.444
JS 3	.491	.398	.145	.225	.077	-.068	.175	.364	.045	.013	.386	.317	.380

Note. WV = work volition, numbers 1-13 correspond to the items of the work volition scale (WVS). CVC = conservation values congruence, numbers 1-5 correspond to the items of the Conservation Values Congruence Scale (CVCS). WE = work engagement, numbers 1-9 correspond to the items of the Utrecht Work Engagement Scale – 9 items (UWES-9). JS = job satisfaction, numbers 1-3 correspond to the items of the Job Satisfaction Scale – 3 item (JSS-3).

Table 5e continued

Polychoric correlations of the categorical variables

	PP1	PP2	PP3	PP4	POS1	POS2	POS3	POS4	POS5	POS6	POS7	POS8
PP 1												
PP 2	.318											
PP 3	.523	.213										
PP 4	.510	.173	.523									
POS 1	.255	.208	.286	.328								
POS 2	.093	-.014	.154	.173	.453							
POS 3	.113	.059	.106	.112	.653	.633						
POS 4	.147	.101	.091	.088	.493	.402	.511					
POS 5	.220	-.001	.139	.227	.584	.678	.748	.570				
POS 6	.208	-.049	.160	.193	.568	.495	.567	.510	.703			
POS 7	.128	-.124	.171	.237	.550	.620	.685	.468	.811	.604		
POS 8	.152	-.078	.261	.246	.668	.464	.481	.527	.625	.704	.603	
SE 1	-.032	.263	-.021	-.032	.013	.023	-.112	.052	.059	.196	-.029	.152
SE 2	.082	.322	-.002	.066	.129	.096	.002	.171	.204	.176	.140	.172
SE 3	.063	.418	.060	.008	.133	.017	-.024	.138	.015	.103	.031	.091
SE 4	.059	.118	.110	.012	.116	.056	-.013	.097	.084	.141	.043	.108
SE 5	.108	.057	.154	.007	.199	.118	.050	.141	.097	.153	-.023	.202
SE 6	-.046	.183	-.047	-.096	-.014	.032	-.103	.073	.114	.060	-.070	.055
SE 7	.149	.054	.248	.199	.246	.133	.021	.082	.154	.281	.137	.197
SE 8	-.028	.318	-.035	-.097	.019	-.012	-.027	.116	.050	.099	.099	.034
SE 9	.161	-.044	.136	.237	.056	.098	.094	.203	.259	.213	.100	.164
SE 10	.239	.028	.241	.297	.228	.082	.034	.053	.201	.141	.128	.049

Note. PP = proactive personality, numbers 1-4 correspond to the items of the Proactive Personality Scale – 4item (PPS-4). POS = perceived organizational support, numbers 1-8 correspond to the items of the adjusted Survey of Perceived Organizational Support – 8 item (adjSPOS-8).

SE = farm worker task self-efficacy, numbers 1-10 correspond to the items of the Farm Worker Self-Efficacy Scale (FWSES).

Table 5e continued

Polychoric correlations of categorical variables

	PP1	PP2	PP3	PP4	POS1	POS2	POS3	POS4	POS5	POS6	POS7	POS8
CVC 1	.233	-.004	.189	.255	.205	.007	.152	.146	.155	.194	.165	.244
CVC 2	.180	.101	.298	.201	.299	.096	.227	.154	.143	.259	.225	.286
CVC 3	.232	-.127	.255	.311	.127	.077	.061	.099	.099	.095	.078	.257
CVC 4	.446	-.077	.292	.346	.248	.099	.160	.205	.152	.175	.233	.217
CVC 5	.286	-.067	.348	.270	.291	.163	.202	.246	.176	.191	.239	.331
WE 1	.320	.095	.319	.269	.352	.270	.281	.282	.214	.320	.257	.276
WE 2	.352	-.011	.278	.362	.412	.247	.338	.324	.330	.332	.372	.295
WE 3	.367	.163	.414	.313	.477	.366	.449	.449	.415	.395	.384	.457
WE 4	.325	.157	.463	.297	.468	.254	.394	.322	.304	.487	.351	.469
WE 5	.231	.038	.412	.345	.466	.306	.393	.269	.340	.337	.365	.384
WE 6	.320	.065	.258	.295	.463	.276	.405	.350	.444	.427	.415	.442
WE 7	.367	.140	.433	.375	.536	.376	.479	.413	.520	.583	.495	.580
WE 8	.284	.149	.368	.386	.453	.285	.396	.353	.400	.464	.407	.456
WE 9	.054	.056	.236	.098	.230	.046	.160	.275	.210	.262	.123	.277
JS 1	.228	-.012	.238	.306	.510	.320	.397	.401	.360	.474	.424	.586
JS 2	.246	.042	.398	.288	.565	.363	.522	.370	.451	.538	.496	.607
JS 3	.312	.104	.477	.374	.543	.300	.479	.363	.420	.579	.472	.554

Note. PP = proactive personality, numbers 1-4 correspond to the items of the Proactive Personality Scale – 4item (PPS-4). POS = perceived organizational support, numbers 1-8 correspond to the items of the adjusted Survey of Perceived Organizational Support – 8 item (adjSPOS-8). CVC = conservation values congruence, numbers 1-5 correspond to the items of the Conservation Values Congruence Scale (CVCS). WE = work engagement, numbers 1-9 correspond to the items of the Utrecht Work Engagement Scale – 9 items (UWES-9). JS = job satisfaction, numbers 1-3 correspond to the items of the Job Satisfaction Scale – 3 item (JSS-3).

Table 5e continued

Polychoric correlations between categorical variables

	SE1	SE2	SE3	SE4	SE5	SE6	SE7	SE8	SE9	SE10	CVC1	CVC2	CVC3	CVC4	CVC5
SE 1															
SE 2	.834														
SE 3	.714	.817													
SE 4	.564	.632	.706												
SE 5	.530	.492	.622	.629											
SE 6	.684	.715	.745	.641	.748										
SE 7	.393	.298	.375	.420	.489	.446									
SE 8	.708	.796	.774	.672	.531	.755	.570								
SE 9	.556	.604	.528	.629	.603	.590	.497	.574							
SE 10	.402	.464	.372	.550	.505	.533	.671	.571	.658						
CVC 1	.141	.181	.232	.158	.361	.240	.228	.130	.276	.345					
CVC 2	.149	.200	.248	.207	.302	.079	.267	.262	.188	.335	.649				
CVC 3	.000	-.051	-.001	.090	.158	-.016	.159	.043	.214	.195	.380	.416			
CVC 4	.092	.134	.198	.228	.365	.191	.331	.227	.361	.388	.632	.482	.616		
CVC 5	.105	.234	.286	.262	.373	.145	.146	.197	.324	.343	.571	.597	.465	.703	

Note. SE = farm worker task self-efficacy, numbers 1-10 correspond to the items of the Farm Worker Self-Efficacy Scale (FWSES). CVC = conservation values congruence, numbers 1-5 correspond to the items of the Conservation Values Congruence Scale (CVCS).

Table 5e continued

Polychoric correlations between categorical variables

	SE1	SE2	SE3	SE4	SE5	SE6	SE7	SE8	SE9	SE10	CVC1	CVC2	CVC3	CVC4	CVC5
WE 1	.026	.027	.013	.061	.019	-.024	.263	.039	.129	.349	.120	.174	.185	.237	.319
WE 2	.009	-.007	-.058	.099	.042	-.042	.250	.030	.177	.376	.140	.156	.225	.224	.267
WE 3	.061	-.001	.034	.095	.121	.002	.341	.042	.152	.269	.220	.308	.291	.334	.347
WE 4	.114	.112	.87	.120	.133	-.012	.408	.169	.139	.243	.239	.357	.241	.244	.348
WE 5	.099	.041	.148	.187	.289	.074	.388	.071	.133	.305	.169	.220	.136	.229	.218
WE 6	.097	.117	.104	.083	.174	.087	.310	.104	.188	.259	.217	.308	.226	.363	.352
WE 7	.140	.251	.175	.113	.225	.042	.253	.131	.190	.139	.257	.374	.198	.352	.416
WE 8	.126	.205	.211	.128	.095	-.056	.332	.109	.150	.202	.218	.359	.200	.246	.313
WE 9	.117	.076	.196	.083	.101	-.084	.265	.004	.217	.138	.134	.321	.181	.142	.193
JS 1	.122	.204	.277	.071	.299	.089	.260	.121	.202	.091	.230	.349	.163	.305	.292
JS 2	.092	.159	.282	.141	.306	.044	.328	.126	.221	.168	.226	.338	.208	.273	.294
JS 3	.091	.007	.190	.040	.229	.012	.372	.111	.208	.231	.292	.426	.179	.273	.323

Note. SE = farm worker task self-efficacy, numbers 1-10 correspond to the items of the Farm Worker Self-Efficacy Scale (FWSES). CVC = conservation values congruence, numbers 1-5 correspond to the items of the Conservation Values Congruence Scale (CVCS). WE = work engagement, numbers 1-9 correspond to the items of the Utrecht Work Engagement Scale – 9 items (UWES-9). JS = job satisfaction, numbers 1-3 correspond to the items of the Job Satisfaction Scale – 3 item (JSS-3).

Table 5e continued

Polychoric correlations between categorical variables

	WE1	WE2	WE3	WE4	WE5	WE6	WE7	WE8	WE9	JS1	JS2	JS3
WE 1												
WE 2	.619											
WE 3	.535	.711										
WE 4	.434	.550	.721									
WE 5	.333	.495	.701	.638								
WE 6	.399	.594	.646	.640	.626							
WE 7	.311	.478	.694	.726	.726	.734						
WE 8	.320	.447	.522	.653	.498	.506	.685					
WE 9	.195	.177	.294	.411	.219	.343	.373	.637				
JS 1	.253	.340	.451	.549	.440	.470	.588	.577	.426			
JS 2	.309	.482	.613	.622	.624	.519	.705	.625	.303	.778		
JS 3	.278	.442	.602	.669	.606	.571	.695	.565	.306	.711	.831	

Note. WE = work engagement, numbers 1-9 correspond to the items of the Utrecht Work Engagement Scale – 9 items (UWES-9). JS = job satisfaction, numbers 1-3 correspond to the items of the Job Satisfaction Scale – 3 item (JSS-3).

5.3.3 CFA results for Measurement Factor Structures

CFAs were conducted using MPlus (Version 8, Muthen & Muthen, 2017) for all proposed measures except the Job Satisfaction Scale, which with three items did not have sufficient parameters to conduct this test. The chi-square test was significant for each scale, indicating poor fit to the data. The chi-square statistic divided by the degrees of freedom for each measure exceeded 2 indicating none met the criteria for good fit, although the PPS-4item and the FWSES returned values between 2 and 5 which can be considered acceptable fit. RMSEA exceeded 0.1 on all scales. This is considered an unacceptably high value and an indication of poor fit. The CFI returned values above 0.95 indicating good fit for the PPS-4item, the FWSES, FWSES aux, and the CVCS. The adjSPOS-8item and the UWES-9 item returned CFI values above 0.90 indicating acceptable fit. The CFI value for the WVS fell below 0.8 and is considered an indication of poor fit. Please see fit statistics for all CFAs reported in Table 5f. Figures 5.3 to 5.13 show the item loadings on the corresponding latent factor for each scale tested.

Table 5f

Confirmatory Factor Analyses Fit Statistics reported for each measure

Scale	<i>N</i>	χ^2	<i>df</i>	χ^2/df	<i>p</i>	RMSEA	CI (90%)	CFI	TLI
WVS	172	572.554	65	8.809	<.01	0.213	.197 to .229	0.735	0.682
WVS- Volition	172	7.328	2	3.664	.0256	0.124	.037 to .227	0.988	0.963
WVS - Financial Constraints	172	13.252	5	2.650	.0211	0.098	.035 to .164	0.990	0.980
WVS - Structural Constraints	172	35.252	2	17.626	<.01	0.311	.226 to .405	0.938	0.815
WVS- No constraints	172	188.991	27	6.999	<.01	0.187	.162 to .212	0.896	0.861
PPS-4	141	5.513	2	2.757	0.06	0.112	.000 to .228	0.991	0.972
adjSPOS-8	142	135.143	20	6.757	<.01	0.201	.170 to .234	0.941	0.917
FW-SES	142	162.483	35	4.642	<.01	0.160	.136 to .185	0.951	0.937
FW-SES aux	142	162.969	35	4.656	<.01	0.160	.136 to .186	0.952	0.924
CVCS	152	31.359	5	6.272	<.01	0.186	.127 to .251	0.966	0.933
UWES-9	147	280.955	27	10.406	<.01	0.253	.227 to .280	0.901	0.867

Note. *N* = number of participants. *p* = probability level associated with the χ^2 statistic. RMSEA = root mean square error of approximation. CI = confidence interval for the RMSEA. CFI = comparative fit index. TLI = Tucker Lewis index. *The auxiliary variable was not included in this model. WVS = work volition scale; PPS-4 = proactive personality scale-4 item; adjSPOS-8 = adjusted survey of perceived organizational support – 8 item; FW-SES = farm worker self-efficacy scale; aux = auxiliary variable included; CVCS = conservation values congruence scale; UWES-9 = Utrecht work engagement scale – 9 item. *N* = number of completed responses.

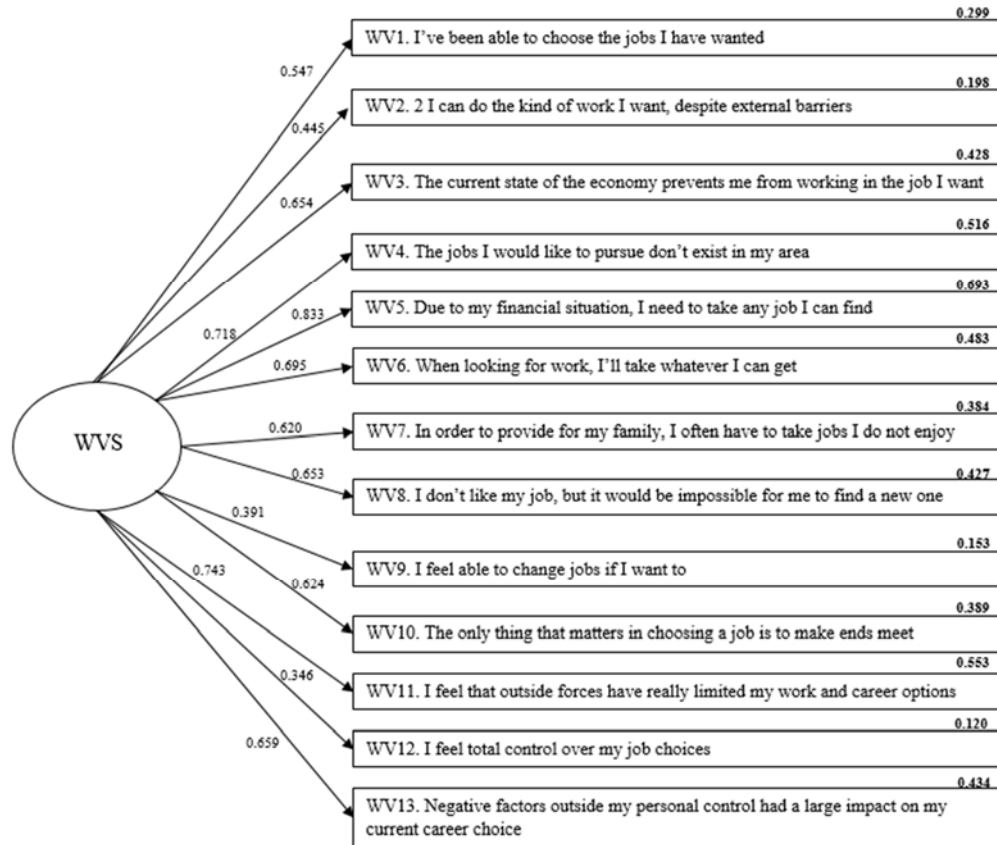


Figure 5.3. CFA of Work Volition Scale. WVS = Work Volition Scale. Numbers next to paths are standardised path co-efficients for the corresponding items. Numbers in bold are the variance explained.

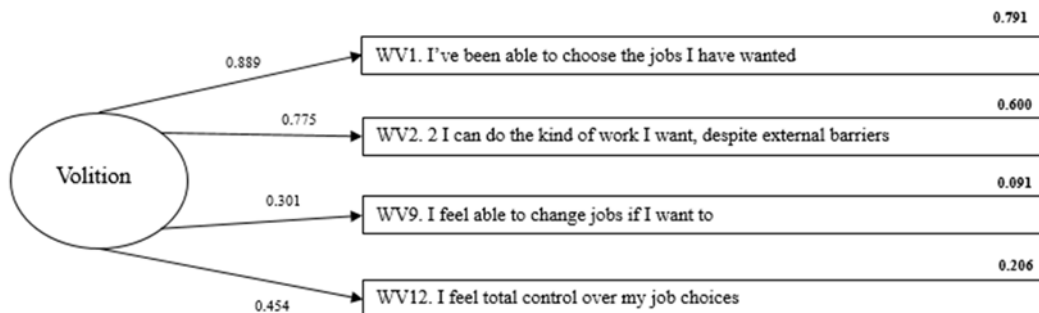


Figure 5.4. CFA of Volition subscale. Numbers next to paths are standardised path co-efficients for the corresponding items. Numbers in bold are the variance explained.

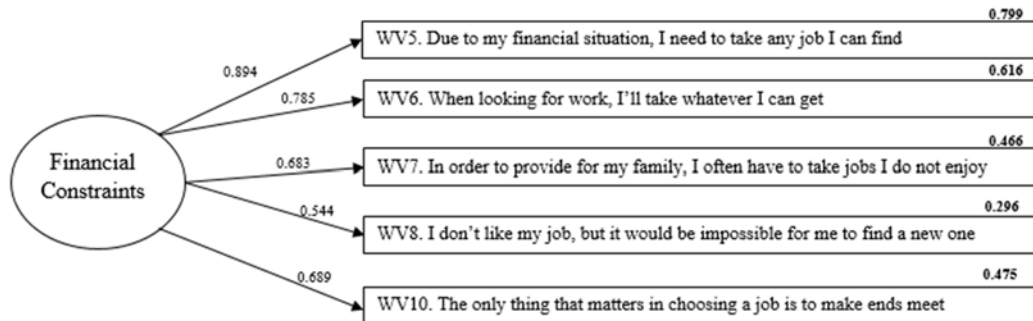


Figure 5.5. CFA of Financial Constraints subscale. Numbers next to paths are standardised path co-efficients for the corresponding items. Numbers in bold are the variance explained.

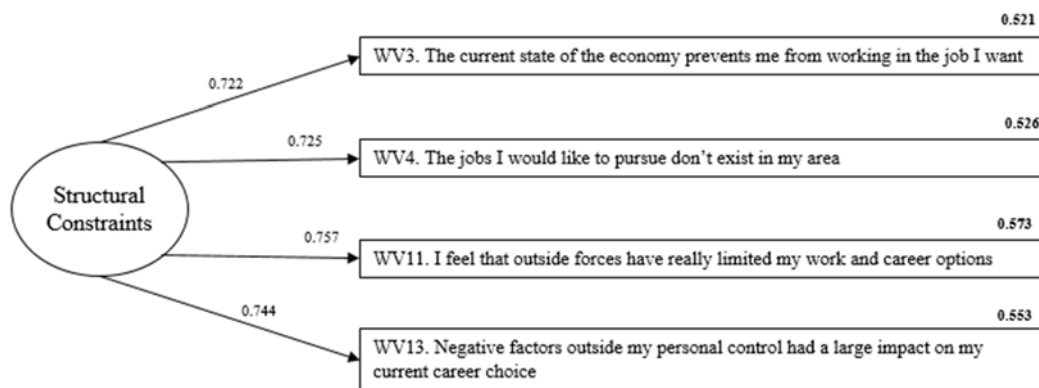


Figure 5.6. CFA of Structural Constraints subscale. Numbers next to paths are standardised path co-efficients for the corresponding items. Numbers in bold are the variance explained.

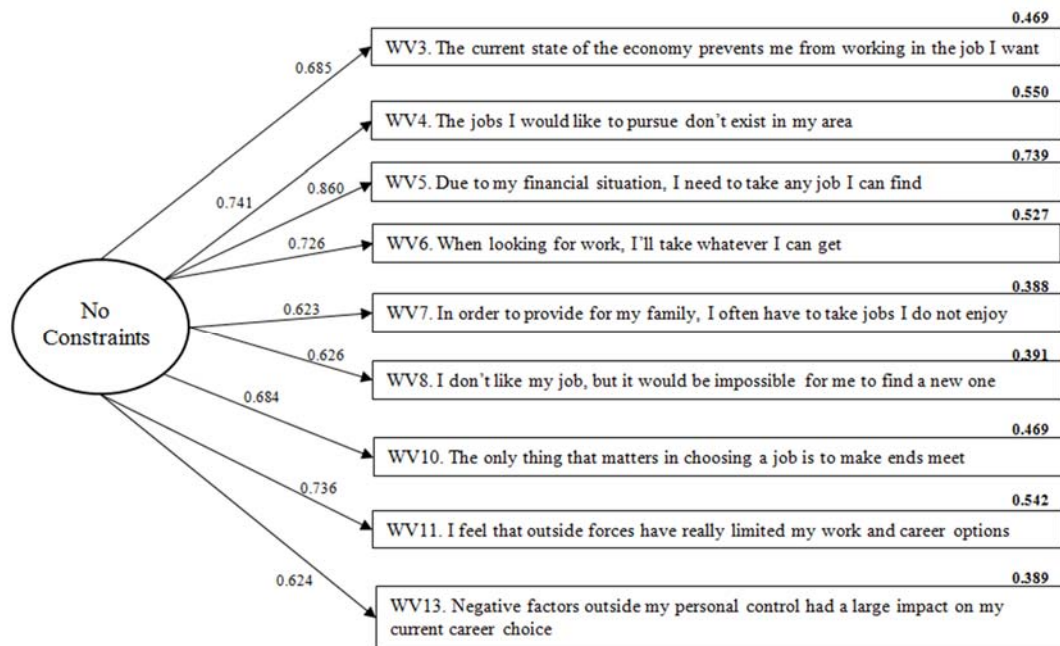


Figure 5.7. CFA of Work Volition No Constraints Factor. Numbers next to paths are standardised path co-efficients for the corresponding items. Numbers in bold are the variance explained.

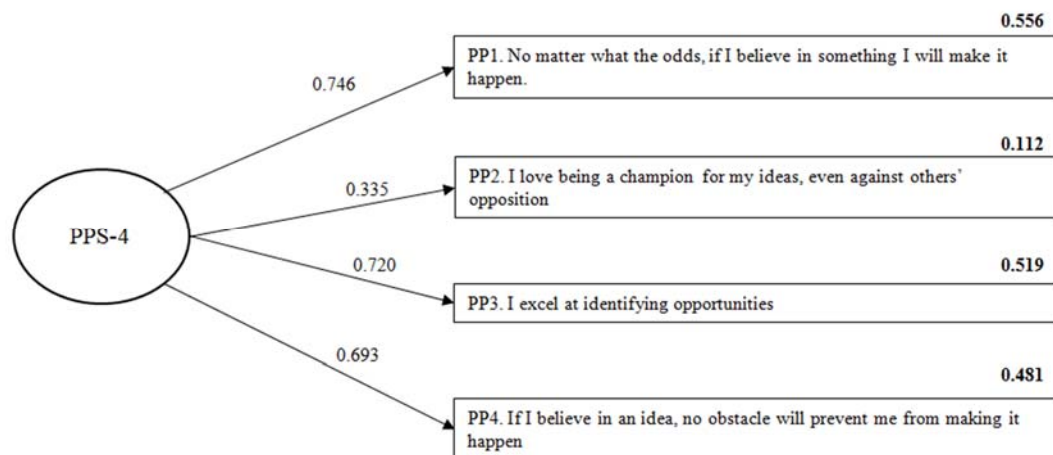


Figure 5.8. CFA of Proactive Personality Scale – 4item (PPS-4). Numbers next to paths are standardised path co-efficients for the corresponding items. Numbers in bold are the variance explained.

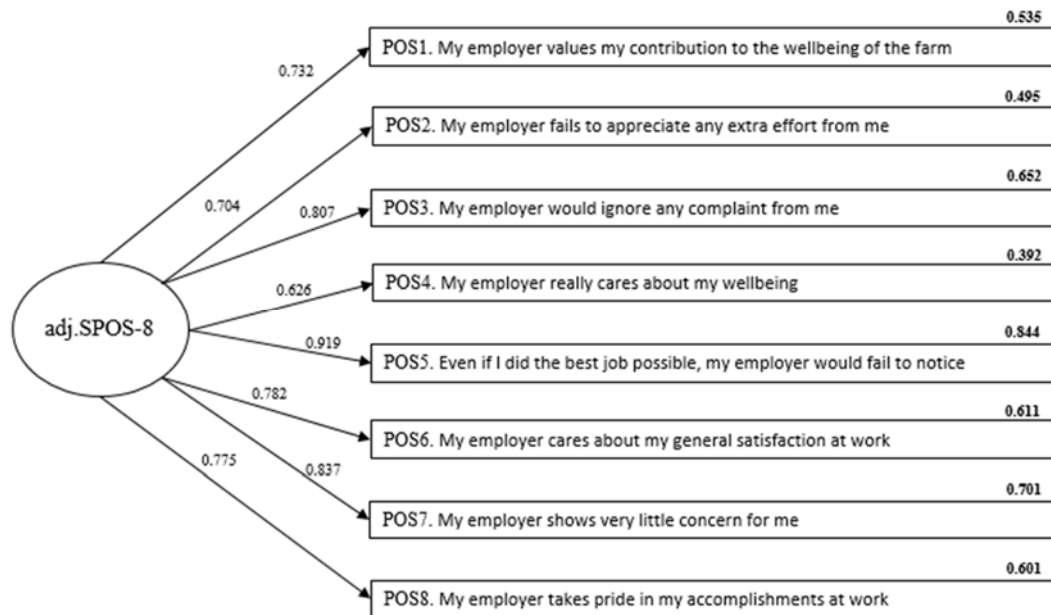


Figure 5.9. CFA of the adjusted Survey of Perceived Organizational Support – 8item (adjSPOS-8). Numbers next to paths are standardised path co-efficients for the corresponding items. Numbers in bold are the variance explained.

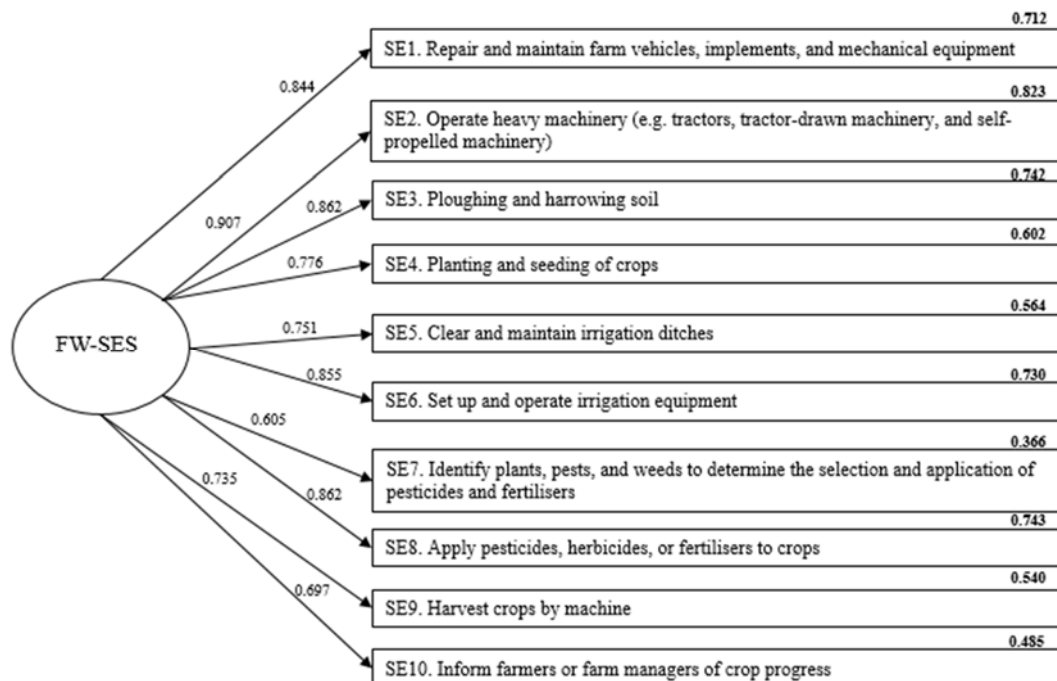


Figure 5.10. CFA of the Farm Worker Self-Efficacy Scale (FWSES). Numbers next to paths are standardised path co-efficients for the corresponding items. Numbers in bold are the variance explained.

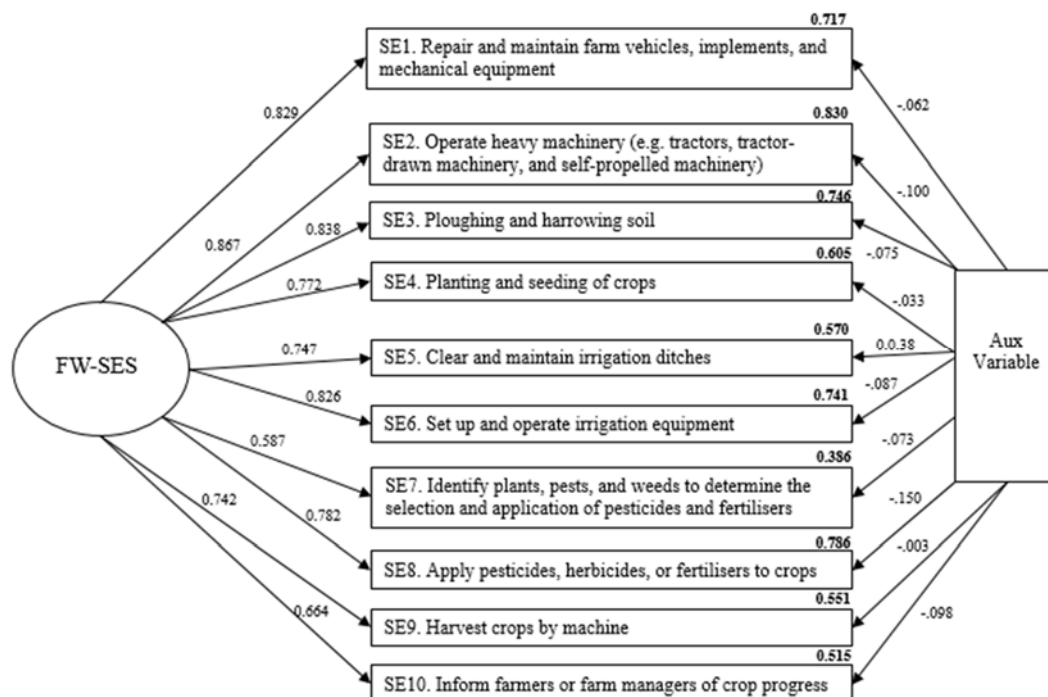


Figure 5.11. CFA of Farm Worker Self-Efficacy Scale (FWSES) including auxiliary variable of total relevancy (FWSES aux). Numbers next to paths are standardised path co-efficients for the corresponding items. Numbers in bold are the variance explained.

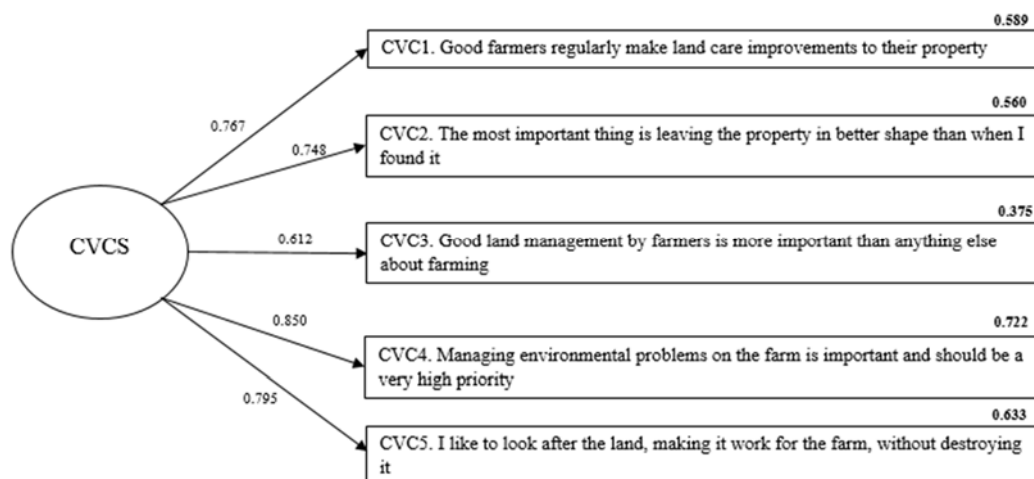


Figure 5.12. CFA of Conservation Values Congruence Scale (CVCS). Numbers next to paths are standardised path co-efficients for the corresponding items. Numbers in bold are the variance explained.

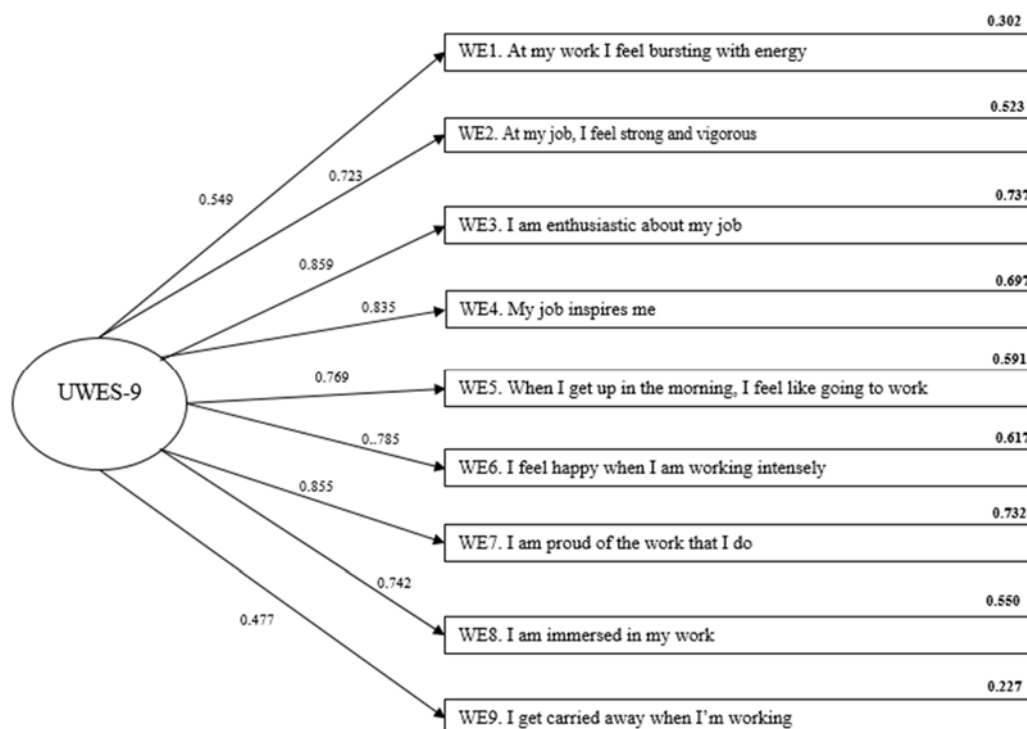


Figure 5.13. CFA of the Utrecht Work Engagement Scale – 9 item (UWES-9).

Numbers next to paths are standardised path co-efficients for the corresponding items. Numbers in bold are the variance explained.

5.3.4 SEM testing of The SCCT Model of Farm Worker Job Satisfaction and The SCCT Model of Farm Worker Job Satisfaction including Work Volition

SEM tests of the hypothesised models 1.1, 1.2, 1.3 and 2.1 were conducted using MPlus (Version 8, Muthen & Muthen, 2017). The fit statistics for all models are reported in Table 5g.

Table 5g

Summary of model-data fit statistics for all structural models

Model	<i>N</i>	χ^2	<i>df</i>	χ^2/df	<i>p</i>	RMSEA	CI (90%)	CFI	TLI
Model 1.1*	156	1090.927	689	1.583	<.01	.061	.054 to .068	0.947	0.943
Model 1.2	156	1102.295	718	1.535	<.01	.059	.052 to .065	0.949	0.944
Model 1.3	156	1046.754	688	1.521	<.01	.054	.047 to .061	0.956	0.952
Model 2.1	157	2011.936	1290	1.560	<.01	.060	.055 to .065	0.910	0.904

Note. *N* = number of participants. *p* = probability level associated with the χ^2 statistic. RMSEA = root mean square error of approximation. CI = confidence interval for the RMSEA. CFI = comparative fit index. TLI = Tucker Lewis index.

*The auxiliary variable was not included in this model.

5.3.4.1 Model 1.1. The first model tested is pictured in Figure 5.14. The chi-square test indicated poor fit, but was likely affected by sample size, with the chi-square test divided by the degrees of freedom, showing good fit. The RMSEA, CFI, and TLI all indicated acceptable fit of the model to the data. Overall the model was able to predict 70.7% of the variance in job satisfaction scores. The standardised regression weights for all direct pathways (hypotheses 1 – 13) are reported in Figure 5.13. A majority of the direct pathways were statistically significant at the $p < .05$ or $p < .01$

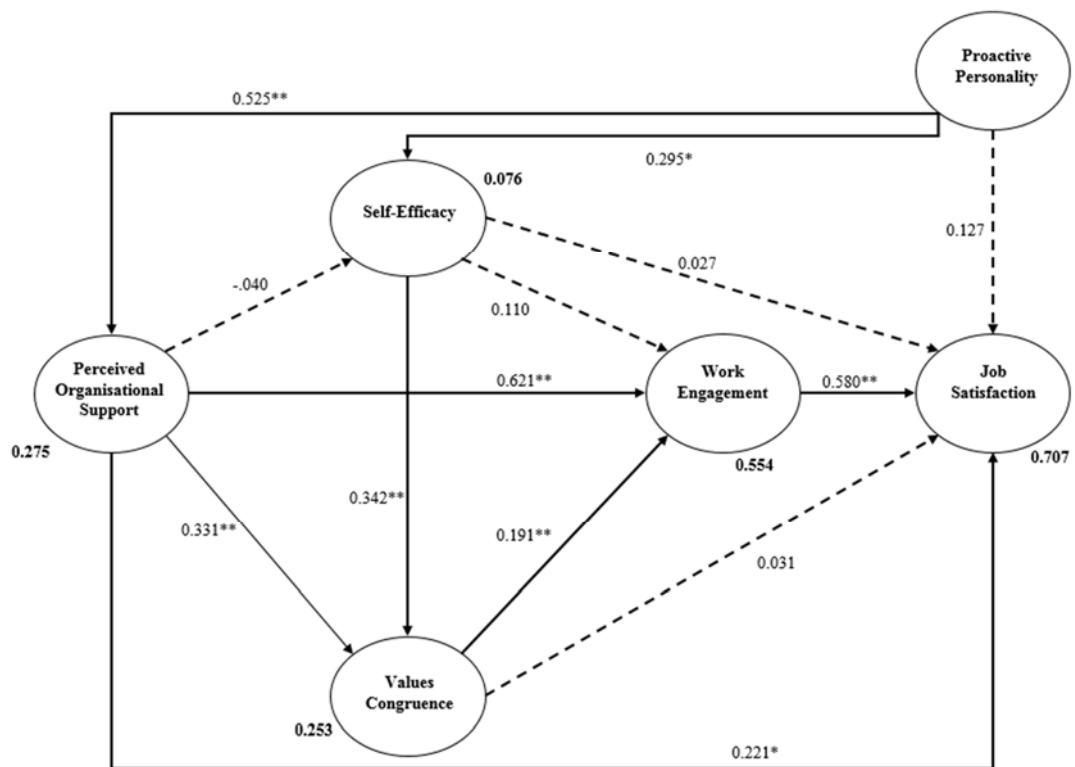


Figure 5.14. SCCT Model of Farm Worker Job Satisfaction. Standardised regression weights are reported on paths. Variance predicted in latent constructs are in bold. Dashed paths are non-significant. Bold paths are significant. * $p < .05$, ** $p < .01$.

5.3.4.2 Model 1.2. The auxiliary variable of total relevancy was regressed onto each observed indicator for farm-worker self-efficacy. The Model of Farm Worker Job Satisfaction was then retested to determine whether the auxiliary variable was able to account for any localised model misspecification due to missing data on the farm worker self-efficacy scale (FWSES). This inclusion did improve overall fit statistics (Table 5g). Furthermore, the standard errors for most of the standardised path co-efficients to and from self-efficacy were reduced; the only exclusion being the path between self-efficacy and job satisfaction (Table 5h). Consequently, the decision was made to proceed with the inclusion of the auxiliary variable in all further models to be tested.

Table 5h.

Standard errors for the standardised path co-efficients of Model 1.1 and Model 1.2

Direct Path			$SE_{Model\ 1.1}$	$SE_{Model\ 1.2}$
PP	→	POS	.059	.062
PP	→	SE	.126	.122
PP	→	JS	.066	.065
POS	→	SE	.112	.104
POS	→	VC	.076	.077
POS	→	WE	.047	.046
POS	→	JS	.094	.096
SE	→	VC	.078	.076
SE	→	WE	.075	.073
SE	→	JS	.079	.082
VC	→	WE	.069	.069
VC	→	JS	.073	.069
WE	→	JS	.073	.074

Note. SE = standard error. PP = proactive personality; POS = perceived organisational support; SE = farm worker self-efficacy; JS = job satisfaction; WE = work engagement; VC = conservation values congruence. Paths involving self-efficacy are in bold.

5.3.4.3 Model 1.3. The third variation of the SCCT Model of Job Satisfaction added a direct path from proactive personality to work engagement. This path was a statistically significant inclusion and improved the fit of the SCCT Model of Farm Worker Job Satisfaction to the data. For this model, CFI and TLI scores both exceeded the 0.95 cut-off, indicating good fit. The model predicted 69.7% of the variance in job satisfaction scores, and while this is lower than Model 1.1, this difference is negligible (Figure 5.15). The weighting of some direct paths changed but the statistical significance of the direct paths was consistent with Model 1.1 (Table 5i). Analysis of the indirect effects are reported in Table 5j.

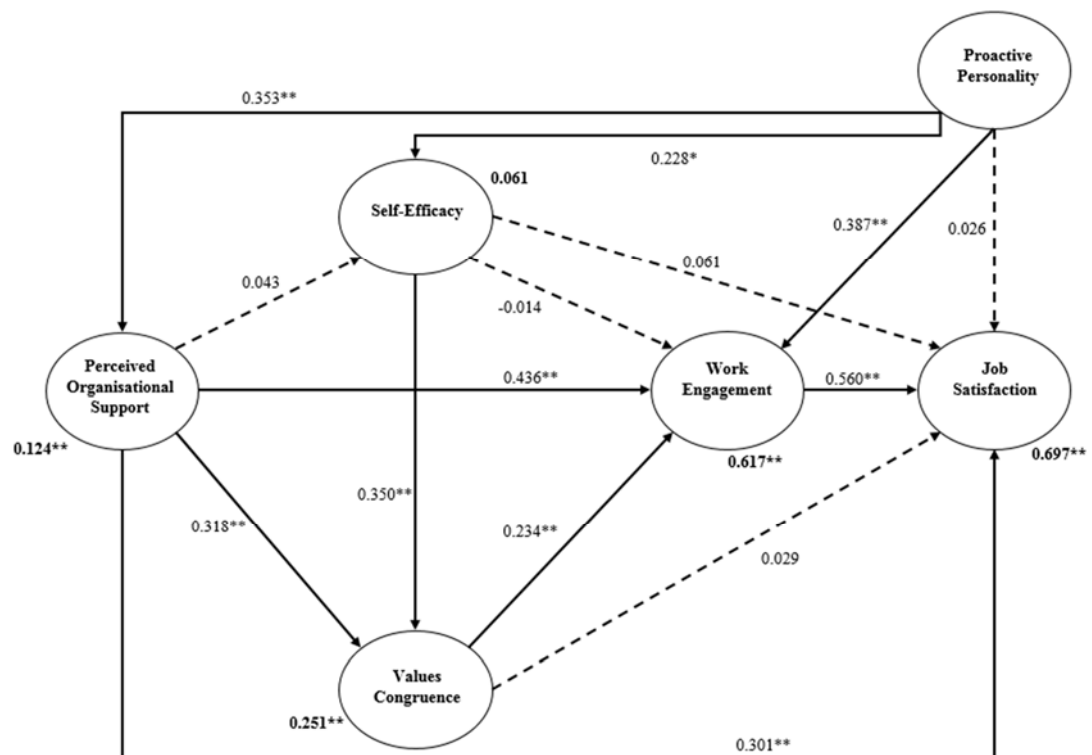


Figure 5.15. Model 1.3 SCCT Model of Farm Worker Job Satisfaction. Standardised regression weights are reported on paths. Variance predicted in latent constructs are in bold. Dotted paths are non-significant. Bold paths are significant. * $p < .05$, ** $p < .01$.

Table 5i
Direct effects for Model 1.3

Direct Path		β	SE	β/SE	p	95% CI
PP	→ POS	.353	.064	5.471	.000	[.226, .479]
PP	→ SE	.228	.105	2.182	.029	[.023, .433]
PP	→ WE	.387	.059	6.550	.000	[.271, .503]
PP	→ JS	.026	.064	.403	.687	[-.100, .152]
POS	→ SE	.043	.082	.521	.602	[-.118, .204]
POS	→ VC	.318	.079	4.037	.000	[.164, .473]
POS	→ WE	.436	.057	7.600	.000	[.324, .549]
POS	→ JS	.301	.063	4.758	.000	[.177, .425]
SE	→ VC	.350	.077	4.517	.000	[.198, .502]
SE	→ WE	-.014	.078	-.182	.855	[-.166, .138]
SE	→ JS	.061	.077	.794	.427	[-.090, .212]
VC	→ WE	.234	.069	3.378	.001	[.098, .370]
VC	→ JS	.029	.074	.387	.699	[-.117, .174]
WE	→ JS	.560	.082	6.845	.000	[.400, .721]

Note. β = standardised path co-efficient; SE = standard error; CI = confidence interval; PP = proactive personality; POS = perceived organisational support; SE = farm worker self-efficacy; JS = job satisfaction; WE = work engagement; VC = conservation values congruence.

Table 5j

Bootstrap estimates of the indirect effects, standard errors, and 95% bias-corrected confidence bounds for Model 1.3

Predictor	Mediator(s)	Outcome	ab_{cs}	SE_{cs}	BC 95% CI for mean ab_{cs}
PP	→ POS	→ WE	.154	.031	[.094, .214]*
PP	→ POS	→ JS	.108	.029	[.051, .165]*
PP	→ WE	→ JS	.224	.047	[.131, .317]*
POS	→ VC	→ WE	.074	.026	[.022, .125]*
POS	→ WE	→ JS	.248	.048	[.155, .342]*
SE	→ VC	→ WE	.080	.030	[.020, .139]*
VC	→ WE	→ JS	.134	.044	[.047, .221]*
PP	→ POS	→ SE	.023	.032	[-.040, .086]
PP	→ SE	→ JS	.012	.018	[-.022, .047]
PP	→ SE	→ WE	-.003	.016	[-.035, .029]
POS	→ SE	→ VC	.021	.031	[-.039, .081]
POS	→ SE	→ WE	-.001	.005	[-.011, .009]
POS	→ SE	→ JS	.004	.006	[-.009, .016]
POS	→ VC	→ JS	.008	.024	[-.040, .056]
SE	→ WE	→ JS	-.008	.043	[-.044, .062]
SE	→ VC	→ JS	.009	.027	[-.093, .077]

Note. ab_{cs} = completely standardised indirect association; SE_{cs} = standard error of the point estimate of the standardised indirect association; BC = bias corrected; CI = confidence interval; PP = proactive personality; POS = perceived organisational support; SE = farm worker self-efficacy; JS = job satisfaction; WE = work engagement; VC = conservation values congruence.

*This 95% confidence interval excludes zero; therefore, the indirect relation is significant at $p < .05$.

5.3.4.4 Model 2.1. The SCCT Model of Job Satisfaction including Work Volition was able to predict 71% of the variance in job satisfaction scores (see Figure 5.16). The model had an acceptable fit to the data according to the RMSEA of .060 (90% CI = .055 to .065). The CFI score of .910 and TLI score of .904 indicated adequate fit. For other fit statistics please see Table 5g. The direct paths are reported in Table 5k. Indirect effects for the model are reported in Table 5l.

Table 5k

Direct effects for Model 2.1

Direct Path	β	SE	β/SE	<i>p</i>	95% CI
PP → NC	.022	.083	.260	.795	[-.141, .184]
PP → POS	.373	.063	5.877	.000	[.249, .497]
PP → SE	.314	.103	3.038	.002	[.111, .516]
PP → V	-.029	.082	-.348	.728	[-.190, .133]
PP → WE	.397	.068	5.804	.000	[.263, .531]
PP → JS	.056	.082	.682	.495	[-.105, .216]
NC → POS	.423	.056	7.576	.000	[.313, .532]
NC → SE	.347	.109	3.181	.001	[.133, .560]
NC → VC	-.227	.088	-2.576	.010	[-.400, -.054]
NC → WE	.142	.077	1.851	.064	[-.008, .293]
NC → JS	.076	.075	1.011	.312	[-.072, .224]
POS → SE	-.176	.097	-1.818	.069	[-.365, .014]
POS → VC	.436	.093	4.686	.000	[.254, .618]
POS → V	.507	.083	6.145	.000	[.345, .669]
POS → WE	.208	.109	1.909	.056	[-.006, .422]
POS → JS	.249	.093	2.686	.007	[.067, .430]
SE → VC	.419	.078	5.409	.000	[.267, .571]
SE → V	.275	.087	3.162	.002	[.104, .445]
SE → WE	-.125	.101	-1.233	.218	[-.323, .074]
SE → JS	.021	.106	.193	.847	[-.188, .229]
VC → V	.062	.096	.647	.518	[-.126, .251]
VC → WE	.200	.075	2.661	.008	[.053, .347]
VC → JS	.038	.084	.451	.652	[-.127, .202]
V → WE	.326	.071	4.610	.000	[.188, .465]
V → JS	.112	.072	1.542	.123	[-.030, .253]
WE → JS	.488	.099	4.956	.000	[.295, .682]

Note. β = standardised path co-efficient; SE = standard error; CI = confidence

interval; PP = proactive personality; NC = no constraints; POS = perceived organisational support; SE = farm worker self-efficacy; JS = job satisfaction; WE = work engagement; VC = conservation values congruence. V = volition.

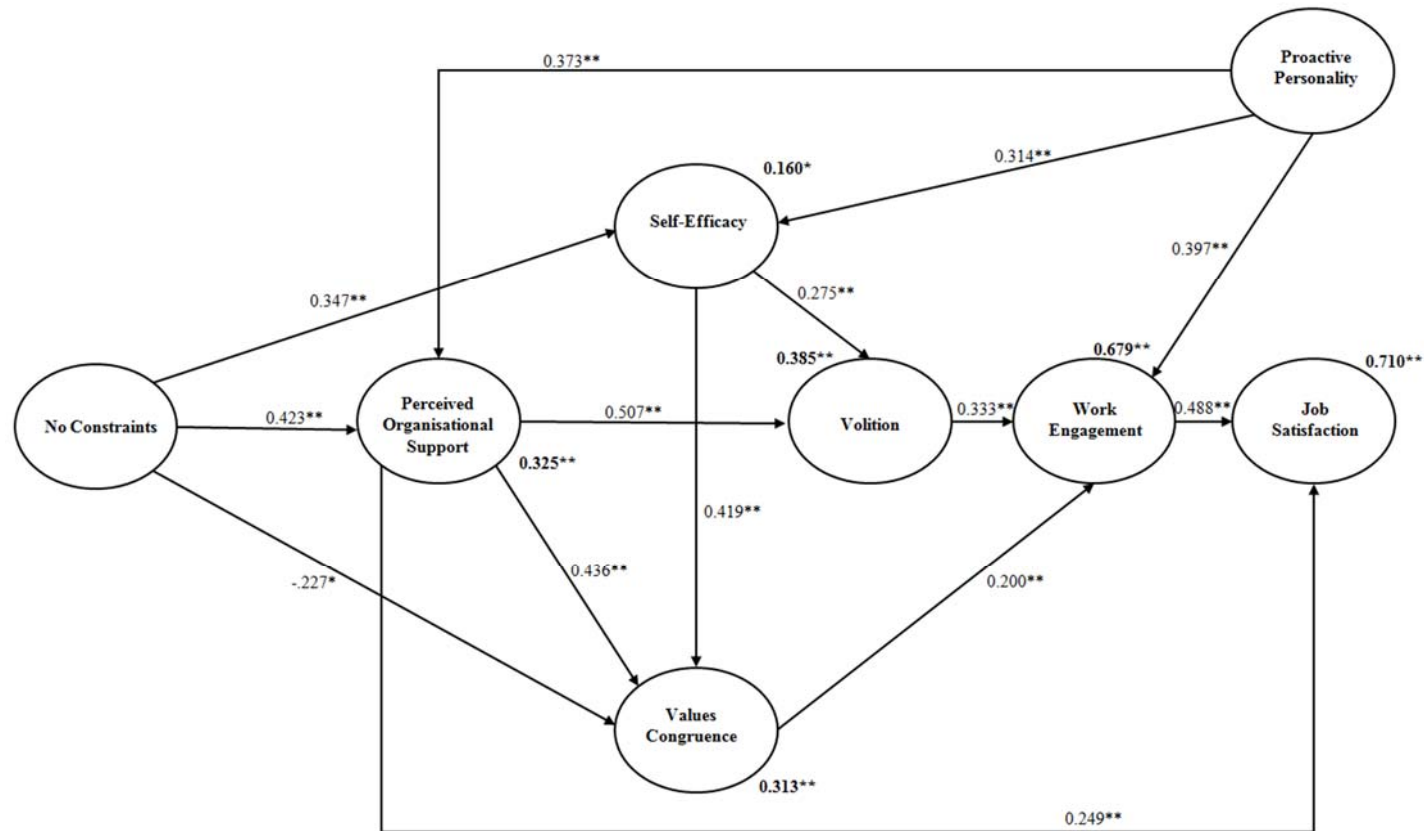


Figure 5.16. Model 2.1 SCCT Model of Farm Worker Job Satisfaction including Work Volition. Only statistically significant paths are drawn. Standardised regression weights are reported on paths. The variance predicted in latent constructs are in bold. * $p < .05$, ** $p < .01$.

Table 51.

Bootstrap estimates of the indirect effects, standard errors, and 95% bias-corrected confidence bounds for Model 2.1

Predictor	Mediator(s)	Outcome	ab_{cs}	SE_{cs}	BC 95% CI for mean ab_{cs}
PP	→ POS	→ V	.189	.047	[.097, .281]*
PP	→ SE	→ V	.086	.042	[.004, .169]*
PP	→ POS	→ WE	.078	.040	[.000, .156]*
PP	→ POS	→ JS	.093	.037	[.019, .166]*
PP	→ WE	→ JS	.194	.049	[.098, .290]*
NC	→ POS	→ VC	.184	.043	[.094, .274]*
NC	→ SE	→ VC	.145	.057	[.033, .257]*
NC	→ POS	→ V	.214	.041	[.133, .296]*
NC	→ SE	→ V	.095	.045	[.007, .184]*
POS	→ VC	→ WE	.087	.036	[.016, .159]*
POS	→ V	→ WE	.166	.047	[.073, .258]*
SE	→ VC	→ WE	.084	.035	[.015, .153]*
SE	→ V	→ WE	.090	.038	[.015, .164]*
VC	→ WE	→ JS	.098	.038	[.023, .172]*
V	→ WE	→ JS	.159	.041	[.078, .241]*
PP	→ NC	→ SE	.007	.028	[-.047, .062]
PP	→ POS	→ SE	-.065	.040	[-.145, .014]
PP	→ SE	→ WE	-.039	.037	[-.111, .033]
PP	→ V	→ WE	-.009	.027	[-.063, .044]
PP	→ SE	→ JS	.006	.034	[-.059, .072]
PP	→ V	→ JS	-.003	.009	[-.022, .015]
NC	→ POS	→ SE	-.074	.043	[-.158, .009]
NC	→ VC	→ V	-.014	.022	[-.058, .030]
NC	→ POS	→ WE	.088	.048	[-.006, .182]
NC	→ SE	→ WE	-.043	.039	[-.120, .034]
NC	→ VC	→ WE	-.045	.024	[-.092, .001]
POS	→ SE	→ VC	-.074	.043	[-.157, .010]
POS	→ SE	→ V	-.048	.031	[-.110, .013]
POS	→ VC	→ V	.027	.041	[-.054, .108]
POS	→ SE	→ WE	.022	.022	[-.022, .066]
POS	→ SE	→ JS	-.004	.019	[-.041, .033]
POS	→ VC	→ JS	.016	.036	[-.055, .088]
POS	→ V	→ JS	.057	.037	[-.016, .129]
POS	→ WE	→ JS	.102	.060	[-.017, .220]
SE	→ VC	→ V	.026	.041	[-.053, .106]
SE	→ VC	→ JS	.016	.035	[-.053, .085]
SE	→ V	→ JS	.031	.022	[-.013, .075]
SE	→ WE	→ JS	-.061	.048	[-.154, .033]
VC	→ V	→ WE	.020	.031	[-.041, .082]
VC	→ V	→ JS	.007	.012	[-.016, .030]

Note. ab_{cs} = completely standardised indirect association; SE_{cs} = standard error of the point estimate of the standardised indirect association; BC = bias corrected; CI = confidence interval; PP = proactive personality; NC = no constraints; POS = perceived organisational support; SE = farm worker self-efficacy; JS = job satisfaction; WE = work engagement; VC = conservation values congruence. V = volition.

*This 95% confidence interval excludes zero; therefore, the indirect relation is significant at $p < .05$.

5.4 Summary of the Results from Study Two

This chapter has reported on the methods and results for the empirical testing of the SCCT Model of Farm Worker Job Satisfaction and the integration of the work volition construct into this model. A brief summary of notable results is presented now; however, there will be further depth of discussion in the next chapter.

Proportion counts showed adequate spread of the data to treat each observed indicator as ordered categorical variables. With two exceptions, all predictor items were positively correlated with the Job Satisfaction Scale items ($r = .013$ to $.705$) Item PP2 “I love being a champion for my ideas, even against other’s opposition” was negatively correlated with item JS1 “I feel fairly satisfied with my present job” ($r = -.012$) and the reverse scored item WV6 “When looking for work I’ll take whatever I can get” was negatively correlated with JS3 “I find real enjoyment in my work” ($r = -.068$). These polychoric correlations, while negative, are small enough to be considered of little significance.

The CFAs for all scales, except the full work volition scale, demonstrated acceptable to good fit on the CFI. RMSEAs were unacceptably high on all scales, but inflation on this fit index is possibly due to small sample sizes.

Testing of the SCCT Model of Farm Worker Job Satisfaction, with the inclusion of the auxiliary variable (total relevancy) and the path from proactive personality to work engagement, demonstrated good fit to the data (RMSEA = 0.054, CFI = .956, TLI = .952). While proactive personality was not a direct predictor of job satisfaction, it did have an indirect effect on job satisfaction through both POS and work engagement. The model showed no ability to account for any significant variance in farm worker self-efficacy ($r^2 = .061$), and farm worker self-efficacy was only influential through its relationship with conservation values congruence. POS directly and indirectly predicted job satisfaction through all hypothesised pathways except that involving self-efficacy. The model accounted for 61.7% of the variance in work engagement, and work engagement in turn was a strong predictor ($\beta = .560$) of job satisfaction.

The inclusion of work volition, in the form of the no constraints and volition latent constructs, added little to the SCCT Model of Farm Worker Job Satisfaction’s ability to predict job satisfaction (Model 1.3 = 69.7%, Model 2.1 = 71%). However, both the no constraints and the volition factor revealed more about the potential for

work volition to influence the SCCT Model of Farm Worker Job Satisfaction predictor variables. The inclusion of the no constraints factor added to the variance predicted in POS (Model 1.3 = 12.4%, Model 2.1 = 32.5%), self-efficacy (Model 1.3 = 6.1%, Model 2.1 = 16%), and conservation values congruence (Model 1.3 = 25.1%, Model 2.1 = 31.3%). The addition of both no constraints and volition also improved the variance predicted in work engagement (Model 1.3 = 61.7%, Model 2.1 = 67.9%). Unexpectedly the direct relationship between no constraints and conservation values congruence was negative, suggesting that the more perceived constraints on career choices, the more the individual identified with the conservation values that underpin the farm work context. The volition construct was a direct predictor of work engagement and mediated the relationship between self-efficacy and work engagement, and POS and work engagement. Unlike Model 1.3, The SCCT Model of Farm Worker Job Satisfaction including Work Volition demonstrated the potential for self-efficacy to be a mediator. It was through self-efficacy that no constraints indirectly predicted conservation values congruence and no constraints indirectly predicted volition.

Both models have demonstrated that the SCCT Model of Farm Worker Job Satisfaction is able to demonstrate how (a) proactive personality, (b) POS, (c) farm worker self-efficacy, (d) conservation values congruence, and (e) work engagement inter-relate to predict job satisfaction. The addition of the work volition constructs, no constraints and volition, provided new information on how perceptions of career choice can influence and be influenced by the different variables in the SCCT Model of Farm Worker Job Satisfaction. The results from Study One and Study Two will be integrated in Chapter Six: General Discussion.

CHAPTER SIX: GENERAL DISCUSSION

This General Discussion begins with a summary of the findings. The theoretical and practical implications that come from the evidence are presented, followed by limitations and arguments made for future directions for research on the SCCT in the agricultural work context, and career development in the cotton industry.

The SCCT has been a dominant theory in the career development literature over the last decade; nevertheless, to date there has been no thorough examination of the SCCT Model of Job Satisfaction in the Australian agricultural workforce. The current research project is the first to investigate the SCCT model of job satisfaction in terms of how its core constructs are experienced by on-farm cotton workers. These core constructs include: (a) personality; (b) goal and efficacy-relevant environmental supports, resources and barriers; (c) self-efficacy; (d) work conditions and outcome expectations; (e) goals and goal-directed activity; and (f) job satisfaction. It is also the first to attempt to use SCCT to quantitatively test the inter-relationship and predictive nature of each of these variables and, in doing so, presents the SCCT Model of Farm Worker Job Satisfaction.

This research adds to the research literature of vocational psychology and career development by integrating the construct work volition into the Model of Farm Worker Job Satisfaction. Work volition comprises three first order factors: financial constraints, structural constraints, and volition. Integration of work volition as a single overall construct was abandoned due to farm workers' accounts of some aspects of work volition acting as a predictor of SCCT core constructs and others an outcome of SCCT core constructs. Instead, the two sub-factors financial constraints and structural constraints merged as one factor: no constraints (with "no" being due to reverse scoring), and the volition sub-factor remained a distinct construct. The inclusion of these factors added little to the prediction of job satisfaction, but they did provide some initial evidence on the ways work volition may influence and be an outcome of some of the SCCT Model of Farm Worker Job Satisfaction constructs.

The pattern of direct and indirect pathways that were hypothesised in Study Two were mostly supported by the sample data. Overall, the findings of the research support the adaptation and utility of SCCT to explain the dispositional and situational psychological aspects of farm workers' satisfaction with their jobs. The

findings from Study Two will now be discussed with the analyses from Study One integrated and used to support explanation of the results.

6.1 SCCT Model of Farm Worker Job Satisfaction

This study attempted to adapt the constructs of the SCCT to the farming context by using first-hand accounts of farm workers' experiences of work to inform the selection, adaptation, and development of measures to be used in Study Two. As a direct result of the interview data, previously proposed measures of the five factor model of personality, and positive affect and negative affect, were abandoned and the construct, proactive personality, was used instead. The results from Study One also changed the way the work volition construct was integrated into the SCCT Model of Farm Worker Job Satisfaction for testing in Study Two.

The first model examined was the SCCT Model of Farm Worker Job Satisfaction, which mapped paths based on the traditional SCCT Model of Job Satisfaction between (a) proactive personality, (b) perceived organisational support, (c) farm worker self-efficacy, (d) conservation values congruence, (e) work engagement, and (f) job satisfaction. The model demonstrated good fit to the data. Work volition in the form of both the no constraints construct (combining the financial and structural constraints measures), and the volition construct, were added in the second model, which demonstrated adequate fit to the data. A summary of the findings on each construct in relation to the research questions of the project, and the hypothesised direct and indirect pathways that were proposed in Study Two will now be discussed.

6.1.1. Proactive Personality

Two questions were included in the interview schedule in Study One to elicit information about personality in the cotton farm work context, which were: "What sort of person do you need to be to do farm work?" and "What sort of person do you need to be to be good at farm work?" Personality factors were also alluded to throughout discussion of other topics in the interviews. Farm workers described an ideal worker that was self-motivated, demonstrated initiative and willingness "to have a go" (i.e., to attempt tasks without prior experience or that are beyond current competence levels). These qualities seemed to align with a specific personality trait that has been identified in the psychological literature as Proactive Personality.

As well as testing the face validity of the Proactive Personality Scale-6 item (PPS-6; Bateman & Crant, 1993) in Study One, a CFA was conducted on the four

item short version (PPS-4) in Study Two. The decision to use the smaller scale in Study Two was to reduce the number of observed indicators. This was beneficial for the small sample ($N = 141$) that completed this scale in the Farm Worker Job Satisfaction Survey. The CFA for the PPS-4 returned an unacceptably high RMSEA score, but CFI and TLI scores indicated good fit to the data. Interestingly, the weakest loading item for the PP-4 “I love being a champion for my ideas, even against other’s opposition” was noted to be questionable in the interview data with a grower pointing out the difference between a proactive worker making suggestions, which was welcomed, as opposed to telling him what to do, a behaviour which was not viewed favourably. This item suggests the potential for conflict which may be a maladaptive work behaviour that ultimately inhibits a worker’s job satisfaction.

Proactive personality was a direct predictor of perceived organisational support. It can be argued that if proactive personality is a characteristic of the ideal worker, then farm workers who are proactive may have more capacity to choose their potential employer and purposely seek out work with growers who demonstrate appreciation for their contributions on farm. However, no direct relationship was observed between proactive personality and either work volition factor which discredits part of Bateman and Crant’s (1993) definition for proactive personality as “one who is relatively unconstrained by situational forces...” (p. 105). Other evidence which aids understanding the impacts of proactive personality in the SCCT Model of Farm Worker job satisfaction include: (a) the strength of the relationship between proactive personality and POS decreased when a direct path from proactive personality to work engagement was entered into the model; (b) it was revealed that proactive personality directly predicted work engagement; and (c) proactive personality also indirectly predicted work engagement through perceived organisational support. This makes it more likely that this personality factor is influential in the model because proactive workers are motivated to apply effort and shape their work environment, which is consistent with the second part of Bateman and Crant’s (1993) definition which describes proactive personality as someone “... who effects environmental change” (p. 105). One way workers do this may be by being more direct in telling their boss what they want to achieve in their job which leads workers to elicit the kinds of support they need to be engaged at work. This behaviour was mentioned as a desirable trait by Participant C2 in Study One, who stated, “I want to know what people want when they come – when they come into

farming so that it gives me somewhere to go”. The proactive personality item “No matter what the odds, if I believe in something I will make it happen” was the strongest loading item in the CFA of the PPS-4. This item describes an important characteristic for a worker to have in farming, as this type of proactive trait helps a worker stay engaged in their efforts to grow a good crop when experiencing adverse weather. As Participant K described, “I’m going to prove that we can get out of it, or prove it can be done”. It is unsurprising that the combination of this attitude and the perceived presence of supports such that workers feel that their employer values them and cares for their wellbeing was related to workers’ increased self-reporting of dedication, absorption, and vigour when carrying out their job.

The drive of proactive individuals to affect environmental change may also explain the direct relationship between proactive personality and farm worker task self-efficacy in the SCCT Model of Farm Worker Job Satisfaction. Every task listed in the Farm Worker Self-Efficacy Scale is ultimately performed to exert some control or influence on the growth of the crop. Part of being proactive on a farm involves actively learning to master tasks with the goal of exerting a positive influence on the growth of the crop. It is also through self-efficacy that proactive personality indirectly predicts volition. This personality factor has been associated with confidence to complete work tasks outside of those required by a worker’s current role and may result in a sense of efficacy for tasks outside a farm worker’s current level of expertise (Parker et al., 2006). Furthermore, an individual that excels at identifying opportunities (PPS-4, item 3) may frame challenging work tasks as opportunities to learn new skills. Being confident in their ability to learn will likely lead to a strong sense of self-efficacy, and the more self-efficacious an individual is in a wide range of skills, such as those required in the farm hand job, the more one believes in their capacity for choice of employment and their volition while employed in their current job. As Participant B stated, “If I hadn’t come out here, I wouldn’t be able to do a lot of things that I can do now, so it’s good in that way”. This increased self-efficacy may lead workers to aspire to a career in farming which corresponds to an elevated sense of capacity for choosing to work their current job.

Past studies of the SCCT Model of Job Satisfaction which used the trait Positive Affect consistently found a direct relationship between personality and job satisfaction (Duffy & Lent, 2009; Lent et al., 2011; Badri et al., 2013). However, for the current study there was no direct relationship between proactive personality and

job satisfaction. Tests of the indirect effects in the SCCT Model of Farm Worker Job Satisfaction demonstrated that it is through proactive personality's relation with both POS and work engagement that this factor indirectly predicts job satisfaction. This makes sense, in that a highly proactive person could be satisfied or dissatisfied with their job on-farm depending on appraisals of the work environment and their progress made in goal-directed activity. Farm workers who tend to exhibit a more proactive personality may only be satisfied with their job if they felt their contributions were valued (POS) and consequently their efforts were a source of pride (UWES-9, item 7).

6.1.2. Perceived Organisational Support

Several questions in the Study One interviews elicited information about goal and efficacy-relevant supports, resources, and barriers. These included: (a) "What challenges are you up against when it comes to succeeding in your job?", (b) "What kind of support do you get to be able to do your job well?", and (c) "What happens if you make a mistake at work?". The main barrier to achieving farm-related goals was identified by participants as the weather, which could challenge, motivate, or inhibit a sense of self-efficacy and goal-directed activity, and affect work conditions. From the literature review (e.g., Rhoades & Eisenberger, 2002; Duffy & Lent, 2009; Lent et al., 2011) it was clear perceived organisational support (POS) was an important context factor for job satisfaction. Furthermore, the farm workers who were interviewed reported that being valued and having an employer that cared for their wellbeing kept people working in the face of demanding work conditions such as long hours.

There was substantive evidence for the face validity of the Survey of Perceived Organisational Support-8 item (SPOS; Eisenberger et al, 1986). However, the word "organisation" was not considered representative of many farming businesses, which are smaller farms operated by members of a family. The decision to replace the word organisation with the word employer was to broaden the circumstances that the items could be applied to, i.e. employer could mean organisation, but it could also be interpreted as direct supervisor, or owner of the property. A CFA conducted on this scale in Study Two returned an unacceptably high RMSEA score, but CFI and TLI scores indicated adequate fit to the data. The lowest loading item was "My employer really cares about my wellbeing" and the

highest loading item was “Even if I did the best job possible, my employer would fail to notice”.

Perceived organisational support was a direct predictor of job satisfaction for farm workers, which is consistent with the literature (Rhoades & Eisenberger, 2002). This factor was also the strongest direct predictor of work engagement and indirectly predicted job satisfaction through work engagement in the SCCT Model of Farm Worker Job Satisfaction. The results from Study Two are consistent with the interviews in Study One and provide further evidence that farm workers who feel valued and cared for by their employer also report being more dedicated in their work and happy with their job. In this way, the association between POS and work engagement is a representation of the social exchange that occurs when a grower demonstrates care and invests in the wellbeing of workers, and is then repaid with more effort applied on farm from workers, and that when the growers express gratitude or appreciation for these efforts, workers then feel more satisfied. POS has been theorised to influence workers to assimilate in workplaces, adopting workplace values, incorporating their work role into their social identity, and increasing their belief that they will be rewarded for their efforts (Rhoades & Eisenberger, 2002). As well as these processes leading to increased job satisfaction, it has been proposed that it is through these mechanisms that POS increases a worker’s affective commitment to the organisation (Panaccio & Vandenberghe, 2009).

Results derived from the SCCT Model of Farm Worker Job Satisfaction including work volition support these arguments with significant paths that demonstrate: (a) POS directly predicted conservation values congruence, (b) POS directly predicted volition, and (c) POS indirectly predicted work engagement through both conservation values congruence and volition. Interestingly, when volition was introduced to the model, the direct relationship from POS to work engagement and the indirect relationship between POS and job satisfaction through work engagement was no longer present. This evidence lends more weight to the argued importance of both volition and values congruence as key mechanisms through which the effects of POS lead to beneficial outcomes such as work engagement. The more a farm worker feels appreciated, valued and that their personal wellbeing matters to their employer, the more they identify with the conservation values that underpin sustainable farming practices and the more control

they feel over their choice of job. It is because of these two factors that they are more motivated to invest attention and effort in the performance of their duties on farm.

In the literature review it was proposed that workers who feel more supported by their employer feel they can seek assistance when performing challenging tasks and it was identified that cotton growers who value their employees use training opportunities as a strategy to support and look after their workers (Rhoades & Eisenberger, 2002; Kuehne et al., 2016). While previous SCCT studies of job satisfaction in teachers, for example, had positioned POS as a measure of work conditions, a relationship between POS and self-efficacy was consistently demonstrated (Duffy & Lent, 2009; Lent et al., 2011; Badri et al. 2013). It was therefore proposed that POS would directly predict self-efficacy. However, no such path eventuated in SCCT Model of Farm Worker Job Satisfaction.

A potential reason for this non-significant result comes from revisiting the different approaches growers take to managing the diverse cotton farm workforce and then considering the demographics of the participants in Study Two. In the interviews it was clear that although training is prioritised for all new employees, the quality of the training may vary depending on a grower's perception that the worker is considered a worthwhile longer term investment. The sample used for Study Two consisted of approximately 50% backpackers or other temporary work visa holders. Although backpackers are considered a vital part of cotton production, they are employed for up to three months and are short term workers in agriculture. As such, they are not required to perform the wide array of tasks and acquire the skills that are expected of permanent employees. Backpackers may not receive the same developmental opportunities as other farm workers and it is less likely that formal training would be a strategy employed by growers to engage these workers. This is not to say that cotton growers do not demonstrate care for these workers wellbeing but that factors other than POS are responsible for the variance in farm workers' task self-efficacy.

The absence of the direct path from POS to self-efficacy also provides evidence which may be used to reframe where the value lies for growers' utilisation of the formal training opportunities that are provided throughout the cotton industry. When a cotton grower describes the return on investment in staff training is potentially a three-fold increase in the productivity of their operations (Cotton Australia, 2017, July 27), the evidence from the current research project would

suggest this is not simply a straightforward result from farm workers' increased self-efficacy or skills competence. The increase in staff productivity and retention also potentially stems from the support a grower's employees perceive as indicated by the direct and indirect relationship between POS with work engagement. The grower's commitment to staff development can be interpreted as a demonstration of the care and value he has for his workers and their contributions to the farm and it is proposed this improves work engagement.

6.1.3. Self-efficacy

Several questions used in Study One aimed to identify key tasks performed by farm workers and direct the interview towards discussion of farm worker's task self-efficacy and the sources of self-efficacy. These questions included: (a) "What are some of the most important tasks you have to be able to do to be a successful farm worker?"; (b) "How did you learn to do your job?"; and (c) "What do you need to do a good job?" In Study One, feeling efficacious was identified as important in order for workers to carry out tasks unsupervised. Self-efficacy could be inflated for those with little knowledge of the complexity involved in some tasks. Due to most training occurring on the job for early career farm hands, self-efficacy could be linked to increased commitment to their employer. However, as workers gained experience across different farm workplaces their self-efficacy was not linked to a particular context and they understood the transferability of their skills, potentially weakening the influence of this factor on commitment to an employer. Past successful performance experience was a predictor of future self-efficacy with experienced workers reporting confidence in their abilities to learn and master new technologies and approaches to farming. The main barrier to goal progress—the weather—was identified as a potential motivating force in developing self-efficacy, in that farm workers sought to reduce anxiety arising from forces outside of their control and feel confident in their skills to exert as much influence as possible over the growing crop.

One of the main challenges in designing a measure of farm worker self-efficacy is that there is no one role definition for a farm worker. The diverse organisational structure of farms, ranging from small family farms to large corporate farms, means workers could be carrying out a wide range of tasks or be employed in a role that is specialised in the duties required to be performed. The measure of Farm Worker Self-efficacy which was constructed for the present research contained 10 items which were activities that could be performed by someone employed on farm. These

were initially sourced from a list of duties performed by crop farm workers reported on O*NET Online (2010). The items were validated in the interviews but with one worker clarifying that each item actually encompassed multiple skills and could be further broken down into a series of tasks that are executed in the completion of the activity. A CFA on the Farm Worker Self-Efficacy Scale demonstrated an unacceptably high RMSEA score, but acceptable to good fit statistics according to the TLI and CFI scores. Lower loading items, “Identify plants, pests, and weeds to determine the selection and application of pesticides and fertilisers”, and “Inform farmers or farm managers of crop progress”, both require significant knowledge of agricultural science and experience to confidently perform these duties. Higher loading items, “Setup and operate irrigation equipment” and “Operate heavy machinery (e.g., tractors, tractor-drawn machinery, and self-propelled machinery)”, both are duties performed by entry level or relatively unskilled workers, as well as experienced workers on farm.

In the current research, self-efficacy did not directly predict job satisfaction. This is not an unusual result; other studies using SCCT report similar findings (Lent et al., 2011; Singh et al., 2013). Unlike studies of teachers and engineers, for farm workers there was no indirect relationship between self-efficacy and job satisfaction. Furthermore, self-efficacy did not directly predict goal-directed activity. It is possible that the complexity of the tasks listed on the self-efficacy scale obscured the direct relationship expected between self-efficacy and job satisfaction, and self-efficacy and work engagement, as task complexity has been shown to weaken the self-efficacy-performance relationship in past studies (Stajkovic & Luthans, 1998; Judge et al., 2007).

The only significant paths from self-efficacy in the SCCT Model of Farm Worker job satisfaction were in the direct prediction of conservation values congruence (i.e., outcome expectations) and indirect prediction of work engagement through conservation values congruence. It would appear that to be dedicated in the performance of farm work, it is not enough motivation for people to feel confident in their ability to successfully complete tasks. Farm workers need to identify and accept that it is important that their work contributes to environmental improvements and is not done to the detriment of the natural resources on farm. Self-efficacy beliefs may make workers more open to assimilating with these values which motivate effort and engagement on the job. It is also possible that as people learn how to do their job on

farm, they are also learning about why it is important to do this job in a way that is consistent with sustainable farming practices. Conservation values congruence may potentially be a way that people reduce performance ambiguity and the consequent deleterious effects of performance ambiguity on the relationship between self-efficacy and achievement outcomes (Schmidt & DeSchon, 2010). By identifying with conservation values, farm workers internalise a set of underlying principles to guide their actions and by trying to perform tasks in a way that aligns with conservation values, they are more likely to be dedicated in trying to achieve work standards expected on farms that are best practice accredited.

More information about the antecedents, mechanisms, and effects associated with self-efficacy became apparent when both work volition factors (i.e. no constraints and volition) were integrated into the SCCT Model of Farm Worker Job Satisfaction. Self-efficacy was a direct predictor of volition, and it was through volition that self-efficacy indirectly predicted work engagement. Those that felt confident in their ability to perform tasks reported greater capacity in their choice of job, and these competency beliefs combined with a sense of agency contributes to conscious effort, vigour and absorption in farm work. Similar to the results for POS, the results for self-efficacy highlight the importance of conservation values congruence and volition as potential mechanisms that explain how self-efficacy influences work engagement.

6.1.4. Conservation Values Congruence

From the literature review it was argued that outcome expectations could be operationalised as values congruence. The interviews in Study One included a series of open ended questions which aimed to get participants discussing their goals and outcome expectations. These included: (a) “What is considered the most important thing you are striving for on farm?”; (b) “What do you get out of your work?”; and (c) “What do you think people have to want out of life for farm work to be the right sort of job for them?” Other specific questions targeted the three landholder outcomes and values identified by Maybery, et al. (2005) which were economic values, conservation values, and lifestyle values. The appeal of this scale was that it anchored the SCCT Model of Farm Worker Job Satisfaction in the environment of interest by using a context specific measure to capture the data. In this way the operationalisation of work conditions and outcome expectations mirrored the specificity of the self-efficacy measure. Each of the proposed farming values were

validated in the interviews and as one experienced leading farm hand (Participant M) explained, these values could be considered complementary to each other:

They (farmers) don't want to poison that land because that's where their money comes from. So they're going to take the best care of it they can.

They're going to stop the erosion when they can because it wrecks their money making potential. They're not gonna spray harmful chemicals out because their kids live right there.

Due to a limited sample size which could impact the statistical power required for Structural Equation Modelling (SEM), the decision was made to select only one of the values for further exploration in Study Two, thereby limiting the number of observed indicators included in the model. Past SCCT research has demonstrated limited evidence for the outcome expectations as a predictor in studies of academic satisfaction and reasoned that this resulted from some outcomes being too distal to impact present day attitude appraisals (Lent et al., 2007). Consequently, the analysis was limited to conservation values congruence, as this was considered the value which was most proximal to the work experiences of farm employees. Further discussion of the lifestyle and economic factors, with regards to future directions for research, will be presented in Section 6.3.2

The five item Conservation Values Congruence Scale (CVCS, Maybery et al., 2005) demonstrated an unacceptably high RMSEA score, although CFI and TLI scores showed good and acceptable fit to the data. One item, "Good land management by farmers is more important than anything else" (Item 3) was noticeably the lowest in terms of prediction of the overall factor, however this was not unacceptably low and the item was retained. The item that demonstrated the highest prediction of the factor was "Managing environmental problems on the farm is important and should be a very high priority" (Item 4). Both items essentially highlight the importance of active management of the environment although the lower item phrased "more important than anything else" denotes a hierarchy of conservation values as more important than economic or lifestyle values. As demonstrated by the earlier quote, the interview data did not support conservation values as the head of a hierarchy but rather as complementary to other values on farm.

Unexpectedly, conservation values congruence did not directly predict job satisfaction. However, conservation values congruence did directly predict work

engagement and through work engagement indirectly predicted job satisfaction. It would appear the strength of work engagement as a predictor of job satisfaction may have resulted in no unique variance being attributed to the conservation values congruence factor. However, the evidence would seem to support that value congruence may assist workers' internalisation and self-regulation at work (Blustein, 2006). Identifying with the full range of conservation values may be a mechanism through which farm workers can connect with the meaningfulness of their work, which increases their engagement at work and consequently their job satisfaction.

There was no direct relationship between conservation values congruence and volition. This was unexpected due to the correlations between the volition subscale items and a majority of the CVCS items. Only item three "Good land management by farmers is more important than anything else" demonstrated a very limited relationship to volition. However, it would appear that any relationship between conservation values congruence and volition, as indicated by the inter-item correlations, was only due to their relationships with self-efficacy and perceived organisational support. This is interesting as it demonstrates the distinct nature of these two constructs and supports the idea that there are two different ways farm workers' confidence in their ability to perform their job and perceptions of support can transform into productive behaviour; through their increased sense of capacity to choose their job and through a stronger identification with the conservation values that underpin best practice farming approaches.

6.1.5. Work Engagement and Job Satisfaction

Work engagement was proposed to measure participation in progress at goals and goal directed activity. Questions in the interview schedule for Study One aimed to get participants to discuss their work engagement by asking questions such as: (a) "What does a good day at work look like for you?"; (b) "How do you feel when you are getting stuck into your work?"; (c) "What do you do to make sure things go to plan in your job?" Participants predominantly described their work engagement in terms of dedication. This sense of dedication was inextricably linked to the farm workers' emotional commitment to the job and was essential to their success at work and the success of the farm. Other characteristics and aspects of an engaged farm worker included (a) enthusiasm for the job, (b) a sense of ownership in their work, and (c) purposeful attention in the performance of tasks.

The vigour aspect of work engagement was discussed by farm workers less in terms of feeling energetic at work and more in terms of managing exhaustion. In times when participants felt exhausted and struggled with, “When I get up in the morning, I feel like going to work” (UWES-9, item 5), their sense of dedication was a source of motivation. One farm worker (Participant E) explained overcoming a lack of vigour when preparing to go to work in terms of dedication to his responsibilities in providing for his family, his dedication to his team and the farm, as well as the pride he takes in his work ethic. He further linked his dedication to the pride and satisfaction he gained from working towards his goal:

I want to give my kids the best . . . that and not letting these fellows down. I know it sounds a bit dim but, and not letting myself down. I know that I’ve got to get up. I’d say it’s the way I was brought up. Everyone does stuff in their lives that you don’t want to do. And there’s times there you just don’t want to do it. But you know you’ve got to get it done. So it was that way I was brought up and the way I am. I just – I get a thing out of growing the best cotton – trying to grow the best cotton.

This illustrates how when the vigour dimension of work engagement is low, the dedication dimension gives the worker the impetus to continue to direct effort in his job. The different levels of these dimensions of work engagement further supports the theory that work engagement and burnout are two distinct constructs and not two ends of the one continuum (Demerouti et al., 2010; Makikiangas et al., 2012).

The importance of the dedication dimension of work engagement for farm workers was demonstrated in the CFA of the Utrecht Work Engagement Scale (UWES-9; Schaufeli & Bakker, 2004b) with all three dedication subscale items shown to be the highest loading items and biggest predictors of variance for overall work engagement scores. Unexpectedly, the unidimensional solution for the UWES-9 recorded a less than adequate RMSEA score and TLI score, while the CFI score was considered acceptable. Revisiting the interviews from Study One, it is clear that vigour may not necessarily indicate work engagement in the agricultural context as application of energy is a central part of job performance which may not necessarily indicate the quality of performance. A young farm hand describing that feeling “bursting with energy” (UWES-9, item 1) could be productive or unproductive depending on the attention and care given by farm workers when performing their tasks. “It comes like down to checking things ... checking the job that you’re doing

and not just, you know, going gung-ho and not looking back” (Participant B). Another particularly poor performing item on the UWES-9 was the absorption item “I get carried away when I’m working” (item 9). The metaphor used in this item may not be suitable for farm workers. It also could be an issue of translation, as this survey was administered in English and over 50% of participants reported a first language other than English ($N = 83$). To illustrate this issue, when Google is used to translate this item into Chinese and then back to English it becomes “I was taken away at work” which is a problematic interpretation of the item.

Work engagement demonstrated the strongest direct path to job satisfaction in both the SCCT Model of Farm Worker Job Satisfaction and this a model including work volition. In both models, the combination of predictor variables accounted for a large amount of variance in work engagement (61.7% and 67.9%) and job satisfaction (69.7% and 71%). Closer inspection of the inter-item correlations between the UWES-9 and Job Satisfaction Scale – 3 item (JSS-3) reveals them to be particularly high, most notably between “I am proud of the work that I do” (UWES-9, item 7) with all three indicators of the JSS-3 ($r = .588, .705, .695$). Correlations this high could indicate a significant conceptual overlap between work engagement and job satisfaction. However previous literature on work engagement demonstrates while highly related this factor is distinct from job satisfaction (Christian et al., 2011). Furthermore, multicollinearity between these factors was not an issue that affected the SCCT Model of Farm Worker Job Satisfaction.

Although they are distinct factors, it has been argued in the literature that work engagement and job satisfaction are both forms of wellbeing at work, differing in their energy-related arousal, with work engagement as more active and a present/future oriented appraisal of wellbeing, and job satisfaction as more passive and a reflective appraisal of wellbeing (Warr & Inceoglu, 2012). Past investigations using the SCCT to understand job satisfaction have found potential conceptual overlap between other factors and job satisfaction. In their investigation of school teachers’ job satisfaction, Duffy and Lent (2009) explored the factor structure of the two measures of general Person-Environment fit (P-E fit, measured as Person-Organisation fit and Needs-Supplies fit), POS and job satisfaction. The results indicated that the P-E fit measures and job satisfaction measure both loaded onto the same latent construct. It was consequently argued that measuring general perceptions of how well a workplace fulfills a teacher’s needs/values may be an alternate

indicator of work satisfaction and not a unique construct. Contrasting this with the overlap of job satisfaction and work engagement in the current research, perhaps these findings explain the ways different occupations conceptualise wellbeing at work. The evidence would suggest that for teachers, job satisfaction means performing a job in an organisation that reflects an extension of their values, while for farm workers job satisfaction is synonymous with dedication and absorption in giving themselves to their work, and the pride that can be derived from a job well done. Work engagement was not included in any past studies of the SCCT Model of Job Satisfaction, so it is unclear whether the highly correlated nature of this factor with job satisfaction is unique to the farm environment. Nevertheless, the current study suggests that the SCCT constructs interrelate to influence farm workers' productive goal-directed activity and this is integral to farm workers experiencing job satisfaction.

6.1.6. Work Volition

The main motivation for including work volition in the SCCT Model of Farm Worker Job Satisfaction was acknowledging that an important part of the cotton farming workforce—backpackers—experience very real structural constraints which require them to complete three months specified work in regional Australia to qualify for a second 12-month visa. The approved industries are limited to: (a) plant and animal cultivation, (b) fishing and pearling, (c) tree farming and felling, (d) mining, and (e) construction. The roles designated for this visa are jobs that can be described as laborious manual work such as general maintenance crop work, harvesting and/or packing of fruit and vegetable crops. The 417-visa explicitly stipulates jobs that are excluded. For example, the backpacker does not qualify for a visa extension if their job is nannying on a farm, or working at a winery cellar door providing wine tastings (Australian Government Department of Immigration and Border Protection, 2017). With this limited scope of roles, some backpackers are likely to be taking jobs that they do not want to do. As Participant X surmised, "...they start counting down the day they start on the farm". It was proposed that backpackers may experience the visa requirements as a structural constraint on their work volition.

The impact of constraints on work volition were also discussed by Australian farm workers employed full time, as they reflected on their past work experiences. Environmental conditions, such as drought, limited work opportunities and led to

changes in the participants' career paths. The current labour market, in terms of jobs available, also influenced work volition and perceptions were that good workers could pick and choose their employer. Financial responsibilities and family responsibilities also acted as constraints which were considered when seeking employment. Both of these factors could result in people taking on jobs that were not their ideal career in order to have time to dedicate to their family roles or provide a good life for their families.

The constraint factors in relation to perceptions of work volition were talked about by interview participants in Study One as an outside force that influenced the current work situation. This was different to the volition subscale, which is defined as an individual's capacity to choose their job (Duffy et al., 2012). The items of the volition subscale reflect a more agentic expression of an individual's sense of work volition. In the interviews, young workers actively sought to expand their skills and qualifications to protect their future work volition, and more experienced workers expressed that self-efficacy was a source for their work volition. Participant X described how he had tried other careers but that he always came back to farming, "That's something I know so that's why I do it pretty much". Consequently, positive work experiences and personal resources such as self-efficacy were theorised to influence the volition subscale. Supporting the split of the work volition scale into the separate factors, the CFA on the Work Volition Scale (WVS-13) as a unidimensional factor returned exceptionally poor fit statistics. The split of the WVS-13 into two factors, no constraints (consisting of the financial constraints and structural constraints subscales) and volition (consisting of the volition subscale), while still less than ideal showed marked improvement. The constraints factor was described in the model as "no constraints" as items were reverse scored such that a higher score indicated more work volition due to less constraints, and alternatively a lower score indicated less work volition due to increased perceptions of constraints.

There was no relationship, neither directly nor indirectly, between the constraints factor and job satisfaction, and the constraints factor and work engagement. This finding is promising, as it demonstrates that there are other factors, potentially more malleable than the perceptions of constraints, which account for a farm worker's productive efforts and job satisfaction. This evidence supports the notion that positive work outcomes are possible for all farm workers, even for those that may feel constraints limit them from the pursuit of other preferred job

opportunities. No constraints directly predicted self-efficacy, and through the relationship with self-efficacy, no constraints indirectly predicted volition and conservation values congruence. Similarly, no constraints directly predicted perceived organisational support and through the relationship with perceived organisational support predicted volition and conservation values congruence. It would appear that (a) a farm worker's increasing confidence in their skills, (b) perceptions that their work contributions are valued, and (c) their wellbeing is important to their employer, are potential mechanisms through which the negative experience of constraints may be weakened and a greater sense of control in their current career choice is regained.

In contrast to the indirect pathways from no constraints to conservation values congruence, the direct path from no constraints to conservation values congruence, while significant, was negative in direction. That a farm worker who feels a lack of volition due to constraints reports higher levels of importance when rating the conservation values associated with farming may be best explained by Bandura (2009) when he states that people "figure out ways of exercising some measure of control even in environments of limited opportunities and many constraints" (p. 181). Similarly, in *The Psychology of Working*, Blustein (2006) describes that workers may experience greater self-regulation when they identify with the values of their workplace. Actively identifying with the values that underpin farm work is one-way people who may have had limited career choices can assimilate into a workplace.

This combination of direct and indirect effects from the constraints factor to the conservation values congruence factor is unusual as it appears that both the less constraints a farm worker has on their choice of job, the more they identify with the conservation values that underpin farm work (explained as an indirect relationship through self-efficacy and POS), and the more constraints a farm worker perceives as impacting their job choices, the more they identify with the conservation values that underpin farm work (the direct effect). A closer look at the correlations for the financial and structural constraints items with the conservation values congruence scale items sheds some light on how this is possible.

While the direct path from no constraints to conservation values congruence is negative, the pattern of correlations between the indicators is a mixture of positive and negative. The single conservation values congruence item that demonstrates

negative correlations with a majority of the constraint indicators is “Good land management by farmers is more important than anything else”. This is also the item that shows the weakest correlations with perceived organisational support items, and with most of the self-efficacy items. If items explaining the indirect effects are compared, it is apparent that farm workers who feel like they can get a new job (WVS, item 8), and that their choice of career has not been limited by outside forces (WVS, item 11), also tend to report their employer values their contributions and listens to their opinion (SPOS, item 3 and 5). Following from this, workers who have an employer who takes pride in their accomplishments at work (SPOS item 8), and values their contribution to the wellbeing of the farm (SPOS item 1), tend to identify more strongly with the values “The most important thing is leaving the property in better shape than when I found it” (CVCS, item 2) and “I like to look after the land, making it work for the farm, without destroying it” (CVCS, item 5). The stronger loading conservation values for each pathway are quite different. For the direct path, those who report more constraints (and less work volition), describe an ideal of what farmers should do and also indicate a hierarchy of values where this should be prioritised above and beyond making a profit. While for the indirect path, farm workers reporting fewer constraints (and more work volition) identify more strongly with the items that describe farm work conditions and sustainable farming practices. One interpretation of this result is that the conservation values scale is problematic and some items may need rewording or to be removed for a more consistent scale. Perhaps these findings also highlight the potential for the constraints factor to be reanalysed as a moderator in the SCCT Model of Job Satisfaction, explaining differences between the relationships of perceived organisational support with self-efficacy and conservation values congruence. Alternatively, it provides information about the farming values that workers with low work volition initially come to identify with, and which may be a gateway that helps workers further assimilate on farm and identify with the other conservation values that underpin the farm business. Growers who explicate and demonstrate the ways the environment is managed and cared for on their farm to these employees may encourage their workers to better understand their role and the way their individual actions contribute and impact on the farming system.

In contrast to the non-significant relationship between the constraints factor with work engagement and job satisfaction, the volition factor did have a significant

predictive relationship with work engagement, and through work engagement indirectly predicted job satisfaction for farm workers. This suggests that farm workers who perceive more control in their choice of work are more likely to persistently engage in their work tasks and this effortful activity contributes to a sense of satisfaction with their job. This is a promising finding when trying to better understand ways the SCCT constructs interact to influence job satisfaction. As previously discussed, volition, as farm workers' perceptions of capacity to choose their current job, was predicted by both self-efficacy and perceived organisational support, and mediated the relationship between these two factors with work engagement. In this way, work volition is a potentially malleable construct, and increasing confidence to execute tasks on farm, and perceptions that farm workers are valued by their employer may influence feelings of control in the choice of a career on farm which in turn leads to better production outcomes. The addition of both the constraints factor and the volition factor added little to the overall predictive variance in job satisfaction (69.7% to 71%), but the inclusion of both of these factors added to the strength of certain pathways in the SCCT, provided evidence of potentially another mechanism through which the SCCT core variables interact, and demonstrated the potential for interventions to improve volition even when the constraints that negatively impact work volition are present.

6.2 Limitations of the Current Research

There are a number of limitations of the present research project, in terms of the sample, the analysis and the evidence generated. These will be addressed in the following section. Implications and recommendations for future research will be made.

The sample ($N = 172$) used in Study Two poses limitations on the current research project, both in terms of the generalisability of the results for the cotton industry, and the appropriateness of the quantitative methods used to test the SCCT Model of Job Satisfaction. The most obvious limitation of the findings for the generalisability of the research project is the lack of participants in Study Two that reported working in the cotton industry ($n = 29$). The results cannot be considered indicative of the current state of employee engagement or employee job satisfaction levels in the cotton industry. However, the participants in Study Two can be considered part of the talent pool from where the cotton industry sources workers. Challenges in recruiting and retaining good workers to ensure optimum on-farm

production is a problem that is not exclusive to cotton but exists across the Australian agricultural industry in general. Therefore, the participating farm workers' experiences and consequent self-report responses to the Farm Worker Job Satisfaction Survey provides valuable information and evidence to determine what is important when seeking to improve the potential for cotton farm workers to experience satisfying careers. The results from Study Two have been interpreted using the information from the cotton farm workers in Study One, and in this way the research project grounds the general evidence in the cotton industry context and makes links that are relevant for the Cotton Industry On-Farm Workforce Development Strategy (Cotton Australia & CRDC, 2016).

While all attempts have been made to ensure the current research project has used appropriate methods to collect, analyse, and interpret the data, there are limitations other than generalisability that need to be addressed. These include concerns about the statistical power of the analyses in Study Two. The limited number of participants also restricted the use of other potentially more appropriate methods and the ability to draw more meaningful conclusions about the temporal nature of the relationships hypothesised by SCCT.

With regards to statistical power, there are many opinions in the literature for the number of cases required to conduct SEM analysis. Some recommend greater than 200 cases, others say at least 15 cases for each observed indicator (Meyers et al., 2013; Stevens, 2009, as cited in Meyers et al.). It is clear that the current study fell well short of these recommended numbers. When first finalising the sample for analysis, consideration was given to testing the hypotheses using a lower level analysis such as multiple regression. However, the complexity of the SCCT Model of Farm Worker Job Satisfaction meant as many as 16 multiple regression tests on the one data set. This number increased to 38 when both work volition constructs were added to the model. The repeated multiple regressions to be conducted on the one set of data increased the likelihood of a type one error occurring – rejecting the null hypothesis when it is true, or in layman's terms – claiming a direct or indirect relationship between latent constructs exists when the result has occurred by chance. It was therefore decided to persist in using SEM, which combines the multiple regressions into the one statistical test. Both models performed quite well in terms of fit to the data which was possible because of the strength of the relationships between the constructs of the SCCT. Ideally future research would seek to increase

the number of participants and consequently the statistical power of the tests of the SCCT Model of Farm Worker Job Satisfaction.

A clear challenge that has been discussed throughout the research project is the diversity of the on-farm workforce in terms of type of employment, role descriptions, and farming human resources structures. Treating farm workers as a homogenous group is potentially problematic and some of the evidence uncovered in testing the SCCT Model of Job Satisfaction including work volition supports this sentiment. The results in Study Two demonstrate a difference between the pathways from the constraints factor to the conservation values congruence factor (the direct path was negative, and the indirect paths through perceived organisational support and self-efficacy were positive) which was unusual. While it could be that the constraints factor acts as a moderator and not mediator between the SCCT variables, it could also be a function of the different groups that exist within the farm workforce. Unfortunately, there were insufficient numbers of participants to consider multi-level modelling which would help clarify the influence the potential hierarchical structure of farm workers has on the SCCT Model of Farm Worker Job Satisfaction (Meyers et al., 2013). Finally, the quantitative analysis presented was cross-sectional and therefore while the model hypothesises causal pathways, the data is only correlational in nature and cannot determine the temporal direction of the relationships. The current research project had aspired to test the variables of interest using data collected at two time points, and while this is not longitudinal, it would give some indication of whether time one scores for the constructs predicted time two scores. However the response rate for the second time point was insufficient to attempt this type of analysis ($n = 21$).

The problem of statistical power, the problem of generalisability, and the inability for the current study to explore multi-level modelling or longitudinal analyses, stem from the challenges associated with recruiting participants and conducting social science research in the agricultural industry. These challenges are not confined to the Australian agricultural industry, with international research reporting similar challenges in recruitment in terms of gaining access to participant contact details, overcoming participants' concerns about privacy while asking for what can be viewed as personal and sensitive information (Howley, Dillon, & Hennessy, 2014; Heppner, Cook, Strozier, & Heppner, 1991), and reporting similar response rates, and samples sizes for studies of farmers (Willock et al., 1999;

Heppner et al., 1991). While there is a strong culture of research in the Australian cotton industry, this encompasses a wide range of science disciplines working to understand and solve a multitude of challenges experienced in all aspects of growing cotton. With a relatively small industry of approximately 1200 cotton farms (Cotton Australia, 2017), it is inevitable that researchers seeking the advice, feedback and participation of cotton growers and their employees can struggle to get the widespread access needed as their projects compete for priority. The reception to the current research project was largely positive when meeting face-to-face with cotton growers and their workers, but these are very busy people, juggling multiple demands.

When conducting social science in agriculture, it is not simply about getting access to a farm. A successful response rate requires people to set aside time to engage and complete a survey, and many people today suffer from survey fatigue. In this way, the response rate problem is not only about getting cotton growers to prioritise this particular study and promote or pass on surveys to their workers, the problem is also the workers' lack of interest or unwillingness to participate. The current survey was distributed directly to some farm workers in-person at field days. Farm workers were assured of confidentiality and it was explained that the survey was their chance to have their say about their current work conditions. While some were interested, others either did not believe what they were told or failed to see the value in responding. That past studies reported similar numbers in surveys of cotton farm workers demonstrates the current lack of interest in participating in social science research (Kuehne et al., 2016).

To get people in the cotton industry to respond and value this kind of research, it is essential that the results are used to demonstrate the return on investment (ROI), for employers and workers alike, by way of using the evidence to inform workforce strategy. This aim is clearly articulated in the Cotton Industry On-Farm Workforce Development Strategy (Cotton Australia & CRDC, 2016) and is something that was carefully considered in the design of the current research project. Hence the current study contributes new evidence, beyond that of a small mixed methods case study or solely in-depth qualitative approach. It does this by using a partial mixed-methods approach which gives equal weighting to qualitative and quantitative data, and incorporating a large scale survey ($N=172$) which can statistically and objectively demonstrate the relationships between important factors

for farm worker job satisfaction. The results from the current project provide multiple types of evidence. This has been shown to improve the confidence of consumers of research in the validity of the findings (McKim, 2017). In doing this, the current research attempts to contribute to efforts to build a more active social science culture in the cotton industry. Hopefully future large scale survey studies ($N > 200$) of farm worker engagement and job satisfaction can use a sample that exclusively consists of cotton farm workers.

6.3 Future Directions for Research

In reviewing the current research project, there are four areas identified where the initial evidence demonstrates limited findings or where results from Study One have not been explicated in Study Two, warranting further investigation. These are: (a) minimal to no variance was predicted for self-efficacy, (b) a failure to explore economic and lifestyle values in the SCCT Model of Farm Worker Job Satisfaction, (c) limited knowledge on the diverse experience of work volition for different demographics of farm workers, and (d) little clarity given to the ways team dynamics influence individual farm workers.

6.3.1. Barriers as Antecedents of Farm Worker Self-efficacy

The SCCT Model of Farm Worker Job Satisfaction explained little about the antecedents of farm workers' self-efficacy, with no significant variance predicted for the self-efficacy factor in the first model, and then only 16% when the work volition factors were added to the model. Other studies have presented SCCT Job Satisfaction models which did predict more of the variance in self-efficacy (28% in Lent et al., 2011) however demonstrated mixed results with most if not all of the variance attributed to positive affect (Duffy & Lent, 2009; Badri et al., 2013). From the interviews, participants expressed self-efficacy when attempting to exert control over crop outcomes. This was particularly important as integral aspects of farming, such as the weather, are outside of the workers' control. Further exploration of barriers as motivational factors may help to better understand the development of self-efficacy, in that challenges potentially activate self-efficacy (Bandura, 2009). Support for the importance of exploring barriers and challenges is found in the path between POS and self-efficacy in the SCCT Model of Farm Worker Job Satisfaction including Work Volition. This path is non-significant but potentially this is due to the lack of power in using SEM with such a small sample. With a path weight of $-.176$ ($p = .069$), this relationship is non-trivial, and would suggest that less support

predicts marginally higher self-efficacy for farm work tasks. There is also this notion that farm work is self-selective and that workers will not last long if they lack the confidence required to work in an environment where a lack of supervision also means a potential lack of support. As Participant D explained, “You know, they’ve got to be able to show that they can be relied on themselves, they can think for themselves, they can sort of keep the machinery maintained without me having to run back every five minutes”. To further understand this negative relationship between perceived organisational support and farm worker self-efficacy, a scan of the polychoric correlations between items of the SPOS-8 and the FW-SES revealed that item 3 “My employer would ignore any complaint from me” was negatively correlated with five out of the ten farm worker activities. Could it be that having complaints ignored means workers need to then dig deeper into their personal resources, including their self-efficacy, to manage their work? Does the challenge activate self-efficacy beliefs? This preliminary evidence warrants further investigation and future studies of SCCT in the agricultural industry may expand understandings of self-efficacy and the sources of this psychological resource by focusing on the barriers and challenges aspect instead of the support aspect in Goal and Efficacy-Relevant barriers, supports, and resources of the work environment.

6.3.2. Consideration of Other Farming Values

In attempting to reduce the number of observed items used for SEM in Study Two, the current research project did not explore effects of lifestyle values congruence or economic values congruence. Economic values congruence and “making a profit” outcomes were validated in the interviews but seemed to be a more important consideration for those workers who performed managerial duties on farm. One grower was concerned that farm workers’ identification with the economic values that underpin farm businesses could be detrimental to their performance stating “as soon as you start thinking of a financial burden ... I know they would probably start cutting corners”. Whether this value facilitates or inhibits work engagement or job satisfaction is yet to be seen. As the interview data from Study One demonstrates the potential for different impacts from economic values congruence between managers and lower level workers, this is another indication that multi-level modelling is needed to truly understand the interaction of economic values congruence as outcome expectations in the SCCT Model of Farm Worker Job Satisfaction.

Lifestyle values congruence and “living a good life” outcomes were clearly important to the farm workers interviewed for Study One. The farming lifestyle brought rewards of living in a rural environment, with desirable aspects including: (a) wide, open, spaces, (b) the freedom to enjoy the peace and quiet or make loud noise without disturbing neighbours, and (c) the ability to enjoy recreational activities such as fishing, quad bike riding and shooting. The work conditions and the farm worker role were also considered part of the lifestyle, with most workers living on the properties they worked on and some explaining that their work was an extension of who they were in their leisure time. Furthermore, they described the enjoyment of living as part of a rural community that was friendly and supportive.

The omission of lifestyle values from Study Two means a loss of potentially important information. Agricultural science students at university have described the importance of lifestyle outcomes when considering future employment on farms, reporting concerns over living remotely, being removed from society, and having difficulty finding a romantic partner (Li, 2015). Seeing the farming lifestyle as desirable and ensuring that it meets workers’ needs for social connection could be particularly important for attracting and retaining young people in the cotton industry. One young farm worker reported feelings of loneliness, however accepting that this was a downside of a lifestyle that he otherwise enjoyed (Participant A). Lifestyle values congruence may be representative of a source of life satisfaction that protects against the negative effects of some work conditions and positively impacts job satisfaction.

Consideration of lifestyle values could also help understand more about the potential spill-over effect between home and work with regards to work engagement, burnout, and job satisfaction. Given that there is minimal distance between work and home compared to other professions, there may be a greater potential for work-family conflict which can have detrimental effects on both home and workplace domains (Ford, Heinen, & Langkamer, 2007). Having a functional and supportive family living with him on farm was identified as an essential part of one worker’s (Participant M) ability to dedicate himself to his job and to keep going in peak parts of the season.

Without that then we can’t do big hours if someone doesn’t cook my dinner and keep the house going and send the kids to school and all that sort of thing.

. . . My job's bigger, so their job's bigger at home . . . whereas if we both worked in the city 40 hours we'd both have to do that stuff I guess.

Workers that identify with the lifestyle values associated with farming believe that “A rural environment is a great place to raise children” (Landholder Values/Objectives Scale, Item 9). They may be more likely to have partners who similarly feel this way, who are accepting of the demands involved with farm work, and who are able to provide support by taking on a larger role at home. While the SCCT is not a specific theory that explores the interaction of home and work, the lifestyle values congruence construct allows for aspects of this to be integrated and accounted for in the prediction of job satisfaction. It is recommended that future studies consider further exploration of the full range of values that underpin farm work to more thoroughly understand the impact that value congruence has as the outcome expectations factor in the SCCT Model of Farm Worker Job Satisfaction.

6.3.3. Understanding Diverse Perspectives of Work Volition

The current study demonstrates that work volition is a valuable inclusion in the SCCT Model of Farm Worker Job Satisfaction. The Work Volition Scale -13 item (WVS-13; Duffy et al., 2012) was developed to measure the Work Volition construct, defined as “the perceived capacity to make occupational choices despite constraints” (p. 401). While the WVS-13 clearly specifies three dimensions, structural constraints, financial constraints, and volition, it is most commonly used as an overall measure of work volition. The decision to split this scale into two distinct constructs (i.e. no constraints and volition) and integrate them into the SCCT Model of Farm Worker Job Satisfaction was made from the findings of Study One, a qualitative investigation into cotton farm workers' experiences, which seemed to indicate work volition could both be a predictor and an outcome of the SCCT variables. There are limited qualitative investigations that have been published which, (a) explore how work volition restricts workers' adaptive functioning in the workplace, (b) determine whether work volition motivates adaptive functioning, and (c) explain the mechanisms people use to actively increase their sense of work volition. Blustein (2006) first wrote of the importance for qualitative research to understand the diverse range of workers' perspectives of work volition, noting that the proposal that work volition is a key influencing factor on people's careers is informed by cultural values. For the current research project, Study One purposely used participants that were exemplars of workers on cotton farms that are considered

industry leading enterprises. A more diverse sample would help to understand whether the current study's analysis of cotton farm workers' experiences of work volition differ for others that were not represented, including female farm workers, and backpackers. Beyond the agricultural context, further qualitative research in diverse occupational groups would help add clarity to the definition and understanding of work volition as a construct. More research replicating the inclusion of work volition as separate constraints and volition factors is also needed to test whether the current study's findings are reproducible or are a product of this particular sample.

6.3.4. Team Dynamics

In many ways SCCT is one of the most flexible and adaptive theories in career development as it can comprehensively unify other theoretical standpoints into a single process model, and integrate aspects of vocational psychology and organisational psychology to understand a range of outcomes including job satisfaction. The successful contextualisation of SCCT for the farm work environment is apparent as the SCCT Model of Farm Worker Job Satisfaction was able to account for as much as 71% of the variance in farm workers' reports of job satisfaction. However, in specifically focusing on SCCT, one aspect of the Study One analysis that consistently contributed information for all aspects of the SCCT constructs, yet is not clearly explicated by this theory is the reciprocal influences of the team and the individual farm worker.

The interviews in Study One described the farming context as a team environment. As one grower stated, "to build a successful farming business, you need the whole – whole team or whole employees to be going in that one direction" (Participant K). Farm workers described the dynamic between their team on-farm as one of "comradeship" and the importance of surrounding themselves with "people who are going to be working towards that common goal" (Participant M). With training taking place on-farm, the more experienced workers taught those less experienced and on seeing the improvement and achievements of their co-workers stated "The satisfaction in that is just fantastic" (Participant X). Some farm workers were given accommodation with each other, and in those instances boundaries for the working relationships are important "like at work you're – like (co-worker) could get up me or I could get up him ...but then, when you come home, you sorta – oh you can sort of do your own thing" (Participant A). Good working relationships are also

powerful in terms of retaining workers. When discussing his current manager one worker stated “I’ve sort of followed him around (from farm to farm) ... I loved working with him, because he’s taught me a lot in the industry” (Participant E).

The concept of the team on farm, the dynamics occurring between the individual farm worker and the team members and how this affects job satisfaction, has not been explained by the current research. The SCCT captures an individualistic perspective of psychological constructs and does not account for more collectivistic mechanisms affecting farm worker job satisfaction. In raising this limitation of the SCCT theory for understanding job satisfaction of farm workers, it may be argued that in operationalising goal and efficacy-relevant environmental supports, barriers, and resources, the current study should have focused on support from the team as opposed to perceived organisational support. Even if this had been the case, this would only focus on one side of the team dynamic (i.e. what is to be gained by an individual from their team and not what satisfaction is gained from giving to the team). To address this gap in the knowledge future research is needed that investigates concepts such as collective self-efficacy, collective burnout, collective work engagement and collective mood in the agricultural work context. It will be necessary to use other theoretical perspectives to investigate the intersection of these psychological constructs with the individual experience of job satisfaction.

Patton and Collin (2009) acknowledge the limitations of singular discipline research and argue for the beneficial contributions a multi-disciplinary team can make in gaining a more thorough understanding of phenomena. Indeed, to understand the team dynamics aspect of farm workers’ job satisfaction it is necessary to shift the research focus into the Organisational Psychology domain. Researchers have been investigating the collective experience of psychological constructs in the workplace, theorising reciprocal relationships between team members as a potential resource (Halbesleben & Wheeler, 2011). Explorations of the cross over between individual and collective burnout and work engagement theorises the antecedents of these phenomena using the Job Demands-Resources model (JD-R; Bakker, van Emmerick, & Euwema, 2006). Future research in the cotton industry would be well advised to explore the contributions of collective self-efficacy, collective burnout, collective work engagement, and collective mood on farm workers’ job satisfaction, turnover intention and organisational commitment using the JD-R model (Bakker & Demerouti, 2007).

6.4 Future Directions for Interventions

Due to the concerns raised about the generalisability of the results, application of the evidence to support practical intervention is to be done with caution. However, some potential key focus areas and strategies for attraction, retention and improved productivity of farm workers that are supported by the current study are now explored.

In the current research, identification with farming conservation values was an important factor associated with work engagement. It has been suggested that among the motivational factors influencing younger generations' career aspirations, consideration of whether employers operate in a way that is socially responsible is a key factor in the career decisions made (Deloitte, 2017). Social responsibility can be demonstrated in a number of ways, and includes the management of the environmental impact of business, as well as championing efforts to address climate change and protection of the environment. Therefore, it is important to ensure farms (a) are complying with best practice management recommendations, (b) have strategies in place to responsibly manage their natural resources and ecosystems on the farm, and (c) effectively communicate and demonstrate the value of environment conservation and sustainable farming to employees, in order to attract and motivate the next generation to work on farm in the cotton industry. The struggle within agriculture to attract new talent has been that many young people in the cities, who could be ideal candidates and find rewarding careers in agriculture, have outdated ideas of what modern farming entails. What farming does, in terms of growing crops, has not changed, but how it is done is increasingly scientific and seeks to work with the environment to sustain the natural resources that are necessary to a farm's success. The evidence presented would support the continued implementation of career education programs and work experience placements on cotton farms as through these experiences, the expected outcomes that can be gained when working in the cotton industry are communicated to young people. A novel way to bridge the country-city divide and to promote farming careers include the growers use of social media platforms, such as Instagram, to educate people through visual images (particularly those that send positive environmental messages) about their farm and consequently communicate what can be expected from a career in the cotton industry. Highlighting the opportunity that is offered by farming careers for young

people to contribute to working with the environment may be motivational in attracting this next generation of workers.

Growers have attributed a greater retention of staff to investment in skills training. The current research supports this observation and has offered a potential explanation that the confidence of workers in their ability to perform job tasks leads to stronger identification with the intrinsic value of their work (identifying with conservation values) and an increased sense of capacity to choose their job, their employer, and to work in the agricultural industry (work volition). These attitudes and values may act as personal resources for workers, that help protect their psychological safety and ability to withstand work demands to stay engaged in their current job on farm. It is therefore important for the cotton industry to continue to invest in skill development for farm workers. Training that (a) encourages and supports farm workers in their acquisition of skills, (b) demonstrates best practices, (c) allows workers to test their skills and successfully complete new tasks, and (d) feel a sense of accomplishment, promotes the development of farm worker self-efficacy as these training conditions align with the four sources of self-efficacy (persuasion, observation, past performance experience, and affect). Beyond, retaining staff, training may also translate into improvements in worker productivity as evidenced by the indirect effect self-efficacy has demonstrated with work engagement observed in the current study.

6.5. Conclusion

Attracting and retaining motivated and productive workers on farms is essential to the future sustainability and profitability of the Australian agricultural industry (Commonwealth of Australia, 2015). The cotton industry has been proactive in establishing the Cotton Industry On-Farm Workforce Development Strategy which outlines a number of ways research will be used to guide investment into people employed on farm (Cotton Australia & CRDC, 2016). Understanding more about cotton farm workers' experiences of job satisfaction is important to prioritising ways to make the Cotton Industry an employer-of-choice. To contribute evidence which informs the aims of the Cotton Industry On-Farm Workforce Strategy, the current study adapted the Social Cognitive Career Theory Model of Job Satisfaction to the farming context (Lent & Brown, 2008). This has provided some valuable insights on malleable psychological factors which can promote productivity and satisfaction for people employed on farms, including:

- 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 workers' 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 workers' confidence in their skills and ensuring they feel valued and cared for may improve work engagement as these strategies lead to workers' increased identification with the values of farming.

As well as these practical recommendations, the current research provides new evidence on the importance of work volition in understanding the ways people interact with the work context and make sense of their work experiences.

This research project has demonstrated the generalisability of SCCT for investigating career outcomes in a new occupational context (Lent, 2013). Limitations have been discussed and recommendations for future research made include (a) multi-level modelling and longitudinal research, (b) further investigation of the antecedents of self-efficacy, (c) testing of other farming values in the SCCT Model of Farm Worker Job Satisfaction, (d) more in-depth qualitative study of the phenomenon of work volition, and (e) exploration of the team dynamics and the impacts on farm worker job satisfaction.

This research project makes a significant contribution to the discipline of Vocational Psychology and the field of career development by adding to the limited literature on careers in agriculture. The long absence of vocational psychology research into farming careers is concerning when the agricultural industry is responsible for the livelihoods of approximately 40% of the world's population (McIlveen, 2015; UNDP, 2017). Internationally, agriculture is also the main source of income for a majority of the working poor (UNDP, 2017). If vocational psychologists are concerned about expanding the discipline's focus beyond sectors of society that are relatively privileged when it comes to career choice and contribute

to promoting access to decent work as a fundamental human right, then it is essential that investigations into careers in farming are continued.

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APPENDIX A: Farm Worker Job Satisfaction Survey



Farm Worker Job Satisfaction Survey



The Australian agriculture sector is concerned about attracting and retaining good employees to work on farms. Understanding farm workers beliefs, values, and feelings about their jobs is important to knowing what is needed to build a satisfying career in the agriculture industry.

If you are currently employed on a farm, regardless of employment status (full-time, part-time, casual, permanent, contract, 3 month seasonal work etc.), this is your chance, to have your say.

Nicole McDonald, a Doctoral Candidate from the University of Southern Queensland (USQ) and her supervisor Associate Professor Peter McIlveen are conducting a survey on the contributing factors of farm worker job satisfaction. This research project is supported by the Cotton Research and Development Corporation (CRDC). This study will explore how the beliefs, values, and feelings that farm workers have about themselves, their jobs, and their workplace, interact to influence their overall sense of wellbeing at work and job satisfaction. **Participants are asked to complete the same survey 12 weeks apart. A reminder will be sent to you 12 weeks after completion via email, therefore please ensure your email address has been entered correctly below. In addition, your email will be utilised to match your responses on the two occasions and to enter you in the survey prize draw. It will not be used to identify you personally.**

Your participation in this project is entirely voluntary. If you do not wish to take part you are not obliged to. If you decide to take part and later change your mind, you are free to withdraw from the project at any stage. Please note, that if you wish to withdraw from the project after you have submitted your responses, the Research Team are unable to remove your data from the project (unless identifiable information has been collected). If you do wish to withdraw from this project, please contact the Research Team (contact details at the bottom of this form). Your decision whether you take part, do not take part, or take part and then withdraw, will in no way impact your current or future relationship with USQ, the CRDC, or your Employment.

All information will be kept strictly confidential, and will only be seen by the researchers listed below and the researcher's academic supervisory team. Any information linking the survey responses to an individual will be deleted and the data will be stored securely in a data bank as per USQ's Research Data Management policy. Your employer will not have access to any of your individual survey responses. The responses of all survey participants will be analysed and the overall trends of the group data will be published in the researcher's PhD thesis, academic journal articles, and reported to the CRDC. These data may be used for future research projects investigating career motivation and job satisfaction in other industries.

The survey will take approximately twenty minutes to complete. Participants who complete the survey will be entered into the draw to win a prize. If you complete the survey at both time one and time two, you will receive two entries. **There are two mini i-Pads and three \$150 RM Williams vouchers up for grabs.** You will be contacted by email if you are one of the winners. There is no time limit, but please try to complete the whole survey in the same session. There are instructions at the top of each section. Read carefully before you begin answering questions in each section, but do not spend too much time on any one.

If you have any questions about the research please do not hesitate to contact the researchers at the numbers listed below. Thank you for your interest in this study.

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Farm Worker Job Satisfaction Survey



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If you have any concerns or complaints about the ethical conduct of the project you may contact the University of Southern Queensland Ethics Coordinator on (07) 4631 2690 or email ethics@usq.edu.au. The Ethics Co-ordinator is not connected with the research project and can facilitate a resolution to your concern in an unbiased manner. Please quote the Human Research Ethics Approval Number: H15REA012.

By signing below, you are indicating that you:

- Have read and understood the information document regarding this project.
- Have had any questions answered to your satisfaction.
- Understand that if you have any additional questions you can contact the research team.
- Understand that you are free to withdraw at any time, without comment or penalty.
- Understand that you can contact the University of Southern Queensland Ethics Coordinator on (07) 4631 2690 or email ethics@usq.edu.au if you do have any concern or complaint about the ethical conduct of this project.
- Are over 18 years of age
- Agree to participate in the project.

Participant Name	<input type="text"/>
Participant Signature	<input type="text"/>
Date	<input type="text"/>
Email Address	<input type="text"/>



Farm Worker Job Satisfaction Survey



Questionnaire One

Below you will find statements about **your choice of job**. Please rate each statement, crossing a number from (1) strongly disagree to (7) strongly agree

	Strongly Disagree	Moderately Disagree	Slightly Disagree	Neutral	Slightly Agree	Moderately Agree	Strongly Agree
1.1 I've been able to choose the jobs I have wanted	1	2	3	4	5	6	7
1.2 I can do the kind of work I want, despite external barriers	1	2	3	4	5	6	7
1.3 The current state of the economy prevents me from working in the job I want	1	2	3	4	5	6	7
1.4 The jobs I would like to pursue don't exist in my area	1	2	3	4	5	6	7
1.5 Due to my financial situation, I need to take any job I can find	1	2	3	4	5	6	7
1.6 When looking for work, I'll take whatever I can get	1	2	3	4	5	6	7
1.7 In order to provide for my family, I often have to take jobs I do not enjoy	1	2	3	4	5	6	7
1.8 I don't like my job, but it would be impossible for me to find a new one	1	2	3	4	5	6	7
1.9 I feel able to change jobs if I want to	1	2	3	4	5	6	7
1.10 The only thing that matters in choosing a job is to make ends meet	1	2	3	4	5	6	7
1.11 I feel that outside forces have really limited my work and career options	1	2	3	4	5	6	7
1.12 I feel total control over my job choices	1	2	3	4	5	6	7
1.13 Negative factors outside my personal control had a large impact on my current career choice	1	2	3	4	5	6	7



Farm Worker Job Satisfaction Survey



Questionnaire Two

Below you will find a list of activities that are typically performed by farm workers. Each activity requires workers to use many skills and perform a range of tasks. Think about your **confidence in your current ability to perform these activities**. Rate each activity from (1) no confidence to (5) complete confidence or N/A if you feel the activity is not relevant to your job.

	No Confidence	Slightly Confident	Moderately Confident	Very Confident	Complete Confidence	Task not relevant
2.1 Repair and maintain farm vehicles, implements, and mechanical equipment	1	2	3	4	5	N/A
2.2 Operate heavy machinery (e.g. tractors, tractor-drawn machinery, and self-propelled machinery)	1	2	3	4	5	N/A
2.3 Ploughing and harrowing soil	1	2	3	4	5	N/A
2.4 Planting and seeding of crops	1	2	3	4	5	N/A
2.5 Clear and maintain irrigation ditches	1	2	3	4	5	N/A
2.6 Set up and operate irrigation equipment	1	2	3	4	5	N/A
2.7 Identify plants, pests, and weeds to determine the selection and application of pesticides and fertilisers	1	2	3	4	5	N/A
2.8 Apply pesticides, herbicides, or fertilisers to crops	1	2	3	4	5	N/A
2.9 Harvest crops by hand	1	2	3	4	5	N/A
2.10 Harvest crops by machine	1	2	3	4	5	N/A
2.11 Inform farmers or farm managers of crop progress	1	2	3	4	5	N/A
2.12 Use basic computer skills to work with new technology on farm	1	2	3	4	5	N/A



Farm Worker Job Satisfaction Survey



Questionnaire Three

Below you will find a list of statements about farm work. Please think about **what is important to you**. Rate each statement on a scale of (1) strongly disagree to (5) strongly agree

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
3.1 Dollars and cents is what farming is all about	1	2	3	4	5
3.2 I view the farm first and foremost as a business enterprise	1	2	3	4	5
3.3 When future farming activities are planned the only focus should be on how profitable they will be	1	2	3	4	5
3.4 A maximum annual return from the property is the most important aim	1	2	3	4	5
3.5 Money and profit are not the most important things about farming	1	2	3	4	5
3.6 The lifestyle that comes with being on the farm is very important to me	1	2	3	4	5
3.7 Farming communities are a great place to live	1	2	3	4	5
3.8 I enjoy the peace and quiet that comes with farm work	1	2	3	4	5
3.9 A rural environment is a great place to raise children	1	2	3	4	5
3.10 I do not make a fortune from farm work but the lifestyle is great	1	2	3	4	5
3.11 Good farmers regularly make land care improvements to their property	1	2	3	4	5
3.12 The most important thing is leaving the property in better shape than when I found it	1	2	3	4	5
3.13 Good land management by farmers is more important than anything else about farming	1	2	3	4	5
3.14 Managing environmental problems on the farm is important and should be a very high priority	1	2	3	4	5
3.15 I like to look after the land, making it work for the farm, without destroying it	1	2	3	4	5



Farm Worker Job Satisfaction Survey



Questionnaire Four

The following statements are about **how you feel at your work**. Please read each statement carefully and decide if you ever feel this way at your job. If you have never had this feeling, select the '0' (zero) in the space after the statement. If you have had this feeling, indicate how often you feel it by selecting the number from (1) almost never, to (6) always.

	Never	Almost Never	Rarely	Sometimes	Often	Very Often	Always
4.1 At my work I feel bursting with energy	0	1	2	3	4	5	6
4.2 At my job, I feel strong and vigorous	0	1	2	3	4	5	6
4.3 I am enthusiastic about my job	0	1	2	3	4	5	6
4.4 My job inspires me	0	1	2	3	4	5	6
4.5 When I get up in the morning, I feel like going to work	0	1	2	3	4	5	6
4.6 I feel happy when I am working intensely	0	1	2	3	4	5	6
4.7 I am proud of the work that I do	0	1	2	3	4	5	6
4.8 I am immersed in my work	0	1	2	3	4	5	6
4.9 I get carried away when I'm working	0	1	2	3	4	5	6



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Questionnaire Five

Thinking about **your current job**, please rate the following statements from (1) strongly disagree to (7) strongly agree

	Strongly Disagree	Moderately Disagree	Slightly Disagree	Neutral	Slightly Agree	Moderately Agree	Strongly Agree
5.1 I feel fairly satisfied with my present job	1	2	3	4	5	6	7
5.2 Most days I am enthusiastic about my work	1	2	3	4	5	6	7
5.3 Each day at work seems like it will never end	1	2	3	4	5	6	7
5.4 I find real enjoyment in my work	1	2	3	4	5	6	7
5.5 I consider my job to be rather unpleasant	1	2	3	4	5	6	7



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Questionnaire Six

Listed below are statements that represent **possible opinions that you may have about working at your current place of employment**. Please think about your current workplace and rate each statement on a scale of (1) strongly disagree to (7) strongly agree.

	Strongly Disagree	Moderately Disagree	Slightly Disagree	Neutral	Slightly Agree	Moderately Agree	Strongly Agree
6.1 My employer values my contribution to the wellbeing of the farm	1	2	3	4	5	6	7
6.2 My employer fails to appreciate any extra effort from me	1	2	3	4	5	6	7
6.3 My employer would ignore any complaint from me	1	2	3	4	5	6	7
6.4 My employer really cares about my wellbeing	1	2	3	4	5	6	7
6.5 Even if I did the best job possible, my employer would fail to notice	1	2	3	4	5	6	7
6.6 My employer cares about my general satisfaction at work	1	2	3	4	5	6	7
6.7 My employer shows very little concern for me	1	2	3	4	5	6	7
6.8 My employer takes pride in my accomplishments at work	1	2	3	4	5	6	7



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Questionnaire Seven

Thinking about **your behaviour in all areas of your life (not just work)**, please rate the following statements from (1) strongly disagree to (7) strongly agree.

	Strongly Disagree	Moderately Disagree	Slightly Disagree	Neutral	Slightly Agree	Moderately Agree	Strongly Agree
7.1 If I see something I don't like, I fix it	1	2	3	4	5	6	7
7.2 No matter what the odds, if I believe in something I will make it happen	1	2	3	4	5	6	7
7.3 I love being a champion for my ideas, even against others' opposition	1	2	3	4	5	6	7
7.4 I excel at identifying opportunities	1	2	3	4	5	6	7
7.5 I am always looking for better ways to do things	1	2	3	4	5	6	7
7.6 If I believe in an idea, no obstacle will prevent me from making it happen	1	2	3	4	5	6	7



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Questionnaire Eight

Thinking of the past few weeks, **how much of the time have you felt each of the following during work?** Please indicate how often by selecting the number from (1) never to (6) all of the time

	Never	Occasionally	Some of the time	Much of the time	Most of the time	All of the time
8.1 Tense	1	2	3	4	5	6
8.2 Uneasy	1	2	3	4	5	6
8.3 Worried	1	2	3	4	5	6
8.4 Calm	1	2	3	4	5	6
8.5 Contented	1	2	3	4	5	6
8.6 Relaxed	1	2	3	4	5	6

8.7 Depressed	1	2	3	4	5	6
8.8 Gloomy	1	2	3	4	5	6
8.9 Miserable	1	2	3	4	5	6
8.10 Cheerful	1	2	3	4	5	6
8.11 Enthusiastic	1	2	3	4	5	6
8.12 Optimistic	1	2	3	4	5	6

8.13 Bored	1	2	3	4	5	6
8.14 Meaningful	1	2	3	4	5	6
8.15 Valuable	1	2	3	4	5	6
8.16 Purpose	1	2	3	4	5	6
8.17 Irrelevant	1	2	3	4	5	6
8.18 Personally Fulfilled	1	2	3	4	5	6
8.19 Trivial	1	2	3	4	5	6



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Questionnaire Nine

The following are statements about how you see yourself. Please rate the following statements from (1) strongly disagree to (7) strongly agree.

I see myself as someone who:

	Strongly Disagree	Moderately Disagree	Slightly Disagree	Neutral	Slightly Agree	Moderately Agree	Strongly Agree
9.1 ...is reserved	1	2	3	4	5	6	7
9.2 ...is generally trusting	1	2	3	4	5	6	7
9.3 ...tends to be lazy	1	2	3	4	5	6	7
9.4 ...is relaxed, handles stress well	1	2	3	4	5	6	7
9.5 ...has few artistic interests	1	2	3	4	5	6	7
9.6 ...is outgoing, sociable	1	2	3	4	5	6	7
9.7 ...tends to find fault with others	1	2	3	4	5	6	7
9.8 ...does a thorough job	1	2	3	4	5	6	7
9.9 ...gets nervous easily	1	2	3	4	5	6	7
9.10 ...has an active imagination	1	2	3	4	5	6	7



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Please provide the following demographic information about yourself:

Age: _____

Gender: _____

Country of Origin: _____

What is your first language? _____

What is your second language? _____

What is your resident status? (Please circle answer)

Citizen

Permanent resident

417 Visa holder

457 Visa holder

Other, please specify: _____

What is the highest education level you have obtained? (Please circle answer)

Grade 10

Grade 12

Certificate

Diploma

Undergraduate degree

Post-graduate degree

Other, please specify: _____



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Which category most resembles your type of employment? (Please circle answer)

- Permanent full time**
- Permanent part time**
- Casual**
- Contract**
- Other, please specify: _____**

What position do you hold at your current employment? _____

How many years have you worked in the agriculture industry? _____

How many years have you been working for your current employer? _____

What crops are grown at your current place of employment?

What is your current residential postcode? _____

Are you an owner, part-owner or related to the owner of the farm where you currently work? (please circle answer) YES NO

Is there any further feedback you would like the researchers to know about your job and work situation?

Thank you for your participation.