

**Practices that energise the self-starter: How to influence proactive
behaviour at work**

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Abstract

Complex and increasing competition, fast global changes, and unpredictable shifts in expectations describe the business world. Relying merely on static procedures and instructions to employees is not agile enough in such an environment. Instead, organisations must be able to rely on employees who will identify opportunities and risks in the organisation and act pre-emptively. Proactivity increases job and organisational performance, as proactive employees anticipate situations and create circumstances that increase the chances of success and high performance. Proactive behaviour is associated with creativity, affecting organisations through higher idea generation levels. The study illuminates practical behaviours and practices that leaders and managers can use to increase their team members' proactive work behaviour. Existing literature has investigated primarily at an overall leadership and organisational design level. Significant correlations between proactive work behaviour and the proposed leadership actions are demonstrated. This quantitative mono-method study adds value to practitioners and academics by drilling down to the practices and behaviours that cause, enable, enhance, and maintain employees' proactive work behaviour. Management and leaders can adopt these practices to enable and influence proactive behaviour in their work teams.

Keywords

proactive work behaviour, leadership behaviours, management practices, personal initiative

Declaration

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other University. I further declare that I have obtained the necessary authorisation and consent to carry out this research.

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CONTENTS

Abstract	i
Keywords	ii
Declaration	iii
List of tables	viii
List of Figures	x
1. Introduction to the research problem	1
1.1 Introduction	1
1.2 Background to the research topic	1
1.3 Research problem and objectives	3
1.4 Research motivation and relevance	4
1.5 Research scope	4
2. Literature review	5
2.1 Proactive work behaviour	5
2.2 Evolution of research	5
2.2.1 Historical background	5
2.2.2 Methodologies used to study proactive work behaviour.....	8
2.3 Outcomes of proactive work behaviour	9
2.3.1 Personal outcomes.....	9
2.4 Types of proactive work behaviour	11
2.4.1 Proactive work behaviour	11
2.4.2 Proactive strategic behaviour	12
2.4.3 Proactive person-environment-fit behaviour.....	12
2.5 Antecedents to proactive work behaviour	12
2.5.1 Leadership perspectives	12
2.5.2 Organisational perspectives	16
2.5.3 Individual attributes	17

2.6	Conclusion to the literature review	19
3.	Research hypotheses	20
3.1	Hypothesis 1.....	20
3.2	Hypothesis 2.....	21
3.3	Hypothesis 3.....	21
3.4	Hypothesis 4.....	21
3.5	Hypothesis 5.....	22
3.6	Hypothesis 6.....	22
4.	Research methodology	23
4.1	Research paradigm and design.....	23
4.2	Population and sample.....	23
4.3	Strategy.....	24
4.4	Sampling method and size.....	24
4.5	Measurement instrument	24
4.5.1	Instrument testing	26
4.6	Data gathering.....	26
4.6.1	Privacy of participants	27
4.6.2	Data storage.....	27
4.7	Data analysis	28
4.7.1	Coding	28
4.7.2	Missing values.....	28
4.7.3	Validity	28
4.7.4	Reliability	29
4.7.5	Factor analysis	31
4.8	Hypothesis testing.....	32
4.8.1	Correlation.....	32
4.8.2	Multiple regression	32
5.	Results	33

5.1	Data	33
5.1.1	Demographic data	33
5.1.2	Descriptive statistics	35
5.2	Results	37
5.2.1	Hypothesis testing	37
5.3	Multiple regression analysis	43
6.	Discussion of results	49
6.1	Effectiveness of management and leadership practices in increasing proactive behaviour	49
6.2	Asking for proactive behaviour	50
6.3	Invitation and facilitation to anticipate future consequences	51
6.4	Role authority and responsibility clarity	52
6.5	Valuing the mastery of new skills	53
6.6	Celebrating the positive outcomes	54
6.7	Combination of practices	55
6.8	Proactive personality	57
6.9	Summary of discussion	58
7.	Conclusions and recommendations	59
7.1	Principal conclusions	59
7.2	Theoretical contribution	60
7.3	Implications for management and leaders	61
7.4	Limitations of the research	61
7.5	Suggestions for future research	62
8.	References	64
9.	Appendix 1 - Questions and Code book	75
10.	Appendix 2 - Question validity	82
11.	Appendix 3 - Factor Analysis	87

12. Appendix 3 - Multiple stepwise regression results with organisational initiative factor	91
13. Appendix 4 - Multiple stepwise regression results with individual items making up the organisational initiative factor (selected examples)	105
14. Appendix 5 - Ethical clearance	108
15. Appendix 6 - Declaration of assistance	110

List of tables

Table 4-1 Cronbach's alpha results	30
Table 5-1 Factor and item means and standard deviations.....	36
Table 5-2 Correlations	38
Table 5-3 Regression fitting results	44
Table 5-4 Regression fitting results for items of "Initiative Org Factors"	46
Table 9-1 Question validity testing results	82
Table 10-1 Factor analysis results	87
Table 11-1 Model Selection - Issue selling willingness.....	91
Table 11-2 Model constant and coefficients - Issue selling willingness.....	91
Table 11-3 Model Selection - Strategic scanning	93
Table 11-4 Model constant and coefficients - Strategic scanning.....	93
Table 11-5 Model Selection - Career initiative	94
Table 11-6 Model Selection - Problem prevention.....	94
Table 11-7 Model constant and coefficients - Problem prevention	95
Table 11-8 Model Selection - Feedback monitoring	95
Table 11-9 Model constant and coefficients - Feedback monitoring.....	96
Table 11-10 Model Selection - Individual motivation	96
Table 11-11 Model constant and coefficients - Individual motivation.....	97
Table 11-12 Model Selection - Individual innovation	97
Table 11-13 Model constant and coefficients - Individual innovation.....	98
Table 11-14 Model Selection - Voice	98
Table 11-15 Model constant and coefficients - Voice	99
Table 11-16 Model Selection - Job change negotiation.....	99
Table 11-17 Model constant and coefficients - Job change negotiation	100
Table 11-18 Model Selection - Feedback inquiry.....	100
Table 11-19 Model constant and coefficients - Feedback inquiry.....	101
Table 11-20 Model Selection - Consideration of future consequences	101
Table 11-21 Model constant and coefficients - Consideration of future consequences	102
Table 11-22 Model Selection - Learning goal orientation	102
Table 11-23 Model constant and coefficients - Role based self-efficacy.....	103
Table 11-24 Model Selection - Felt responsibility for change	104
Table 11-25 Model constant and coefficients - Felt responsibility for change	104

Table 12-1 Model selection - Strategic scanning	105
Table 12-2 Model constant and coefficients (shortened) - Strategic scanning	106
Table 12-3 Model selection - Problem prevention	106
Table 12-4 Model constant and coefficients (shortened) - Problem prevention....	107

List of Figures

Figure 5-1 Participant's education	34
Figure 5-2 Participant's career experience	34
Figure 11-1 Regression standardised residual – Issue selling willingness	92
Figure 11-2 Scatterplot – Regression standardised predicted value – Issue selling willingness.....	92

1. Introduction to the research problem

1.1 Introduction

Complex competition, fast global economic changes, and unpredictable shifts in expectations describe our world (Hong et al., 2016). Simply depending on procedures and instructions is not enough when faced by rapidly changing priorities. Instead, organisations count on employees to actively look for signs and reasons to pre-empt opportunities and risks that can best be captured and mitigated by actions taken by the employees and their initiative.

Proactivity of employees is associated with desirable outcomes. For the individual, it is associated with increased job performance, job satisfaction (Thomas et al., 2010) and support from supervisors (Okolie et al., 2022). For the organisation, it can lead to increased creativity outcomes (Binnewies & Gromer, 2012), better team performance (Lisbona et al., 2021) and increased idea generation (Fritz & Sonnentag, 2009).

Several organisational aspects and the role of leadership have been linked to proactive employee behaviour (Caesens et al., 2016; Crant, 2000; Hong et al., 2016; Nurjaman et al., 2019; Parker et al., 2006). These organisational aspects and the role of leadership often occur at the organisational or leadership style levels. The question then is, what can leaders start doing today without the need to overhaul their business' human resource (HR) management, implement expensive new company-wide performance systems or cultivate a new leadership style?

1.2 Background to the research topic

Many authors have expanded on the proactive work behaviour of employees and personal initiative (Bindl et al., 2012; Bohlmann & Zacher, 2021; Escrig-Tena et al., 2018; Parker et al., 2010; Schmitt et al., 2016; Schraub et al., 2014; Steinmann et al., 2018; Yu & Davis, 2016). The main research focus has been on leadership styles, personal antecedents and organisational culture factors. What has not been covered extensively yet is which action-level leader practices positively influence, motivate and enhance the employees' proactive behaviour.

Leaders can directly impact employees' moods and affect the level of proactive behaviour. However, the employees' personality also plays a role in proactive behaviour (Bindl et al., 2012; Parker et al., 2010).

Several leadership styles have been associated with employees' proactive behaviour. Bilal (2021) showed that entrepreneurial leadership reduced work uncertainty and increased proactive work behaviour. Numerous authors demonstrate the positive link between transformational leadership and proactive work behaviour. Schmitt et al. (2016) highlight that transformational leadership is related positively to proactive work behaviour through work engagement. Transformational leadership positively affects how employees view the importance of organisational goals, and that goal attributes transfer the effect of transformational leadership to proactive work behaviour (Steinmann et al., 2018). Authentic leadership has also been demonstrated to affect proactive work behaviour via the mediating factors of psychological capital and employees' well-being (Lisbona et al., 2021). Certain authentic, transformational and entrepreneurial leadership practices also positively affect proactive employee behaviour. There is an opportunity for further investigation to understand the leaders' behaviours and actions that cause such positive impacts.

The impact of leadership styles has been well-researched, and positive links between transformational, authentic and entrepreneurial leadership have been established (Bilal et al., 2021; Hu et al., 2018; Steinmann et al., 2018). Many leadership theories and styles have also been positively linked to proactive behaviour. It is likely that within those leadership styles, there are overlapping practices that affect proactive behaviour positively.

Organisational design factors have been reviewed concerning proactive employee behaviour (Abbasi et al., 2021; Beltrán-Martín et al., 2017; Yu & Davis, 2016), and they demonstrate that organisational design could affect employee proactive behaviour. Autonomy levels of roles also seem to impact the level of proactive behaviours by employees (Yu & Davis, 2016). Liao et al. (2016) demonstrate that HR management systems that enhance personal initiative at an organisational level are positively linked to employees' initiative. Similarly, high-performance work systems have contributed to employee proactivity through role breadth self-efficacy (Beltrán-Martín et al., 2017a). Links have been established between soft quality management and innovation proactivity (Beltrán-Martín et al., 2017).

Leader behaviour has also been demonstrated to impact employees' personal initiative, and it is in this area that practices can be expanded. Emotion management positively affects team members' personal initiative through increased well-being (Schraub et al., 2014a), similar to authentic leadership. Maintaining interpersonal

relationships with key stakeholders positively influences proactive work behaviour (Warshawsky et al., 2012).

In addition to organisational design, leadership style, and leader behaviour, additional antecedents have affected an employee's proactive work behaviour. Parker and Collins (2010) considered a proactive personality as an antecedent to proactive work behaviour.

Experiences in the workplace often leave leaders hoping that their teams would more often identify the need for positive change and act within their authority and resource allocations to bring about that change (Thomas et al., 2010). Notwithstanding the positive associations of transformational leaders and employees and organisations (Afsar et al., 2014; Bottomley et al., 2014; Dionne et al., 2004), there are costs too. Emotional exhaustion in the leader is increased when the expected outcomes of transformational leadership is low (Lin et al., 2019). In addition, leaders and organisations expend significant resources and time to recruit and retain (Kamalaveni M S et al., 2019) employees.

In this age of ever-changing technology and shifting societal expectations (Hong et al., 2016), employees who merely follow procedures and rules are not enough to differentiate organisations and contribute to long-lasting success. The question is then, in light of the organisational design, leadership style, employee traits and other contributing factors, what day-to-day practices and behaviours must leaders use to create, influence, motivate and enhance employees' level of work proactivity?

1.3 Research problem and objectives

The study aims to illuminate at least some practical behaviours and practices that leaders and managers can use to increase team members' proactive work behaviour. Several authors have expanded on the organisational design, leadership styles and personal antecedents to proactive work behaviour (Bilal et al., 2021; Bohlmann & Zacher, 2021; Escrig-Tena et al., 2018; Hu et al., 2018; Schmitt et al., 2016; Steinmann et al., 2018; Warshawsky et al., 2012; Wu et al., 2018). However, isolating and testing the effectiveness of specific practices and behaviours of leaders has not yet been extensively covered in the literature.

Existing literature has mainly been exploratory and at a higher level (organisational design and leadership style), with little intent to guide individuals practically. However, practical application is noted by specific authors. For instance, they state

that organisational culture is essential (Warshawsky et al., 2012), that work context is important (Wu et al., 2018), and equally, leader support is vital (Wu & Parker, 2017). However, the application remains at an abstract level, and it is not accessible to many leaders and managers.

1.4 Research motivation and relevance

The research tests the efficacy of specific practices to increase employees' proactive work behaviour. From a scholarly point of view, it will increase the knowledge base of leadership practices relating to proactive behaviour, personal initiative and self-starting behaviour by starting to delve down the layer of individual management practices and behaviours. In practice, managers and leaders can use the results to tailor their approach when they wish to increase the personal initiative demonstrated by their team members.

Organisational leaders are tasked with maximising the benefits that accrue to their stakeholders. To do this, they must manage the resources at their disposal and lead their teams. One of the most valuable leader resources is the capabilities of their team members and the leader's own time. Thus, management and leadership practices that maximise those two resources should be pursued.

1.5 Research scope

The research tested the link between practical and concrete leader practices and proactive employee behaviour. Analysis was conducted to isolate the impact of other antecedents and confounding factors to measure the strength of the relationship between the proposed actions and practices and other contributing factors.

2. Literature review

This chapter defines and discusses the construct of proactive work behaviour. A brief outline of the history of research about proactive work behaviour is sketched. Several leadership styles and organisational factors have been associated with increased proactive work behaviour. The antecedents for proactive work behaviour are reviewed in light of the leadership styles and organisational factors to isolate leadership actions and behaviours that are hypothesised to influence proactive work behaviour in employees positively. From the literature, methodologies to study proactive work behaviour is summarised. Lastly, a model for implementing leadership actions and behaviours is proposed that informs the formulation of the hypothesis tested and discussed in this research.

2.1 Proactive work behaviour

Personal initiative is a set of behaviours aligned with the organisation's mission, concerns the long term, is action and goal-focused, is resolute and not quickly abandoned in the face of difficulty, is proactive in nature, and is self-starting (Frese et al., 1996). Individuals' proactive work behaviour towards their organisation "is about taking control to make things happen rather than watching things happen" (Parker et al., 2010, p. 2). Although not precisely the same construct, this literature review conceptualised proactive work behaviour and personal initiative as similar and linked. Authors have used the terms in very close association (Hong et al., 2016). From approximately 2010 onwards, proactive work behaviour seems to have become the favoured term. The term proactive work behaviour will be used in this document, except for literature that explicitly refers to personal initiative.

2.2 Evolution of research

2.2.1 Historical background

Proactivity in the work context has been found in research from 1972 (Barilleax, 1972). Bateman and Crant (1993) considered a proactive personality in the work context. Several constructs now considered antecedents to and related to proactive work behaviour were studied in the 1990s, and measurement scales were developed. The consideration of future consequences was explored by Stratham et al. (1994), personal initiative at work was introduced by Frese et al. (Frese et al.,

1996), and taking charge at work was measured by Morrison et al. (1999), to name a few of these authors.

The terms used in the literature shifted from personal initiative to proactive work behaviour. Two prominent authors in the field of proactive work behaviour and personal initiative are Frese and Parker. Frese favoured the use of the term personal initiative (Bledow & Frese, 2009; Fay & Frese, 2001; Frese et al., 2016; Frese & Fay, 2001; Speier & Frese, 1997). Parker refers to what is, to a large extent, the same employee behaviours as proactive work behaviour or proactive behaviour for short (Parker & Cai, 2019; Parker & Collins, 2010; Strauss et al., 2017; Wu & Parker, 2012, 2017). To some extent, the term proactive behaviour is more prevalent in recent literature.

While a subsection of research focused on the impact of certain personality traits on work, another tranche of research focused on the proactive behaviours of employees (Grant & Ashford, 2008). The proactive behaviour of employees, rather than the personality traits, is more interesting to organisations and individuals. The actualisation of ideas and actions to enhance the future organisational or professional state is of interest to leaders.

Several authors remained active in this field and explored various constructs and antecedents related to proactive work behaviour and personal initiative at work. Fay and Frese, and Frese et al. (2001; 1997; 2001) demonstrated that the measure of personal initiative is meaningfully related to a network of variables. Warr and Fay (2001) explored the relationship between age and personal initiative at work and illustrated that no significant differences were present for various ages of males in the German workforce. In a longitudinal study, Fay et al. (2002) investigated the impact of stressors on personal initiative and established that increased stressors at work positively correlated with personal initiative.

2.2.1.1 Personal initiative

Personal initiative is behaviour at work that considers the future and is characterised by a self-starting and proactive approach. Personal initiative is not easily deterred by setbacks and is directed at specific goals. It aligns with the organisation's priorities (Frese et al., 1997). From the definition of personal initiative, it can be argued that such employees' behaviour would advance the organisation's interests.

Creating an environment likely to increase employees' personal initiative would thus be beneficial to organisations. Frese et al. (2014c) demonstrate that leaders who manage their emotions well and enhance the well-being of their employees can achieve progress and success in such an environment. The work of Diamantidis and Chatzoglou (2019) builds on Frese et al. (2014c) in illustrating that management support has a positive impact on employee-related factors, among which is proactivity. In turn, the improved employee-related factors are associated with increased employee performance and, by extension, the organisation's overall performance.

2.2.1.2 Proactive work behaviour

Proactive work behaviour has been explored through many lenses, organisational design and leadership, and the employees' personal attributes. High-performance HR practices were evaluated concerning proactive work behaviour and demonstrated to be associated with positive outcomes (Kehoe & Wright, 2010). Parker and Collins (2010b) determined the interrelationship between various aspects of proactive work behaviour and antecedents and, in the process, developed a measurement instrument for proactive work behaviour. Moods and attachment styles have been scrutinised as they pertain to proactive work behaviour. Links have also been established between anxiety and curiosity of individuals and proactive behaviour (Wu & Parker, 2012), and high activated positive mood is associated with proactive behaviour (Bindl et al., 2012). The leadership actions that influenced the moods, however, were not explored and are not connected to the work behaviour.

For the leader interested in increasing proactive behaviour, or indeed personal initiative in their teams, many broad constructs have been shown to influence outcomes (Crant, 2000; Hong et al., 2016; Parker et al., 2006, 2010; Schraub et al., 2014; Speier & Frese, 1997). However, the constructs are broad and literature relating to testing the specific aspects of the behaviours and practices associated with the constructs is scarce.

2.2.1.3 *Related constructs – Innovative work behaviour*

Innovative work behaviour is related to proactive work behaviour in that innovative work behaviour is related to employees anticipating future consequences of a current situation and then taking steps to influence the outcome positively. Innovative work behaviour is typically required to influence the intended outcome and may include the development of new ways of doing things or the introduction of new technology (Nurjaman et al., 2019). An employee who can identify and address future concerns or opportunities is thus a boon to their employer.

Innovative work behaviour refers to exploring opportunities or threats and determining means to mitigate the threat or capture the opportunity in novel and usable ways. Innovative work behaviour is associated with creativity and is the intersection between creativity and proactive work behaviour (J. de Jong & den Hartog, 2010; J. P. J. de Jong & den Hartog, 2007). Thus, by extending a nurturing and proactive work behaviour, employers could increase the effect their employees' innate creativity has on their business.

2.2.2 Methodologies used to study proactive work behaviour

Bindl et al. (2012) studied how dimensions of effect interact with individual proactivity by using a quantitative method. Their sample consisted of 224 call centre agents. The team used a cross-sectional study quantitative approach consisting of a questionnaire administered to the call centre agents in the United Kingdom. Hypothesis testing was performed in SPSS, using general linear models.

Yu and Davis (2016) conducted a longitudinal study over two years, focusing on proactive newcomer behaviour. They introduced the concept of focusing on specific newcomer behaviour that a leader may want to influence, as opposed to proactive behaviour in general. A polynomial regression model was used to model the outcomes of various types of proactive behaviour.

Liao et al. (2016) further investigated antecedents to proactive behaviour. They gathered data from hotel employees across 22 sites of the same hotel company and tested hypotheses by using quantitative methods based on data gathered through the use of questionnaires. A longitudinal study was performed over four months and triangulated data from three sources. The data was analysed using correlations and multilevel path analysis to support or not support the hypotheses.

To understand the relationship between high-performance work systems and proactive behaviour, Beltrán-Martí et al. (2017a) used quantitative techniques, which used questionnaires to gather the data. They tested hypotheses by using multilevel structural equation modelling.

Several other authors used quantitative techniques based on questionnaires (Bilal et al., 2021; Bohlmann & Zacher, 2021; Schmitt et al., 2016) and thus, established that quantitative research based on questionnaire-based data was a dominant method for studying and understanding proactive behaviour. Because quantitative techniques based on questionnaires are the most prominent method used to study proactive behaviour, it was chosen for this study too.

It is typical in studies of proactive behaviour to rely on a form of equation modelling or regression analysis in addition to correlation calculations to support or not support hypotheses (Bindl et al., 2012; den Hartog & Belschak, 2007; Parker et al., 2010; Schmitt et al., 2016; Yu & Davis, 2016). Equation modelling and correlation analysis is dominant in the field of proactivity research. Therefore, correlation analysis and equation modelling was selected to test the hypotheses developed.

2.3 Outcomes of proactive work behaviour

2.3.1 Personal outcomes

2.3.1.1 Positive outcomes

Proactivity is associated with increased job performance, because proactive employees make choices about situations and create circumstances that increase the possibility of success and high performance. This increased performance may manifest itself in employee scanning and an assessment of the work environment for signals that help them identify potential problems and opportunities well in advance. Crucially, these employees then take action to influence the outcome towards what would be preferred. It is obvious that this kind of employee behaviour is likely to lead to positive organisational as well as professional outcomes. It is possible that proactive behaviour and improved job performance by one behaviour feed on each other. The mechanism that facilitates the virtuous circle is increased organisational and resource support for employees that is, in turn, likely to reinforce and make it easier to act proactively (Thomas et al., 2010).

Satisfaction at work is higher in proactive individuals because they remove roadblocks, adapt their work environment to their preferences, and induce a job-person-fit for themselves. These behaviours give the employees a sense of control, and actual control over their work environment, which leads to increased job satisfaction. In addition, proactive behaviour may increase the rate of skills and career development (Thomas et al., 2010).

Proactive behaviour specific to career development in students is related to increased work placement support by supervisors (Okolie et al., 2022). Presidents of the USA were rated as better leaders, if they were more proactive and more likely to avoid war than their less proactive counterparts. In estate agents, proactive behaviour is associated with more listings and sales, and higher commissions (L. Wang & Parker, 2015).

Proactive behaviour can be risky and the exact outcomes, organisationally and personally, may not be known. All the outcomes of proactive behaviour will not be positive for the individual and in many instances may even place them outside of their comfort zone. Individuals who are more concerned with meeting their short-term goals may therefore shy away from proactive behaviour (L. Wang & Parker, 2015).

2.3.1.2 Negative outcomes

In situations where motivation at work is achieved by coercion and pressure, proactive behaviour depletes an employee's energy, and this then results in job strain. However, proactive motivation has no negative impact on job strain under other conditions (Strauss et al., 2017).

2.3.1.3 *Organisational outcomes*

The creation of knowledge and the management thereof is increasingly prominent in the world (Nayak et al., 2022). Personal initiative increases engagement in the creative process and is positively associated with creativity outcomes (Binnewies et al., 2007). Thus, to create new knowledge to foster or gain a competitive advantage in business and industry needs initiative, and proactive behaviour of an organisation's members is crucial. Similarly, initiative is positively correlated with team performance (Lisbona et al., 2021). As such, proactive behaviours can increase organisational effectiveness through higher levels of creative idea generation (Fritz & Sonnentag, 2009) Through taking steps and engaging in actions and behaviours that increase proactive behaviour and initiative-taking in employees, organisations can improve their positioning in the competitive landscape.

2.4 Types of proactive work behaviour

Parker and Collins (2010) differentiated between proactive work behaviour, proactive strategic behaviour and proactive person-environment-fit behaviour. Despite separating proactive work behaviour based on the stance that it was a higher-order proactive behaviour within the work context by Parker and Collins, the term "proactive work behaviour" is maintained as the overarching construct for this study. References to proactive work behaviour outside this section thus incorporate all proactive behaviours at the workplace. This terminology is maintained for simplicity and to avoid coining any new terms.

2.4.1 Proactive work behaviour

This behaviour refers to bringing about change within the organisation's environment and includes the constructs of taking charge, voice, individual innovation and problem prevention. Therefore, it relates to proactivity about work or how to make the functions inside the organisation work better (Parker & Collins, 2010).

2.4.2 Proactive strategic behaviour

Proactive strategic behaviour is concerned with modifying the organisation's fit with the external environment. It is about ensuring that the organisation focuses on what may be coming and what could be done to maximise an opportunity or mitigate risk. This behaviour is focused on adapting the strategy of the organisation. The constructs within this higher-order strategic behaviour are issue selling and strategic scanning (Parker & Collins, 2010).

2.4.3 Proactive person-environment-fit behaviour

Team members may take specific actions to improve their fit within the organisation or their role. Similar to proactive strategic behaviour and proactive work behaviour, actions taken to improve the work situation are still focused on aspects relating to work roles and roles within the organisation. The constructs of feedback inquiry, feedback monitoring, job change negotiation and career initiative are related to proactive person-environment-fit behaviour (Parker & Collins, 2010).

2.5 Antecedents to proactive work behaviour

2.5.1 Leadership perspectives

2.5.1.1 Leadership definition

A multifaceted definition of leadership was developed by Winston and Patterson (2006). Their definition covers several aspects that are of importance to organisations; the leader, the followers, legitimacy and being action oriented, and the presence of goals and objectives (Gandolfi & Stone, 2018).

A leader is one or more people who selects, equips, trains, and influences one or more follower(s) who have diverse gifts, abilities, and skills and focuses the follower(s) onto the organization's mission and objectives, causing the follower(s) to willingly and enthusiastically expend spiritual, emotional, and physical energy in a concerted coordinated effort to achieve the organizational mission and objectives. (Winston & Patterson, 2006, p. 7)

Transformational leadership, authentic leadership, entrepreneurial leadership, empowering leadership and spiritual leadership are briefly elaborated on below to determine overlapping practices and behaviours. The definition by Winston and Patterson (2006) and guidance about the aspects by Gandolfi and Stone (2018) was borne in mind during this process.

2.5.1.2 *Transformational leadership*

Transformational leadership is the most studied leadership style (Dionne et al., 2014). “It is often defined in terms of leader behaviours and effects on followers and is composed of four main dimensions: idealised influence, inspirational motivation, intellectual stimulation and individualised consideration” (Dionne et al., 2014). The transformational leadership style is positively related to employees’ proactivity mediated by employees’ engagement (Schmitt et al., 2016).

The transformational leadership style is associated with certain practices. Inspiring a shared vision and challenging the process are positively correlated with desirable outcomes for school principals (Quin et al., 2015). Carless et al. (2000) described seven aspects, or groups of practices, associated with transformational leadership: vision, staff development, supportive leadership, empowerment, innovative and lateral thinking, leading by example, and charismatic leadership.

Similar to Carless et al. (2000), Bottomley (2014) identified in a conceptual framework four areas of leadership and expanded on certain practices within each. The framework expanded on by Bottomley et al. (2014) consists of: vision builder, standard bearer, integrator, and developer. The areas of behaviour and practice identified by the two authors are however similar. Quin et al.’s (2015) vision closely corresponds with the vision builder aspect of Bottomley et al. (2014). Staff development and developer are very similar between the two. Similarly, supportive leadership and empowerment can be associated with being an integrator, while being innovative and applying lateral thinking can be linked with integrator as well.

From a small sample of the comprehensive work on transformational leadership, one can demonstrate that a part of the transformational leadership practices are associated with innovation and lateral thinking, and subsequently, they are creating the space where the ideas can be implemented. As such, transformational leadership is positively associated with proactive work behaviour (Mubarak et al., 2021; Schmitt et al., 2016; Steinmann et al., 2018).

2.5.1.3 *Authentic leadership*

Authentic leadership is defined as a leader's behaviour that promotes positive psychological capacity, a positive ethical climate, fosters greater self-awareness, an internalised moral view, and offers transparency on the part of leaders (Walumbwa et al., 2007). Authentic leadership is similar to transformational leadership, except that authentic leaders need not be transformational (Dionne et al., 2014). Authentic leadership is positively correlated with proactive work behaviour, and is mediated by psychological capital and moderated by compassion (Hu et al., 2018). In team settings, authentic leadership has been shown to increase initiative (Lisbona et al., 2021). Therefore, it may be useful to understand the similarities between authentic leaderships and other leadership styles in order to better recognise common aspects that may be the driver of initiative in team members.

2.5.1.4 *Entrepreneurial leadership*

Entrepreneurial leadership is another popular leadership theory. "It involves influencing and directing the performance of group members towards achieving those organisational goals that involve recognising and exploiting entrepreneurial opportunities" (Renko et al., 2015, p. 55). Entrepreneurial leadership increases proactive work behaviour through reduced work uncertainty (Bilal et al., 2021). Because a reduced work uncertainty is isolated as the mechanism that increases proactive work behaviour, it can be linked back to aspects of transformational and authentic leadership. Practices of transformational leadership that can be associated with reducing work uncertainty are supportive leadership and leading by example.

2.5.1.5 *Empowering leadership*

Leaders that delegate significant authority, promote autonomous decision making, coaches, shares information and ask for input can be described as empowering leaders (Sharma & Kirkman, 2015). The actions of promoting autonomous decision making and delegating authority is associated with the understanding of proactive work behaviour. Indeed empowering leadership is associated with increased proactive behaviour at work (C.-J. Wang et al., 2021). An environment at work that is favourable for initiative-taking is also required to increase innovation by middle managers (Hassi et al., 2021).

Where empowering leadership increases the space for employee autonomy directive leadership does not. Directive leadership may be similarly effective in increasing task proficiency. However, only empowering leadership increases proactive behaviours (Martin et al., 2013).

2.5.1.6 Spiritual leadership

Spiritual leadership has a positive impact on proactive work behaviour (Chen et al., 2019) by nurturing the feeling of psychological safety. Spiritual leadership focuses on satisfying the employees' need for meaningful work and allows them the fulfilment of their spiritual needs. It is a more values-based and spirit-centred approach to leadership. Spiritual leadership establishes a vision, a sense of calling and an organisational culture based on altruistic love. In such environment or culture, employees show care, concern, and appreciation. and they feel understood (Fry, 2003).

2.5.1.7 Leadership models similarity and proactive work behaviour

A systematic overview of leadership theories, styles and tabulation of the similarities and differences is beyond the scope of this research. However, literature has supported positive relationships between several leadership styles and proactive work behaviour.

Transformational leadership remains a popular leadership theory and literature about its nature and outcomes are plentiful. There is an overlap between leadership styles in that authentic leadership is similar to transformational leadership, but without the transformational aspect. Empowering leadership can be considered as a subset of transformational leadership as elaborated by Carless (2000). Insofar as entrepreneurial leadership has an impact on proactive work behaviour by reducing job uncertainty, it is similar to transformational leadership in that both styles aim to create a vision for the future. Whereas spiritual leadership positively affects proactive work behaviour through a psychological sense of safety, it is similar to transformational leadership, where transformational leadership is supportive and empowering.

2.5.2 Organisational perspectives

2.5.2.1 Role autonomy level

Autonomy levels of roles have an impact on the level of proactive behaviours by employees (Yu & Davis, 2016). In newcomers to an organisation, proactive behaviour is associated with a mismatch of the expected level of autonomy and the actual role autonomy. For newcomers to an organisation, the proactive behaviour tends to be related to the role and not necessarily the outcomes of the organisation (Yu & Davis, 2016). Therefore, personal initiative, such as taking charge of their own well-being and career is based on proactivity.

2.5.2.2 High-performance HR practices

High-performance HR practices are positively associated with organisational citizenship behaviour, mediated partially by affective commitment (Kehoe & Wright, 2010). Liao et al. (2016) demonstrate that HR management systems that enhance personal initiative at an organisational level are positively related to employees' initiative. High-performance work systems have been shown to contribute to employee proactivity through role breadth self-efficacy (Beltrán-Martín et al., 2017b). Therefore, team members' belief that they can perform the required tasks or roles is associated with increased proactive behaviour.

It can be argued that the description of role breadth self-efficacy, if taken through to action, constitutes proactive behaviour. For instance, the belief and subsequent action from employees that they can and should implement an idea as part of their job is in itself proactive.

2.5.2.3 Supervisor behaviour

Supervisor behaviour has been shown to have an impact on proactive behaviour. For instance, emotion management of supervisors positively affects team members' personal initiative through their sense of increased well-being (Schraub et al., 2014).

Increasingly complex cognitive and emotional exercises are required from employees to promote their proactive behaviour where supervisor justice is low (Molina & O'Shea, 2020), and the discretionary nature of proactive behaviour makes it easy for employees to withhold their input when they are not happy with certain situations. Wahshawsky et al. (2012) were able to demonstrate a positive link

between relationships of stakeholders and the proactive work behaviour of nursing managers.

It can be extrapolated from the examples above that isolated supervisor behaviours can have an impact on employees' proactive behaviour at work as well. Extracting from the leadership theory and the positive impacts specific leadership styles have on behaviours or actions could also individually affect proactive behaviour.

2.5.3 Individual attributes

2.5.3.1 Proactive personality

Proactive personality is a person's inclination to find opportunities and initiate actions to pursue them (Parker et al., 2006). A proactive personality should positively predict all proactive behaviours (Parker & Collins, 2010). Proactive personality is identified as the most significant individual difference that influences proactive behaviour, in that it is a relatively stable behavioural tendency over time (Parker et al., 2006). Therefore, in an attempt to isolate the impact of other variables, it is required to understand to what extent reported proactive behaviour is driven by an individual's own makeup as opposed to their circumstances, the leadership style in their team, or the isolated behaviour and actions of their leaders.

2.5.3.2 Consideration of future consequences

The consideration of future consequences refers to how an individual considers distant consequences instead of only the immediate consequences. Proactive behaviour involves anticipating future needs and problems. Thus, individuals high in considering future consequences are likely to behave more proactively (Parker & Collins, 2010b). In complex situations at work, considering the future consequences of a potential action appears as if it is a proactive behaviour in itself. Of course, if the team members have thought of the future consequences and decided to complete the action, despite an anticipated negative outcome, or not complete an action with an anticipated positive outcome, the objectives of the organisation and those of the individual will not be advanced.

2.5.3.3 *Learning goal orientation*

Parker and Collins (Parker & Collins, 2010) argued that learning goal orientation, or the individual's focus on the mastery of a new situation, is predictive of all proactive behaviours. Although this tendency of employees is cited as an antecedent, it can also be thought of a proactive behaviour in itself. Demonstrating learning goal orientation would require the employees to identify the situation where they lack proficiency and then decide to take action to address the deficiency. Therefore, management practices and leadership behaviour that encourage the learning of goal orientation should be associated with increased proactive behaviour at work.

2.5.3.4 *Role breadth self-efficacy*

Role breadth self-efficacy is about the judgement team members make about their abilities to complete a range of interpersonal and integrating tasks (Parker, 1998). It mediates between high-performance work systems and employees' proactivity; however, flexible role orientation does not mediate the relationship (Beltrán-Martín et al., 2017). One's perception about one's capability leads to several outcomes in relation to the task, which includes outcomes such as increased effectiveness, persistence and coping with change (Parker et al., 2006).

Parker (1998) argued that job enlargement and enrichment through increased breadth, decision-making responsibility, and workplace communication can increase role-based self-efficacy. It is likely that many jobs require incumbents to make significant decisions and effect changes in their surroundings. It is not immediately clear that employees are aware of or remember the extent of their authority and responsibility.

2.5.3.5 *Felt responsibility for change*

(Parker et al., 2006) further proposed that differences in role breadth self-efficacy and felt responsibility for change are important for proactive work behaviours.

2.5.3.6 *Mood*

In addition to the somewhat fixed attributes of an individual, their mood can also affect the likelihood that an employee will engage in proactive work behaviour. A highly activated positive mood is positively linked with proactive goal regulation (Bindl et al., 2012). The extent to which leaders or managers can encourage or activate personal attributes in employees to influence their proactive work behaviour is not

discussed. It would be useful to practitioners to understand how encouraging the activation of employees' traits could increase proactive work behaviour.

2.6 Conclusion to the literature review

Several leadership styles have are associated with increased proactive behaviour (Chen et al., 2019; Hu et al., 2018; Steinmann et al., 2018), and there are overlaps in the practices between the leadership styles. It can then be concluded that it may be practices and behaviours within those leadership styles that contribute to the positive association with proactive work behaviour.

More than one author elaborated (Hong et al., 2016; Parker et al., 2006) on other antecedents to proactive work behaviour. In evaluation of the various aspects of leadership theory and antecedents to proactive work behaviour, five activating practices were identified to potentially increase proactive behaviour in employees. The activating practices have been developed to influence multiple antecedents or proactive work behaviour, and as such, a combination of practices should be more predictive of proactive work behaviour than isolated practices. Figure 2-1 models how the proposed practices would influence proactive work behaviour.

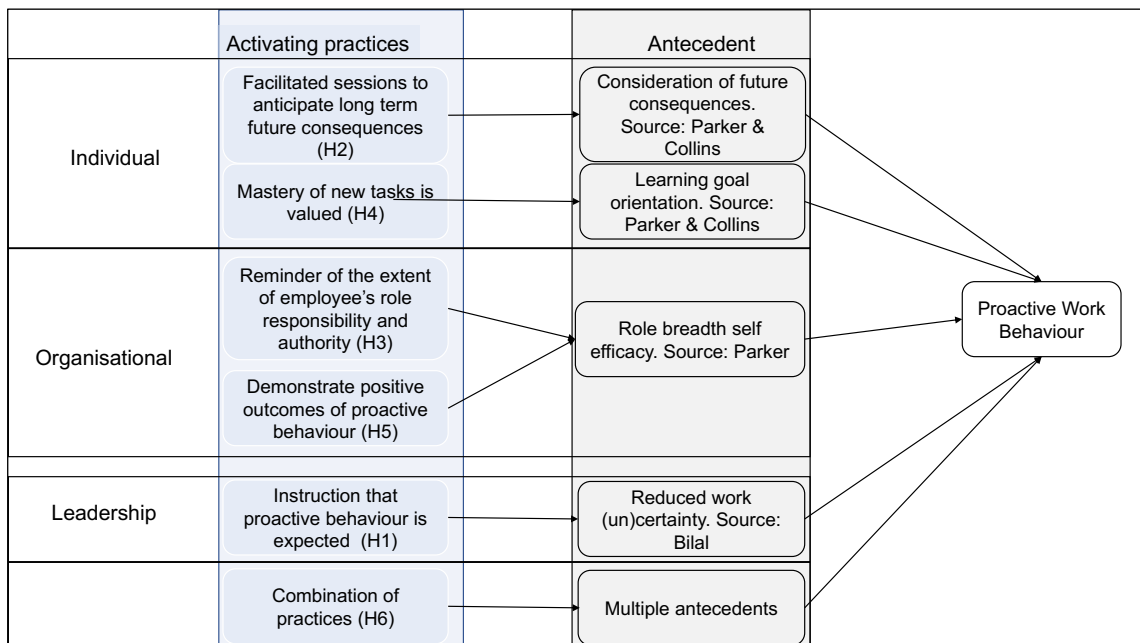


Figure 2-1 Model of activating practices for antecedents to proactive work behaviour

3. Research hypotheses

Leadership styles and effective management encompass various activities and behaviours. Associations between broad leadership styles as well as management systems have been elaborated upon (Bindl et al., 2012; Caesens et al., 2016; Crant, 2000; Hong et al., 2016; Okolie et al., 2022; Parker et al., 2006; Parker & Cai, 2019; Steinmann et al., 2018; Warshawsky et al., 2012; Yu & Davis, 2016). By extension, there are certain practices and behaviours that make up those management systems and leadership styles that are associated with increased proactive behaviour. Alternatively, it is only the leadership style as a whole, for instance, empowering leadership, that is associated with increased proactive behaviour in employees. However, this is unlikely to be an exception, as similarities between leadership styles have been identified as well as the absence of certain features between styles. Therefore, it can be argued that individual practices within those leadership styles and management practices are associated with proactive behaviour, potentially in the absence of the overarching leadership style or management system. This leads to the formulation of the null hypothesis:

Null hypothesis – Management and leadership practices are not associated with increasing proactive behaviour.

3.1 Hypothesis 1

The literature review did not reveal any outcomes associated with direct indications or instructions from managers or leaders that proactive behaviour is desirable. Bilal et al. (2021) elaborate on the role of leaders, especially entrepreneurial leaders in reducing work uncertainty. Arguably, the simplest approach to achieving the desired outcome, expressing the instruction of expectation, must be tested for effectiveness. A function of leadership is to set clear expectations. Thus, it must be clearly stated if proactive work behaviour is expected. Then, if proactive behaviour of employees is valued, it should be clear that:

H1 - Asking employees to act proactively is effective in increasing proactive work behaviour.

3.2 Hypothesis 2

The consideration of future consequences has been established as an antecedent to proactive work behaviour (Parker & Collins, 2010). It is argued that activating the thinking and realisations associated with the trait relating to work will increase proactive work behaviour through increased consideration for future consequences.

H2 - Invitation and facilitation to anticipate long-term future consequences are associated with increasing proactive work behaviour.

3.3 Hypothesis 3

Clear communication has been positively linked to increased role breadth self-efficacy (Parker, 1998). Communicating clearly about the extent to which a role requires proactive work behaviour would increase proactive behaviour in employees. It may be the case that day-to-day tasks over several months may dull the memory of the job description and the initial expectation of the leader. Therefore, ensuring that the extent of a role's authority and responsibility is fresh in employees' memory would be associated with increased proactive behaviour at work.

H3 - Reminders to an employee about the extent of their role's responsibility and authority is associated with increasing proactive work behaviour.

3.4 Hypothesis 4

Learning goal orientation positively predicts proactive work behaviour (as opposed to performance goal orientation, which negatively predicts proactive behaviour) (L. Wang & Parker, 2015). Seeing that proactive behaviour could be thought of as risky, reducing the expectation of negative consequences for reaching outside one's comfort zone could encourage it and increase proactive behaviour. Stating and demonstrating the value of mastery of new tasks or situations will increase employees' learning of goal orientation and positively influence proactive work behaviour.

H4 - Proclamation of the supervisor about the extent to which the organisation values the mastery of new tasks is associated with increasing proactive work behaviour.

3.5 Hypothesis 5

HR systems can positively affect proactive behaviour (Hong et al., 2016). Establishing a practice of highlighting positive outcomes of proactive behaviour (or initiative) is a part of an HR management system that enhances initiative. The practice of demonstrating positive outcomes of proactive work behaviour will positively affect proactive work behaviour by employees.

H5 - Celebrating the positive outcome of individuals who engage in proactive work behaviour is associated with increasing proactive work behaviour.

3.6 Hypothesis 6

Leadership is defined by several facets: followers, goals, the organisation, harnessing the skills of individuals, and influencing their state of mind (Winston & Patterson, 2006). The practices in hypotheses 1 to 5 work on different antecedents to proactive work behaviour and facets of what constitutes leadership. Hypothesis 1 is about whether a simple direct instruction has been given that proactive work behaviour is required or expected. Hypotheses 2 and 4 relate to activating or mimicking individual traits that are positively associated with proactive work behaviour. Hypothesis 3 relates to organisational design and clear communication, while hypothesis 5 relates to aspects of the HR management system. Managers and leaders who demonstrate all the practices would possibly more effectively encourage increased levels of proactive work behaviour in their employees.

H6 - Some combination of the above practices is more predictive than a single practice of increasing proactive work behaviour.

4. Research methodology

A mono-method quantitative research methodology was followed to determine the relationship between certain leadership practices and behaviours. The population was all employees for whom proactive work behaviour could result in them benefiting professionally or their organisations. The sample of 190 was taken from the author's LinkedIn connections. Data was obtained from a measurement instrument based on questions developed and validated in prior research. Additional questions were formulated and tested for validity to test the hypotheses. Correlations and multiple regression calculations were performed on the coded data, once the missing values were addressed. Support was found for the hypotheses and the null hypotheses rejected.

4.1 Research paradigm and design

The research was conducted to determine whether relationships exist in practice to what is predicted in theory regarding the practices leaders and managers may employ to increase their teams' personal initiative and proactive behaviour. To that end, the purpose of the research design was explanatory (Saunders & Lewis, 2018).

A positivist approach was taken, as the work aimed to establish and confirm links between the behaviours and practices of leaders, based on an analysis of sampling results (Saunders & Lewis, 2018).

A mono-method quantitative study was performed to understand the breadth of applicability of the selected practices. Although the research was quantitative, one of the survey questions requested text input. The data from the text responses was used to enrich the quantitative research results. A mono-method quantitative study was performed to understand the breadth of applicability of the selected practices (Campbell et al., 2020).

4.2 Population and sample

The population was all employees for whom proactive work behaviour could result in benefiting professionally or their organisations. The population members may reside in for-profit, social, or other organisations. The complete list and number of individuals that constitute this population were unknown. A non-probability sampling method was used (Saunders & Lewis, 2018). A cross-sectional study was conducted to align with the timeframe available to complete the research study required to meet

the MBA qualification requirements. The unit of analysis was the individual leaders' practices and behaviours.

4.3 Strategy

Conceptual structuring was used to ensure the coherence of the literature review portion of the work. The review focused on keywords and constructs associated with personal initiative and proactive behaviours. Specific practices from the constructs were extracted, focusing on those expected to positively affect the variables (Torraco, 2005).

Once a list of associated practices and behaviours was established, the few most applicable ones were selected for hypothesis development and testing. In choosing the behaviours and practices to be tested for association with proactive behaviour and personal initiative, the availability of existing Likert scale-type questions was used as per the attached questionnaire in Appendix 1 - Questions and Code book.

A proposed survey was constructed from existing material and was administered to LinkedIn contacts. The test for the requirement of proactive work behaviour was a Likert scale question about the extent to which the individual believes that proactive work behaviour is required in their role.

4.4 Sampling method and size

Non-probability sampling was a practical choice, because the population is vast and the researcher had limitations that could be attributed to the researcher's limited influence on the inclusion of subjects. Typical case sampling was used, because of the large pool of professionals for whom it could be considered that proactive behaviour is valuable in their role (Etikan, 2016). Based on an anticipated response rate of approximately 20% (*How to Increase the Response Rate on Surveys | Qualtrics*, n.d.), the questionnaire was sent to 804 potential participants with the hope to obtain between 150 and 170 responses.

4.5 Measurement instrument

A Likert scale questionnaire was used to gather data. A copy of the questionnaire is in Appendix 1. Questionnaires are a vital research tool and attitude scales are widely used. The Likert scale is one of the most often used tools in many research fields. A five-point Likert scale was used, based upon the ease of response, despite a six or seven-point scale having been considered to be more reliable (Taherdoost, 2019). A

five-point Likert scale was considered appropriate, given the length of the questionnaire and used to minimise the reading burden on participants. The questionnaire was sourced from previous research in the field (Bateman & Crant, 1993; Button et al., 1996; Morrison & Phelps, 1999; Parker & Collins, 2010; Strathman et al., 1994).

A questionnaire of approximately 60 questions was developed. It contained sections for general demographics, sections to measure the extent of proactive behaviour, and antecedents to proactive behaviour. In addition to established measures of antecedents confirmed by others (Bateman & Crant, 1993; Button et al., 1996; Morrison & Phelps, 1999; Parker & Collins, 2010; Strathman et al., 1994), questions about specific leader behaviour were developed, based on the hypotheses from the literature review.

The questionnaire was modelled after the questionnaire developed by Parker and Collins (Parker & Collins, 2010). The questionnaire asked three to four questions for each element identified as proactive work behaviour.

After Parker and Collins (2010) three areas of proactive behaviour were tested. They were proactive work behaviour, strategic behaviour and person-environment-fit behaviour. The three areas of proactive work behaviour were tested in sections in the questionnaire. Antecedents to proactive work behaviour were tested by a shortened version of tests developed by others.

Measurement of the antecedents to proactive behaviour was described in Parker and Collins (2010), and the approach used was emulated. References to the source work were extracted from Parker and Collins, and the questions were sourced from the original work. As per the example of Parker and Collins (2010), the measurements for the antecedents were shortened to three questions each.

The antecedents measured in the questionnaire are proactive personality (Bateman & Crant, 1993); consideration for future consequences (Strathman et al., 1994); learning and performance goal orientation (Button et al., 1996); role breadth self-efficacy (Parker, 1998); and felt responsibility for change (Morrison & Phelps, 1999). The questions developed by Morrison and Phelps were adapted to change the perspective of rating a co-worker to one of self-reporting.

Questions relating to the leaders' behaviours were added to the questionnaire to test the extent to which the participants' leaders engage in the behaviours hypothesised

to increase proactive behaviour. The questionnaire is included in Appendix 1 - Questions and Code book.

4.5.1 Instrument testing

Ten people were asked to test the measurement instrument before it was deployed for the final questionnaire. The persons completing the pilot test of the questionnaire were picked to resemble the final intended distribution of the survey.

Responses from the pilot testers were generally positive. No ambiguity or unclear questions were identified. The pilot testers confirmed the estimated time for completion of approximately ten minutes. Some inconsistencies in spelling were pointed out as well as specific cosmetic formatting issues on the display of some browsers. The issues were addressed for the most part, although the formatting of the introduction page was not addressed. It was deemed minor, and efforts to rectify it were unsuccessful.

One of the pilot testers pointed out a duplicate question. It was removed. In addition to the duplicate question, the pilot tester pointed out that the questions seemed repetitive. Reference was made to the source of the questions. The comments about the seemingly repetitive questions were noted, but the questions were left unchanged as per the source. The pilot study tested the administration of a validated tool, and the data was included in the main research (Van Teijlinger & Hundley, 2001).

As the survey was administered, one person commented about difficulty understanding the questions and that some of the questions seemed very similar. The comment was only noted, but no action was taken, because only one out of 190 participants registered a complaint, and the questions were sourced from validated questionnaires. It was decided that no change to the questionnaire was required.

4.6 Data gathering

Questionnaires were distributed via LinkedIn. Care was taken to adhere to internet best practices and etiquette. A cover letter was included in the request for a response, and it adhered to literature guidance (Saunders & Lewis, 2018). The survey instrument was set up in Google Forms, from which a link was extracted.

The online method was chosen because of its ubiquitous nature, global reach, convenience to access of and by participants, the ease of use, and free online survey services. Limitations to online questionnaire-based research include being relegated to the spam folder; computer configurations that could block survey links; and the method could be considered impersonal (Minnaar & Heystek, 2013). To overcome most of the limitations of online surveys, responses were solicited using the direct messaging service provided by LinkedIn.

The pool of potential participants was sourced from the researcher's LinkedIn contacts. Requests for responses were sent via the platform's direct messaging service. The cover letter was included before the survey started, and the direct messages included a brief introduction and a link to the questionnaire. The survey was not posted on any feeds or groups on LinkedIn, but the request did include a call to send the survey to participants' contacts.

The link to the survey was sent to 804 people. Using LinkedIn, some information about the kind of work a person does was available. This information was used, to some extent, to avoid sending the survey to retirees and currently unemployed people. In addition, the survey was not distributed where the LinkedIn contact was a business name instead of an individual. From the distribution of 804, there were 190 qualifying responses. A response rate of 23.6% was achieved, slightly higher than the expected response rate.

4.6.1 Privacy of participants

Participants' privacy was protected by collecting data anonymously. No names or identifying information were requested of the participants or their organisations. In addition, the resulting data was only reported in aggregate. The questionnaire included a question about the extent to which participants believed their privacy would be protected. The majority of participants indicated they were confident they would not be identified.

4.6.2 Data storage

The research data is stored in reputable cloud storage, Microsoft OneDrive™. In addition to the cloud service storage, data is kept on the researcher's computer hard drive.

4.7 Data analysis

4.7.1 Coding

Google Forms were used to administer the survey. The online tool provided an easy option to view responses in Google Sheets. From Google Sheets, the data was copied to Excel for coding and cleaning.

To replace the text data returned from Google Forms with numerical data, the Excel formula “xmatch” was used in conjunction with the text lists of the possible Likert scale responses for each question. Coding was very flexible using this method, and errors could be identified and fixed quickly. A significant advantage of using a formula-based coding approach was that the source data remained intact and spurious results associated with “find and replace” methods could be avoided. For instance, the wrong sequence of application of the ‘find and replace’ function might give incorrect results when replacing “agree” with the number 2 in the “strongly agree to strongly disagree” scale.

Three questions were reverse coded, as the wording of the question was negative. Details about the coding of questions are contained in Appendix 1 - Questions and Code book.

4.7.2 Missing values

There were 31 missing values in the dataset from a total of 11 460 data points, representing 0.27%. This small amount would not significantly affect the results of the study. The average per age group was calculated for each question to fill in the missing values. The missing data entries were replaced with the average answer for that particular age group.

4.7.3 Validity

The validity of the questions as a measurement instrument per construct was determined. The question total for each participant was calculated per construct, and a Pearson’s correlation coefficient was calculated for each of the questions measuring that construct. All calculations were performed in SPSS v 29.0.0.0 software. The validity of all questions and the constructs they were designed to measure were established at a 95% confidence level. Appendix 2 - Question validity details the results.

4.7.4 Reliability

Cronbach's alpha was calculated to determine the internal consistency of the questions related to the constructs. Results for Cronbach's alpha coefficients can be between 0 and 1. Higher values indicate higher reliability. An acceptance value of 0.5 was set as the absolute low limit for acceptance, based on various positions taken. Depending on the stage of the study, risk tolerance and costs involved, Cronbach's alpha results as low as 0.4 were cited as acceptable in limited circumstances. A Cronbach's alpha of 0.7, or close to it, was considered acceptable (O'Leary-Kelly & Vokurka, 1998).

The survey included three questions that required reverse coding. The questions measured the constructs "learning goal orientation" and "consideration of future consequences". These two constructs were the only two, where the initial Cronbach's alpha result was not acceptable. The results were 0.432 and 0.179, respectively. Selected questions were removed, and the final Cronbach's alpha for the constructs were 0.609 for "consideration of future consequences" and 0.582 for "learning goal orientation". Concerning the acceptance criteria, the final Cronbach's alpha for the two constructs were considered acceptable and included in the research results.

The validity of the remaining questions was recalculated, and the results are contained in Appendix 2 - Question validity. After removing three selected constructs, the reliability of the measurement of all the constructs was established. For the two constructs, only two questions remained as part of the analysis. The small number of questions may negatively affect the strength of findings that rely on them.

Table 4-1 Cronbach's alpha results

	Construct	Cronbach's alpha	Notes
B	Issue Selling Willingness	0.885	
C	Issue Selling Credibility	0.883	
D	Strategic Scanning	0.760	
E	Career Initiative	0.872	
F	Problem Prevention	0.697	
G	Feedback Monitoring	0.812	
H	Individual Innovation	0.745	
I	Voice	0.716	
J	Job Change Negotiation	0.776	
K	Taking Charge	0.869	
L	Feedback Inquiry	0.816	
M	Proactive Personality	0.714	
N	Consideration for Future Consequences	0.179	Contains negatively stated questions
N1	<i>Removed the "My convenience" question</i>	0.426	Removed the reverse coding question
N2	<i>Removed the importance to take warnings about negative outcomes seriously</i>	0.582	Only two questions left
O	Learning Goal Orientation and Performance Goal Orientation	0.432	Contains negatively stated questions
O1	<i>Removed "When I fail to complete a task Question"</i>	0.490	
O2	<i>Removed the opportunity to do challenging work question</i>	0.609	Only two reverse coded questions left
P	Role Breadth Self-Efficacy (How confident do you feel ...?)	0.800	
Q	Felt Responsibility for Change (How frequently do you ...?)	0.906	
R	Initiative in your Organisation	0.780	Contains questions not sourced directly from literature

4.7.5 Factor analysis

Each of the constructs were measured by three to four items. To reduce each construct to a single variable factor analysis was conducted on the remaining questions for each of the constructs. The validity of using the average of the questions per construct was determined by calculating the Kaiser-Meyer-Okin measure of sampling adequacy. The calculations were done in SPSS. The analysis confirmed that the average of the questions used for each construct could be used in further analysis. It was determined that the average response per participant could be used for all the constructs.

A correlation matrix for each construct was calculated in SPSS. A correlation value of 0.3 was set as acceptable for the inclusion of a question in the factor. For all but one question, a correlation of higher than 0.3 was calculated. "Nothing is more exciting than seeing my ideas turn into reality" returned a correlation coefficient of 0.28. Participants overwhelmingly indicated that they strongly agreed with this statement. The average for the question was 4.6, with a standard deviation of 0.65. Application of the "Eigen value 1" rule revealed that no further division of the constructs into components was required.

To test hypothesis 6, a factor analysis was performed on the questions: "In the past year have you been invited or instructed by your organisation's leadership to consider the long-term impact of your actions or the actions of others", "To what extent have you been made aware of the full extent of the responsibility and authority of your role", "To what extent is the mastery of new skills valued in your organisation", "How often has the positive outcome of one of your colleagues' proactive behaviour been celebrated in your organisation" and "In the past year, how frequently have you been asked by your leaders to act proactively or to take initiative". The items loaded onto a single factor that was called "Organisational Initiative Factor" (see Appendix 3 - Factor Analysis).

4.8 Hypothesis testing

4.8.1 Correlation

Correlation and multiple regression are tools that can be used to analyse multiple potential contributions of independent variable (Licht, 1995). They are especially useful when experimental control is not available or possible. To determine whether there is a relationship between the dependent variables and the predictive variables, correlations were calculated. A confidence interval of 90% was set to determine the significance of correlations. Pearson's correlations were calculated in SPSS and reported in table format in the results (Table 5-2) chapter. Significance was indicated in the table with asterisks and clearly detailed as part of the table.

4.8.2 Multiple regression

Multilinear regression is used to understand the impact of more than one independent variable on a dependent variable (Uyanık & Güler, 2013). Multilinear regression modelling was conducted to determine the strength of the influence of predictor variables on the dependent variable, proactive behaviour. The questions relating to leader behaviours loaded onto a single variable that was called "Organisational Factors". To support the results of hypothesis testing through correlation analysis multiple regression was also performed on the individual items that were loaded to the "Organisational Factors" variable.

Control variables were used to isolate the impact of the predicting variables. Linear regressions were performed and predicting variables added, until the additional variables no longer increased the predictive ability of the model significantly. To determine whether additional variables significantly increased the predictive capability of the models, the R^2 value of subsequent models were compared. In using this approach, the simplest model that has significantly more predictive power than the previous model was used (Ghani & Ahmad, 2010).

5. Results

The results are presented by first elaborating on the data in terms of the demographics of the 190 individuals who responded to the survey. Then descriptive statistics are briefly discussed. The results of the correlation analysis per hypothesis are discussed and it is demonstrated that the null hypothesis is rejected, and that support is found for the remaining hypotheses.

To understand the magnitude of the impact that the hypothesised leader behaviour could have on employees' proactive behaviour, the results from the multiple regression analysis are presented, first for the organisational factors variable and then for each of the items that make up the organisational factors variable.

5.1 Data

5.1.1 Demographic data

There were 190 participants to the survey. The participants were generally well-educated and in their mid-careers. Most participants indicated they had a degree (Figure 5-1). Seventy-seven per cent of participants have at least ten years of work experience (Figure 5-2). The median age bracket of participants is 36 to 44 years, representing 38% of participants. The remaining participants are evenly divided between older and younger than this bracket. Seventy-four per cent of participants are male.

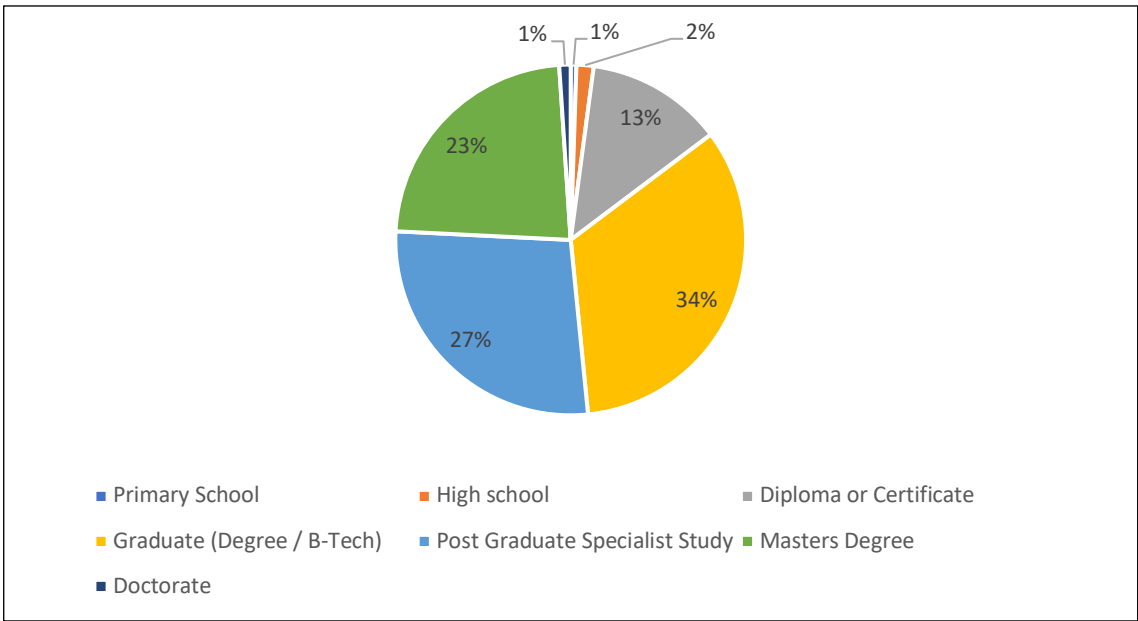


Figure 5-1 Participants' education

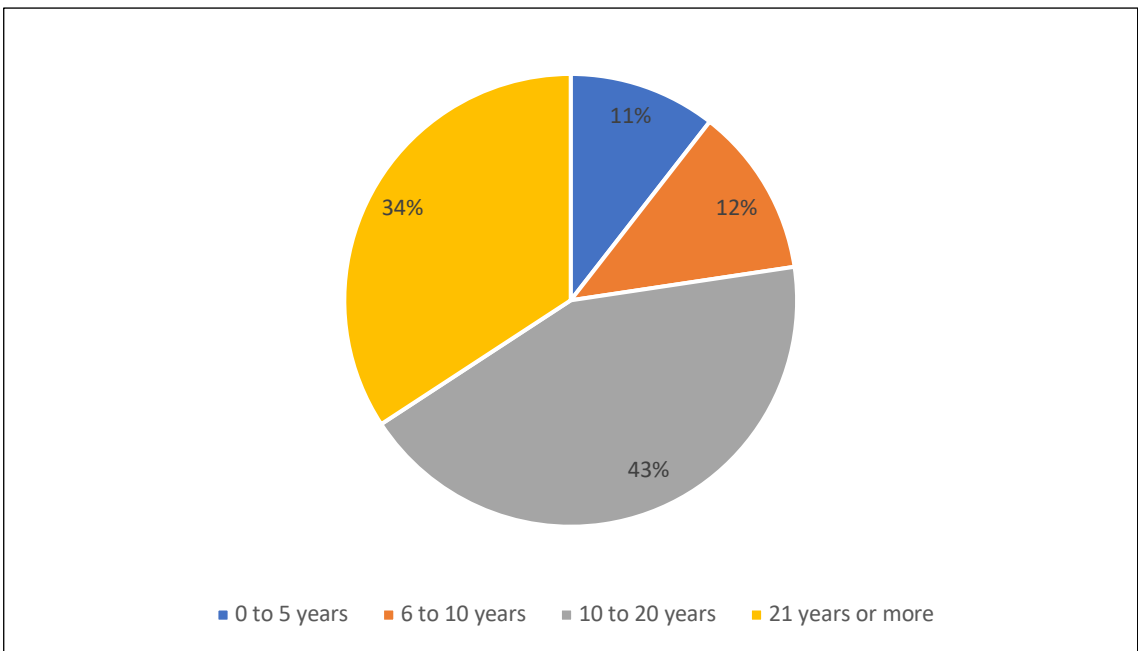


Figure 5-2 Participants' career experience

5.1.2 Descriptive statistics

Questions in the measurement instrument were coded so that higher values (maximum 5) are associated with positive statements. After factor analysis was done, the means for each variable were calculated. To a large extent, all constructs were measured to be very positive. The highest measured variable is “My role requires me to be proactive at work”. Of the 190 participants, 134 respond: “strongly agree.” The strong agreement with the statement indicates the importance the participants place on proactive behaviour.

The construct “learning goal orientation” measures the lowest, and reliability and validity analysis removed a question from the questionnaire. The remaining questions are negatively stated and recoded accordingly. Participants possibly fail to read the question correctly, resulting in skewed data. It is an outlier that in a survey that returned overwhelmingly positive answers, this construct, which is not dissimilar from the others, measures close to neutral.

Items that measure lower tend to have higher standard deviations than items that measure higher, for instance, “learning goal orientation” with a mean of 2.57 and a standard deviation of 0.91. In comparison, for “role breadth self-efficacy”, the mean is 4.43 and the standard deviation is 0.52.

The averages for the practices and the factor that combines the practices, averages are between 2.91 and 3.83. The averages could be interpreted to mean that the practices are not uncommon in the organisations where the participants work.

Table 5-1 Factor and item means and standard deviations

Items and factors	Mean N = 190	Std. Deviation
Issue Selling Willingness	4,26	0,71
Issue Selling Credibility	3,93	0,74
Strategic Scanning	3,98	0,66
Career Initiative	3,96	0,88
Problem Prevention	4,09	0,61
Feedback Monitoring	3,55	0,86
Individual Motivation	3,97	0,63
Individual Innovation	3,97	0,63
Voice	3,88	0,58
Job Change Negotiation	3,06	0,93
Taking Charge	4,01	0,73
Feedback Inquiry	2,98	0,91
Proactive Personality	4,09	0,67
Consideration of Future Consequences	3,93	0,66
LGO_Fact	2,57	0,91
Role Breadth Self-Efficacy	4,43	0,52
Felt Responsibility for Change	4,01	0,74
Init_org_Fact	3,53	0,78
Nothing is more exciting than seeing my ideas turn into reality	4,60	0,65
My role at work requires me to be proactive	4,65	0,63
Asked to consider long-term impacts	2,91	1,17
Made aware of responsibility and authority of role	3,83	1,06
Mastery of new skills valued	3,83	1,09
Proactive behaviour celebrated	3,41	1,12
Asked to act proactively	3,27	1,21

5.2 Results

5.2.1 Hypothesis testing

5.2.1.1 Null hypothesis

Null hypothesis – Management and leadership practices are not associated with increasing proactive behaviour.

Table 5-2 shows the results of Pearson's correlation calculations performed in SPSS. The coloured cells refer to correlations with the items measuring the actions in the hypotheses and proactive personality. The strength of correlations are similar to what has been reported by others (Parker et al., 2006; Parker & Collins, 2010).

For the null hypothesis to be true, no evidence of statistically significant correlation must be evident in the dataset. Table 5-2 details the correlations between the constructs and the questions designed to measure the hypothesis. A statistically significant positive correlation is demonstrated between several management and leadership practices and the constructs associated with proactive work behaviour.

The management or leadership action of celebrating proactive behaviour has a positive, statistically significant correlation with 11 of the 17 elements of proactive behaviour. Similarly, items one, two and five are also statistically significantly positively correlated with several elements of proactive work behaviour.

Item 24, "organisational factors", was derived from factor analysis of the five questions designed to measure separate management practices hypothesised to be associated with increased proactive work behaviour. The item is statistically significant positively correlated with 13 of the 17 elements of proactive work behaviour.

Thus, the null hypothesis must be rejected. Several management or leadership practices and a combination of those practices are statistically significantly positively correlated with a several of proactive work behaviours.

Table 5-2 Correlations

		1	2	3	4	5	6	7	8	9	10	11	12
1	Instructed to consider long-term consequences	--											
2	Made aware of full extent of role resp. and authority	0.37**	--										
3	Extent of new skills valued	0.27**	0.41**	--									
4	Proactive behaviour celebrated	0.31**	0.27**	0.62**	--								
5	Asked to act proactively	0.37**	0.39**	0.34**	0.33**	--							
6	My role at work requires me to be proactive	0.08	0.14	0.22**	0.18*	0.14	--						
7	Issue selling willingness	0.07	0.19**	0.25**	0.22**	0.11	0.12	--					
8	Issue selling credibility	0.19**	0.14	0.06	0.15*	0.02	0.14*	0.41**	--				
9	Strategic scanning	0.06	0.15*	0.03	0.08	0.08	0.23**	0.26**	0.42**	--			
10	Career initiative	0.14	0.03	-0.04	0.11	0.09	0.06	0.08	0.14	0.25**	--		
11	Problem prevention	0.20**	0.15*	0.07	0.14*	0.13	0.26**	0.17*	0.43**	0.42**	0.24**	--	
12	Feedback monitoring	0.26**	0.21**	0.07	0.08	0.30**	0.09	0.08	0.12	0.21**	0.27**	0.17*	--
13	Individual motivation	0.12	0.18**	0.15*	0.21**	0.15*	0.29**	0.11	0.30**	0.45**	0.09	0.44**	0.12
14	Individual innovation	0.12	0.18**	0.15*	0.21**	0.15*	0.29**	0.11	0.30**	0.45**	0.09	0.44**	0.12
15	Voice	0.24**	0.23**	0.21**	0.20**	0.24**	0.27**	0.42**	0.45**	0.46**	0.16*	0.48**	0.20**
16	Job change negotiation	0.14	0.12	-0.05	0	0.14*	0.04	0.07	0.19**	0.23**	0.30**	0.07	0.28**
17	Taking charge	0.17*	0.15*	0.22**	0.24**	0.24**	0.29**	0.34**	0.25**	0.35**	0.1	0.49**	0.16*
18	Feedback inquiry	0.15*	0.06	0.02	0.02	0.27**	0.04	0.08	0.06	0.07	0.39**	0.06	0.38**

		1	2	3	4	5	6	7	8	9	10	11	12
19	Proactive personality	0.12	0.14*	0.1	0.18**	0.15*	0.30**	0.20**	0.38**	0.39**	0.23**	0.38**	0.23**
20	Consideration of future consequences	0.08	0.14	0.11	0.04	0.16*	0.23**	0.05	0.08	0.20**	0.12	0.13	0.16*
21	Learning goal orientation	-0.03	0	0.07	0.22**	-0.04	0.13	0.09	0.03	0	0.12	0.11	0.03
22	Role breadth self-efficacy	0.20**	0.21**	0.18**	0.27**	0.18*	0.38**	0.20**	0.38**	0.40**	0.20**	0.48**	0.15*
23	Felt responsibility for change	0.15*	0.16*	0.26**	0.26**	0.20**	0.32**	0.37**	0.41**	0.37**	0.08	0.52**	0.06
24	Organisational factors	0.64**	0.66**	0.78**	0.72**	0.66**	0.23**	0.25**	0.17*	0.11	0.08	0.19**	0.23**

Table 5-2a Correlation continued

		13	14	15	16	17	18	19	20	21	22	23
13	Individual motivation	--										
14	Individual innovation	01.00*	--									
15	Voice	0.41**	0.41**	--								
16	Job change negotiation	0.20**	0.20**	0.28**	--							
17	Taking charge	0.42**	0.42**	0.54**	0.07	--						
18	Feedback inquiry	0.07	0.07	0.18*	0.37**	0.18**	--					
19	Proactive personality	0.39**	0.39**	0.36**	0.18**	0.43**	0.05	--				
20	Consideration of future consequences	0.24**	0.24**	0.18*	0.12	0.14	-0.01	0.22**	--			
21	Learning goal orientation	0.15*	0.15*	0.05	0.01	0.18*	0	0.09	-0.01	--		
22	Role based self-efficacy	0.44**	0.44**	0.41**	0.12	0.47**	0.05	0.50**	0.35**	0.09	--	
23	Felt responsibility for change	0.42**	0.42**	0.53**	0.07	0.66**	0.13	0.43**	0.21**	0.11	0.60**	--
24	Organisational factors	0.23**	0.23**	0.31**	0.08	0.31**	0.15*	0.20**	0.17*	0.07	0.28**	0.30**
	** Correlation is significant at the 0.01 level (2-tailed)	N = 190										
	* Correlation is significant at the 0.05 level (2-tailed)											

5.2.1.2 Hypothesis 5

Asking employees to act proactively is effective in increasing proactive work behaviour.

There is a statistically significant positive correlation between reported proactive work behaviour and participants indicating that they have been asked by their leader to act proactively. Similar to other practices, the correlations are weak but statistically significant. Significant positive correlations are observed for feedback monitoring, individual motivation, individual innovation, employee voice, job change negotiation, taking charge, feedback inquiry, consideration of future consequences, role-based self-efficacy and felt responsibility for change. Correlations are weak, ranging between 0.15 and 0.30.

5.2.1.3 Hypothesis 1

Invitation and facilitation to anticipate long-term future consequences are effective in increasing proactive work behaviour

The data in Table 5-2 shows a statistically significant positive correlation of the elements of proactive work behaviour with positive sentiments towards the statement, "In the past year, have you been invited or instructed by your organisation's leadership to consider the long-term impact of your actions or the actions of others?" The correlation coefficients are generally low, ranging between 0.15 and 0.26. This factor has a positive, statistically significant correlation with 8 of the 17 elements. Despite the relatively low correlation coefficients, the hypothesis must be accepted. Inviting employees to and facilitating them with considering long-term consequences has a small but significant positive effect on increasing proactive work behaviour.

5.2.1.4 Hypothesis 2

Reminders to an employee about the extent of their role's responsibility and authority is effective in increasing proactive work behaviour.

Positive sentiments from participants to the question "To what extent have you been made aware of the full extent of the responsibility and authority of your role?" are positively correlated to several elements of proactive work behaviour. Correlation coefficients are relatively low, however, ranging from 0.15 to 0.23. Nonetheless, there is a statistically significant correlation between several elements of proactive

work behaviour and item two. As such, the hypothesis must be accepted. Reminding employees of the full extent of their work responsibilities and authorities can be expected to lead to a small but significant increase in some aspects of proactive work behaviour.

Item two is the only hypothesised practice that has a statistically significant relationship with strategic scanning. The relationship is weak with $R=0.15$ only. Thus, the proposed practices are not likely to greatly affect strategic scanning behaviour in employees. However, leaders who wish to increase this behaviour could consider spending time with their employees to ensure that they are familiar with the full extent of their authority and responsibilities.

5.2.1.5 Hypothesis 3

Proclamation of the supervisor about the extent to which the organisation values the mastery of new tasks is effective in increasing proactive work behaviour

Demonstrating to team members or otherwise motivating and causing them to believe that new skills are valued by the organisation is statistically significant and positively correlated with certain proactive work behaviour. The leadership practice is significantly correlated with issue selling willingness, individual motivation, employee voice, taking charge, role-based self-efficacy and felt responsibility for change. However, correlations are generally weak and range between 0.15 and 0.26 for statistically significant correlations. Nonetheless, the hypothesis must be accepted.

5.2.1.6 Hypothesis 4

Demonstrating the positive outcome to individuals who engage in proactive work behaviour is effective in increasing proactive work behaviour.

There is a statically significant correlation between certain proactive behaviours and celebrating proactive behaviour. The practice has statistically significant positive correlations with issue selling willingness, problem prevention, individual motivation, individual innovation, employee voice, taking charge, learning goal orientation, role-based self-efficacy and felt responsibility for change. As for the preceding hypothesis and practices, the correlations are weak, ranging between 0.14 and 0.27 for statistically significant correlations. The hypothesis must be accepted.

5.3 Multiple regression analysis

To understand how much antecedents and leadership actions contribute to predicting proactive behaviour at work, a regression analysis was performed. Certain predictors of proactive behaviour are independent of leadership action, for instance, proactive personality. Table 5-2 documents positive correlation between proactive personality and all the areas of proactive behaviour. Thus, there is a need to control for proactive personality to isolate the impact of the leadership behaviours.

Independent items with a positive significant correlation were included in the regression analysis. Calculations were performed in SPSS. The assumptions for multiple linear regression was assumed to hold, namely that the prediction errors are independent over cases; prediction errors follow a normal distribution; the prediction errors have constant variance; and that all relations between variables are linear.

The histograms of the items were inspected and found satisfactory. Correlations as per Table 5-2 make sense and data scatter plots reveal a measure of linearity. Models were determined for all aspects of proactive behaviour, the instrument measured. All the models were controlled for age, education and years of work experience, and where those aspects significantly contributed to predicting the dependent variable, they were included in the model.

To better understand the impact of the hypothesised leader actions on proactive employees' behaviour, two sets of evaluations were run, the first set with the demographic control variable (age, experience, gender, and qualification), the proactive personality variable, and the "initiative in your organisation" factor. The second set of regression was completed with the individual items that make up the "initiative in your organisation" factor to understand if there are items that have a stronger impact than others.

Regression models were fitted by adding one predictor at a time, using SPSS. Additional predictors were added, until no further significant improvement in model R-square was achieved. Model constants and Beta coefficients are reported in Table 5-3.

As predicted by the correlation table, proactive personality is a significant predictor of all proactive behaviour for all aspects of proactive behaviour, except for issue selling willingness, feedback inquiry, and learning goal orientation. For the latter, no significantly predictive linear model could be produced from this data set.

Table 5-3 Regression fitting results

Dependent Variable	R²	Equation Terms	Unstandardised Beta Coefficients	Standardised Beta Coefficients	Sig.
Issue selling willingness	0.163	Constant	2.508		<0.001
		Felt responsibility for change	0.32	0.332	<0.001
		Init_org_fact	0.134	0.149	0.036
Strategic scanning	0.159	Constant	2.373		<0.001
		Proactive personality	0.393	0.399	<0.001
Career initiative	0.097	Constant	3.021		<0.001
		Proactive personality	0.347	0.262	<0.001
		Age	-0.152	-0.208	0.003
Problem prevention	0.186	Constant	2.753		<0.001
		Proactive personality	0.337	0.367	<0.001
		Highest Qualification	-0.094	-0.167	0.13
		Init_org_fact	0.11	0.14	0.041
Feedback monitoring	0.108	Constant	2.117		<0.001
		Init_org_fact	0.203	0.185	0.009
		Proactive personality	0.28	0.217	0.003
		Age	-0.133	-0.187	0.008
Individual innovation	0.189	Constant	2.424		<0.001
		Proactive personality	0.343	0.372	<0.001
		Init_org_fact	0.144	0.178	0.009

Dependent Variable	R²	Equation Terms	Unstandardised Beta Coefficients	Standardised Beta Coefficients	Sig.
		Highest Qualification	-0.083	-0.145	0.3
Voice	0.181	Constant	2.131		<0.001
		Proactive personality	0.272	0.313	<0.001
		Init_org_fact	0.18	0.244	<0.001
Job change negotiation	0.031	Constant	1.988		<0.001
		Proactive personality	0.263	0.189	0.009
Taking charge	0.231	Constant	1.534		<0.001
		Proactive personality	0.417	0.382	<0.001
		Init_org_fact	0.218	0.235	<0.001
Feedback inquiry	0.08	Constant	2.99		<0.001
		Age	-0.195	-0.258	<0.001
		Init_org_fact	0.172	0.136	0.035
Consideration for future consequences	0.052	Constant	3		<0.001
		Proactive personality	0.227	0.228	0.002
Learning goal orientation	No significantly predictive variables				
Role breadth self-efficacy	0.285	Constant	2.493		<0.001
		Proactive personality	0.366	0.47	<0.001
		Init_org_fact	0.125	0.188	0.003
Felt responsibility for change	0.229	Constant	1.508		<0.001
		Proactive personality	0.428	0.388	<0.001
		Init_org_fact	0.211	0.225	<0.001

To determine the extent to which the individual questions or items that make up the organisational initiative factor contribute to the prediction of proactive behaviour, regression analysis was performed. Regression models were fitted by adding one predictor at a time, using SPSS. Additional predictors were added, until no further significant improvement in model R-square was achieved. Model constants and Beta coefficients are reported in Table 5-4.

Table 5-4 Regression fitting results for items of “Initiative Org Factors”

Dependent Variable	R²	Equation Terms	Unstandardised Beta Coefficients	Standardised Beta Coefficients	Sig.
Issue selling willingness	0.097	Constant	2.895		<0.001
		Mastery of new skills valued	0.154	0.237	<0.001
		Proactive personality	0.19	0.179	0.011
Strategic scanning		No individual item contributed significantly to predicting this variable			
Career initiative		No individual item contributed significantly to predicting this variable			
Problem prevention	0.185	Constant	2.831		<0.001
		Proactive personality	0.345	0.363	<0.001
		Invited to consider future consequences	0.085	0.162	0.009
		Highest qualification	-0.092	-0.164	0.014
Feedback monitoring	0.16	Constant	2.065		<0.001
		Instructed to be proactive or take initiative	0.14	0.196	0.008
		Proactive personality	0.263	0.204	0.003
		Age	-0.126	-0.177	0.009

Dependent Variable	R ²	Equation Terms	Unstandardised Beta Coefficients	Standardised Beta Coefficients	Sig.
		Invited to consider future consequences	0.122	0.166	0.023
Individual innovation	0.185	Constant	2.579		<0.001
		Proactive personality	0.356	0.378	<0.001
		Proactive celebrated	0.092	0.164	0.016
		Highest qualification	-0.081	-0.142	0.035
Voice	0.173	Constant	2.377		<0.001
		Proactive celebrated	0.296	0.341	<0.001
		Instructed to be proactive or take initiative	0.101	0.203	0.003
Job change negotiation	No individual item contributed significantly to predicting this variable				
Taking charge	0.22	Constant	1.698		<0.001
		Proactive celebrated	0.45	0.413	<0.001
		Mastery of new skills valued	0.123	0.185	0.005
Feedback inquiry	0.127	Constant			<0.001
		Instructed to be proactive or take initiative	0.199	0.263	<0.001
		Age	-0.185	-0.245	<0.001
Consideration for future consequences	No individual item contributed significantly to predicting this variable				
Learning goal orientation	0.045	Constant	1.948		<0.001
		Proactive celebrated	0.182	0.223	0.002

Dependent Variable	R²	Equation Terms	Unstandardised Beta Coefficients	Standardised Beta Coefficients	Sig.
Role breadth self-efficacy	0.285	Constant	2.623		<0.001
		Proactive personality	0.369	0.474	<0.001
		Proactive celebrated	0.087	0.187	0.003
Felt responsibility for change	0.229	Constant	1.573		<0.001
		Proactive personality	0.455	0.412	<0.001
		Mastery of new skills valued	0.149	0.221	<0.001

6. Discussion of results

6.1 Effectiveness of management and leadership practices in increasing proactive behaviour

Null hypothesis – Management and leadership practices are not associated with increasing proactive behaviour.

Significant positive correlations between management practices and leadership behaviours were demonstrated and evident in the data, and the null hypothesis was rejected. Instructions by management to consider the long-term consequences was significantly and positively correlated with problem prevention (0.20, $\rho < 0.01$), feedback monitoring (0.26, $\rho < 0.01$), voice (0.24, $\rho < 0.01$), taking charge (0.17, $\rho < 0.05$), feedback inquiry (0.15, $\rho < 0.05$), role-based self-efficacy (0.20, $\rho < 0.01$) and felt responsibility for change (0.15, $\rho < 0.05$). The leadership behaviour of celebrating proactive behaviour was positively correlated with issue selling willingness (0.22, $\rho < 0.01$), problem prevention (0.14, $\rho < 0.05$), individual motivation and innovation (both 0.21, $\rho < 0.01$), voice (0.20, $\rho < 0.01$), taking charge (0.24, $\rho < 0.01$), learning goal orientation (0.22, $\rho < 0.01$), role-based self-efficacy (0.27, $\rho < 0.01$) and felt responsibility for change (0.26, $\rho < 0.01$). Similar correlations are highlighted in Table 5-2 between three more practices and behaviours.

Different management environments and leadership styles have been demonstrated to be positively associated with proactive behaviour (Bindl et al., 2012; Hu et al., 2018; Okolie et al., 2022; Parker et al., 2010; Parker & Cai, 2019; Steinmann et al., 2018; Warshawsky et al., 2012; Yu & Davis, 2016). Similarities and areas of overlap between leadership styles have been established and management systems consist of a series of practices. Therefore, it was expected that the null hypothesis would be rejected, because the behaviours that were tested were extracted from the areas of overlap of leadership styles. These had been demonstrated to be positively correlated with increased proactive work behaviour. Thus, practices that were extracted from broader management systems that had been demonstrated to be positively correlated with increased proactive work behaviour were also expected to be positively correlated with increased proactive work behaviour.

While previous research has focused mainly on broader leadership styles and management systems (Beltrán-Martín et al., 2017; El-Gazar et al., 2022; Hu et al., 2018; Sonnentag & Spychala, 2012; Steinmann et al., 2018), it was hypothesised that lower-level practices and behaviours that form part of the larger leadership style or management system could also, or perhaps uniquely, explain increased proactive work behaviour. By rejecting the null hypothesis, one must conclude that leadership behaviours and management practices, apart from the larger construct of leadership style and management system, are positively associated with increased proactive behaviour. Therefore the results shown in this study extends the body of knowledge in by demonstrating significant positive correlations between the actions and behaviours of leaders and proactive work behaviour. This is important because of the simple and concrete manner in which the proposed actions and behaviours can be implemented.

6.2 Asking for proactive behaviour

Hypothesis 1: Asking employees to act proactively is effective in increasing proactive work behaviour.

A statistically significant positive correlation was demonstrated by the data analysis between asking for proactive behaviour and several types of proactive work behaviour. There was a positive correlation between being asked to act proactively and several proactive behaviours, including feedback monitoring (0.30, $\rho < 0.01$), voice (0.24, $\rho < 0.01$), job change negotiation (0.15, $\rho < 0.05$), taking charge (0.24, $\rho < 0.01$), feedback inquiry (0.27, $\rho < 0.01$), consideration for future consequences (0.16, $\rho < 0.05$), role-based self-efficacy (0.18, $\rho < 0.05$), and felt responsibility for change (0.20, $\rho < 0.01$).

Multiple regression analyses isolated the strength of the relationship between the proactive behaviour and the independent variables. Asking for proactive behaviour was a significant contributor to several proactive behaviours, namely; feedback monitoring ($\beta = 0.196$, $\rho = 0.008$), voice ($\beta = 0.203$, $\rho = 0.003$) and feedback inquiry ($\beta = 0.263$, $\rho < 0.001$).

No reference to asking for proactive behaviour was found in the literature review for this study. Consequently this simple result progresses the knowledge in the field. The results and finding to accept Hypothesis 1 is consistent with the literature that shows reduced work uncertainty leads to increased proactive work behaviour (Bilal et al., 2021). Thus, extending the concept to ensuring that it is certain that proactive behaviour is required from an employee is expected to be associated with increased proactive behaviour.

Therefore, the simple act of asking employees for proactive behaviour can be effective in facilitating the desired behaviour. A good starting point for leaders who want proactive behaviour from their team is to ask them for it.

6.3 Invitation and facilitation to anticipate future consequences

Hypothesis 2: Invitation and facilitation to anticipate long-term future consequences is associated with increasing proactive work behaviour.

Positive and significant correlation to the question “In the past year, have you been invited or instructed by your organisation’s leadership to consider the long-term impact of your actions or the actions of others?” with certain aspects of proactive behaviour was present in the responses to the survey. The item correlated positively and significantly with problem prevention (0.20, $\rho < 0.01$), feedback monitoring (0.26, $\rho < 0.01$), voice (0.24, $\rho < 0.01$), taking charge (0.17, $\rho < 0.05$), feedback inquiry (0.15, $\rho < 0.05$), role-based self-efficacy (0.20, $\rho < 0.01$) and felt responsibility for change (0.15, $\rho < 0.05$). However, there was no significant correlation between the item and the consideration of future consequences factor measured by three questions; thus, the instruction from management had no impact on the direct expected consequence.

The item contributed significantly to predicting the proactive behaviours of problem prevention ($\beta = 0.162$, $\rho = 0.009$) and feedback monitoring ($\beta = 0.166$, $\rho = 0.023$). Thus, the invitation to consider future consequences or facilitation of the problem prevention contributed to significantly predicting fewer proactive behaviours than just asking for proactive behaviour. This may be so because there is an additional cognitive step required between seeing and understanding a potential future consequence and deciding to take action to either enable, support or prevent it.

Significant positive correlation to many proactive work behaviours supports the findings reported by Parker and Collins (2010) that the consideration of future consequences is predictive of proactive behaviour; strategic scanning (0.20, $\rho < 0.01$) and voice (0.18, $\rho < 0.01$), for instance. The proposed hypothesis that activating or causing the behaviour to occur within the individual surprisingly yields no correlation with the individual's behaviour. However, the expected increase in proactive behaviour is supported through both the regression analysis as well as the significant positive correlation with several proactive behaviours.

Despite the lack of measured increase in the expected antecedent leadership efforts to activate employees' proactive behaviour, it appears to be effective in increasing proactive behaviour. The expected mechanism was however not found. It could be that participants isolated what they decided to do themselves in their responses. In other words, potentially they only reported on considering future consequences that they initiated themselves, without the influence or motivation to do so by the leadership. This may explain why there is no correlation between the leadership practice and the individuals' self-report. Nonetheless, it is a good idea for leaders and managers to facilitate the consideration of future consequences with their teams, or, at least, invite them to do so.

6.4 Role authority and responsibility clarity

Hypothesis 3: Reminders to an employee about the extent of their role's responsibility and authority is associated with increasing proactive work behaviour.

Self-reported data regarding the extent to which participants were reminded about the full extent of their role's authority and responsibilities were found to be positively and significantly correlated to proactive work behaviours. The item showed significant correlation with issue selling willingness (0.19, $\rho < 0.01$), strategic scanning (0.15, $\rho < 0.05$), feedback monitoring (0.21, $\rho < 0.01$), individual motivation (0.18, $\rho < 0.01$), individual innovation (0.18, $\rho < 0.01$), voice (0.23, $\rho < 0.01$), taking charge (0.15, $\rho < 0.05$), role-based self-efficacy (0.21, $\rho < 0.01$) and felt responsibility for change (0.16, $\rho < 0.05$).

Reminders to the employees of the full extent of their role responsibility was positively and significantly correlated with increased role breadth self-efficacy (0.21, $\rho < 0.01$). It can then be concluded that the practice could be effective in increasing role breadth self-efficacy. As predicted by the literature, role breadth self-efficacy is significantly and positively correlated with several proactive behaviours (Table 5-2).

Multiple regression analyses analysed the strength of the relationship between the proactive behaviour and the independent variables. Reminding employees about the extent of their role's responsibilities and authority was not shown to be significantly predictive of any of the proactive behaviours measured in the survey.

According to some scholars, role breadth self-efficacy is an antecedent to proactive work behaviour (Parker, 1998). Therefore, practices that increase this perception among employees could be expected to increase their proactive behaviour. However, there are roles for which a significant amount of authority and decision-making is imbued that may dull over months of day-to-day rote activities that are also associated with the job. Reminding employees and discussing with them their role responsibilities is generally an aspect of celebrated leadership practices under the banner of empowerment or standard bearer. The positive association demonstrated confirms the guidance inferred from literature (Bottomley et al., 2014; Carless et al., 2000). Reminders to employees of the full authority and responsibility of their role is a practice that should be considered by all leaders, especially those who hope to boost the proactive behaviour of their team members.

6.5 Valuing the mastery of new skills

Hypothesis 4: Proclamation of the supervisor about the extent to which the organisation values the mastery of new tasks is effective and is associated with increasing proactive work behaviour.

Reviewing the response data revealed a statistically significant positive correlation between the management or leadership action of Hypothesis 4. Significant positive correlations were calculated for these proactive behaviours: Issue selling willingness (0.25, $\rho < 0.01$), individual motivation (0.15, $\rho < 0.05$), individual innovation (0.15, $\rho < 0.05$), voice (0.21, $\rho < 0.01$), taking charge (0.22, $\rho < 0.01$), role-based self-efficacy (0.18, $\rho < 0.05$) and felt responsibility for change (0.26, $\rho < 0.01$).

Multiple linear regression revealed that the actions of Hypothesis 4 contributed significantly to the prediction of the proactive behaviours, issue selling willingness ($\beta = 0.237, \rho < 0.001$), taking charge ($\beta = 0.185, \rho = 0.005$) and felt responsibility for ($\beta = 0.221, \rho < 0.001$). Therefore, valuing the mastery of new skills by an organisation can be expected to be predictive of and increase proactive work behaviour.

From the literature review, it was proposed that the practice would increase proactive work behaviour through an increased learning goal orientation (L. Wang & Parker, 2015). However, no significant correlation was found. To measure the construct learning goal orientation, the instrument contained negatively worded questions that were reverse coded. Reliability testing of the instrument questions dictated that two questions be removed. Only two questions remained to measure the construct, and as such, the results may not be reliable.

Making it known that the mastery of new skills is valued reduces the risk associated with trying to do attempt such new skills' mastery. Proactive behaviour can have unknown consequences and reducing the perceived potential outcomes of going beyond one's comfort zone may thus increase proactive behaviour. This research confirms the hypothesis extracted from the literature and extends it by proposing a concrete action to implement it at work (L. Wang & Parker, 2015). One way of encouraging team members to go beyond their comfort zone is by encouraging the mastery of new skills. The practice was associated with increased proactive behaviour, as well as significantly predictive of proactive behaviour. Therefore, valuing the mastery of new skills in an organisation is a practice that leaders can consider employing to increase proactive behaviour in their organisations.

6.6 Celebrating the positive outcomes

Hypothesis 5: Celebrating the positive outcome to individuals who engage in proactive work behaviour is associated with increasing proactive work behaviour.

The analysis provided a statistically significant positive correlation between the practice of Hypothesis 5 and several proactive behaviours. The item correlated significantly with issue selling willingness (0.22, $\rho < 0.01$), problem prevention (0.14, $\rho < 0.05$), individual motivation (0.21, $\rho < 0.01$), individually innovation (0.21, $\rho < 0.01$), voice (0.20, $\rho < 0.01$), taking charge (0.24, $\rho < 0.01$), learning goal orientation

(0.22, $\rho < 0.01$), role-based self-efficacy (0.27, $\rho < 0.01$), felt responsibility for change (0.26, $\rho < 0.01$).

Multiple regression analysis showed that celebrating the positive outcomes of proactive behaviour was significantly predictive of proactive behaviours. It was found to contribute significantly to the prediction of individual motivation (0.164, 0.016) ($\beta = 0.164$, $\rho = 0.016$), voice ($\beta = 0.341$, $\rho < 0.001$), taking charge ($\beta = 0.413$, $\rho < 0.001$), learning goal orientation (0.223, 0.002) and role breadth self-efficacy ($\beta = 0.187$, $\rho = 0.003$).

Similar to the findings for hypothesis 4 (the mastery of new skills is encouraged), the practice of celebrating positive outcomes of proactive behaviour was about managing the risk versus reward equation of the behaviour. The practice of encouraging the mastery of new skills can be thought of as reducing the size of the stick. On the other hand, celebrating the positive outcomes of proactive behaviour can be thought of as increasing the size of the carrot. Therefore, similar to Hypothesis 4, the practice of encouraging the mastery of new tasks and the celebration of positive outcomes should increase proactive behaviour through increased role breadth self-efficacy.

The practice was derived from the work of Hong et al. (2016) relating to the influence of HR systems on proactive behaviour. Policies about what and how something is celebrated has traditionally been maintained by many organisations. Thus, this should ideally also include the celebration of proactive behaviour in those “celebration policies”. However, the celebration envisaged when developing the question was more informal than the prescribed formal policy type; it should be rather ad hoc and intimate. In conclusion, if there is a behaviour that a leader or an organisation want, then they have to draw attention to it, such as to proactive behaviour in this case, and it needs to be celebrated when it is applied. As hypothesised that practice is associated with an increased role-based self-efficacy and proactive behaviour, it should be pursued by leaders and managers who value the behaviour in their teams.

6.7 Combination of practices

Hypothesis 6: Some combination of the above practices is more predictive than a single practice of increasing proactive work behaviour.

Factor analysis established that the five questions loaded on the same factor. In evaluating the correlations with the factor that was called “Organisational Factors”, statistically significant positive correlations were calculated with 11 out of the 15 proactive behaviours that were measured. However, statistically significant correlation was not found with strategic scanning, career initiative, job change negotiation, and learning goal orientation. Two individual practices had significant positive correlation with the 11 proactive behaviours as well, making team members aware of the full extent of their role, and asking them to act proactively. However, the average of the correlation coefficients for the correlations was highest for the combined factor (0.238) compared to asking for proactive behaviour (0.198) and reminding employees of the full extent of their role’s responsibility and authority (0.178). Detailed comparison of the correlation factors is presented in Table 5-2.

Multiple regression analysis with the variable consisting of the average response per individual for the leadership and management actions and behaviours revealed that the combined organisational factors were significantly predictive of issue selling willingness ($\beta = 0.149$, $\rho = 0.036$), problem prevention ($\beta = 0.140$, $\rho = 0.041$), feedback monitoring (0.185,0.009) ($\beta = 0.185$, $\rho = 0.009$), individual motivation ($\beta = 0.178$, $\rho = 0.009$), voice ($\beta = 0.244$, $\rho < 0.001$), taking charge ($\beta = 0.235$, $\rho < 0.001$), feedback inquiry ($\beta = 0.136$, $\rho = 0.035$), role breadth self-efficacy ($\beta = 0.188$, $\rho = 0.003$) and felt responsibility for change ($\beta = 0.225$, $\rho < 0.001$). The multiple regression analysis also showed that there were proactive behaviours with no significantly predictive independent variables, referring to learning goal orientation. However, reliability testing of the items related to this construct revealed problematic results that were addressed by removing offending items. In addition, this was one of two constructs that were measured using reverse coded questions. Therefore, the results relating to learning goal orientation may be less reliable than those of the remaining constructs.

Leadership involves followers, goals, the organisation, harnessing the skills of individuals, and influencing their state of mind (Winston & Patterson, 2006). The practices in Hypotheses 1 to 5 work on different antecedents to proactive work behaviour and facets of what constitutes leadership. Hypothesis 1 is about whether a simple direct instruction has been given that proactive work behaviour is required or expected. Hypotheses 2 and 4 relate to activating or mimicking individual traits that are positively associated with proactive work behaviour. Hypothesis 3 relates to

organisational design and clear communication, while Hypothesis 5 relates to aspects of the HR management system.

Support was found for Hypotheses 1 to 5, which cover the areas of leadership expanded on by Winston and Patterson (2006) via several antecedents to proactive work behaviour. Therefore, the results from correlations and multiple regression analysis that support the hypothesis were not surprising. Individual practices were associated with fewer proactive behaviours, or if the same number of practices were included, then the correlations were on average less robust than for the combined variable.

Thus, a group of practices was more strongly associated with and predictive of increased proactive work behaviour. Leaders who wish to increase the proactive behaviour by their team members would be well-advised to consider applying a range of practices or behaviours they should implement to achieve the outcome they have in mind.

6.8 Proactive personality

Parker et al. (2006) stated that a proactive personality was the most significant individual influencing factor that affected proactive behaviour. As such, the measurement instrument included items to measure proactive personality and thereby isolate it as driver of proactive work behaviour. The results of this study corroborated the findings of previous work in demonstrating the strength of proactive behaviour as a predictor of proactive work behaviour.

Correlation calculations demonstrated significant positive correlation with all proactive behaviours measured, except for the feedback inquiry and the learning goal orientation. Correlations ranged from 0.20 to 0.50 and $\rho < 0.01$. Similarly, multiple regression showed a proactive personality to be predictive of almost all proactive behaviours (Table 5-3 and Table 5-4).

6.9 Summary of discussion

Significant positive correlations between proposed management practices and leadership behaviours were found. All proposed leadership actions and behaviours were significantly positively correlated with more than one proactive work behaviour. The practices of celebrating the outcomes of proactive behaviour and reminding employees of the full responsibility of authority of their role is positively and significantly correlated with role breadth self-efficacy which is positively and significantly correlated with increased proactive work behaviour, specifically but not uniquely problem prevention. This is consistent with expectations from the literature (Bottomley et al., 2014; Carless et al., 2000; Parker, 1998; L. Wang & Parker, 2015). No significant correlation between the proposed actions was found between the consideration of future consequences and learning goal orientation. However as expected from previous work, these two antecedents were significantly and positively correlated with proactive work behaviour (Parker & Collins, 2010; L. Wang & Parker, 2015). In addition, inviting and facilitating employees to anticipate future consequences and demonstrating that the organisation values the mastery of new tasks is directly significantly positively correlated with proactive work behaviour. Asking employees to act proactively is directly positively and significantly correlated to proactive work behaviour. It was expected that proactive work behaviour would be impacted through reduced work uncertainty (Bilal et al., 2021). The antecedent “work uncertainty” was not measured.

7. Conclusions and recommendations

7.1 Principal conclusions

Rejection of the Null Hypothesis and support for Hypotheses 1 to 5 showed that isolated practices could affect proactive work behaviour positively. Efforts to have an impact on or activate antecedents to proactive work behaviour are, therefore, worth pursuing. Although the anticipated increase in the expected antecedent was not consistently observed, the hypothesised practices were associated with increased proactive work behaviour. The practices that had been anticipated to be associated with the antecedents “consideration for future consequences” and “learning goal orientation” were not linked, however, they were significantly correlated with increased proactive work behaviour. Correlations from Table 5-2 are shown on the model of proactive work behaviour developed from the literature review (Figure 2-1). The strength of the relationships discussed in Chapter 5 is similar to what was demonstrated by previous authors (Parker et al., 2006; Parker & Collins, 2010). The practices hypothesised and supported in this study were by no means proposed to be complete or even optimal in increasing proactive work behaviour. However, the findings from this study demonstrated they were associated with increased proactive work behaviour. Therefore, managers and leaders who require proactive work behaviour from their teams and individual employees should consider some or all of the measured and discussed practices.

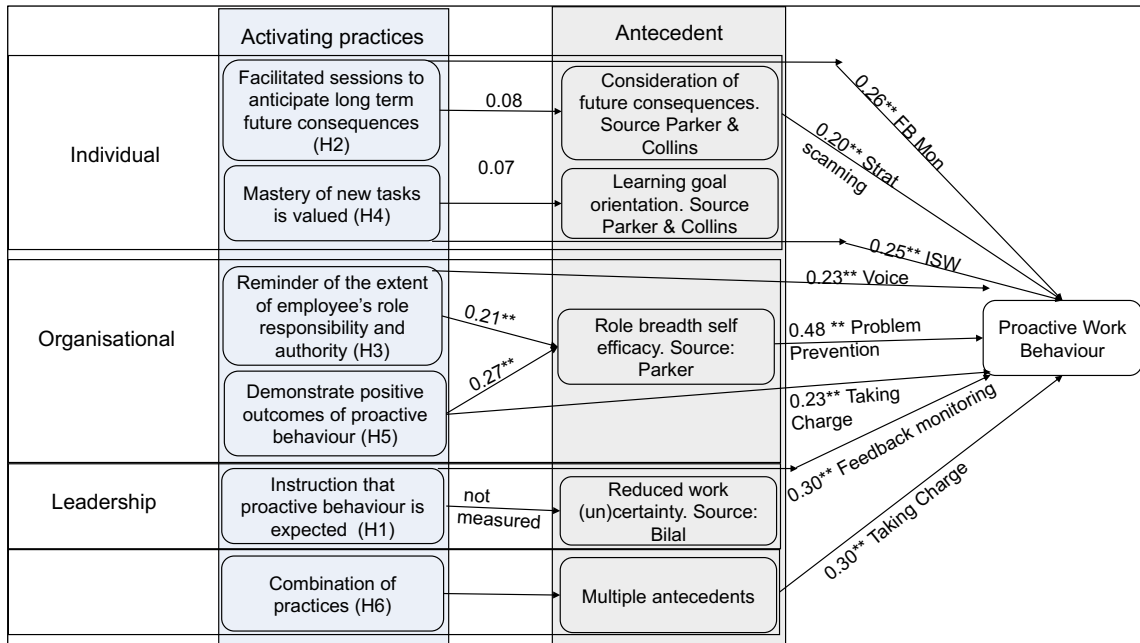


Figure 7-1 Model of proactive work behaviour with correlations (** indicates significance)

7.2 Theoretical contribution

The work isolated a set of practices from leadership (Brown & Treviño, 2006; Dionne et al., 2004, 2014; Gandolfi & Stone, 2018) and organisational theory (Caesens et al., 2016; Crant, 2000; Hong et al., 2016; Parker et al., 2010; Wu & Parker, 2017) that can be associated with employees' increased proactive behaviour at work. The theoretical contribution lies in increasing the granularity of leadership and management interventions as it pertains to proactive work behaviour. This work moves on from the larger construct of leadership styles and evaluates practices that form part of the leadership styles and are common between leadership styles associated with proactive work behaviour (Bilal et al., 2021; Chen et al., 2019; Hu et al., 2018; Schmitt et al., 2016). Then, through the lens of the antecedents of proactivity theory (Parker, 1998; Parker & Collins, 2010; L. Wang & Parker, 2015) showed that practice and behaviour level intervention can impact proactive behaviour. In doing so takes the first tentative steps to leadership and management research that is based on the actions of leaders, is pragmatic and, concrete in nature.

7.3 Implications for management and leaders

The practices proposed and shown to be significantly positively correlated to increased proactive work behaviour are extremely low cost, easy and concrete to implement. Therefore, this study guides managers and leaders with a first pass of five practices that have been demonstrated to be associated with increased proactive work behaviour. They are all extremely pragmatic and can be implemented by any leader, regardless of the style of leadership they subscribe to. In addition, isolated practices can be implemented, in cases where only certain proactive behaviours are desirable.

The strong impact of a proactive personality on the prevalence of proactive behaviour was once more affirmed by the results of this study. Two possibilities have been suggested to achieve a proactive workforce, hire persons with a proactive personality or cultivate such behaviour at the workplace (Parker et al., 2006). Finding a way to identify proactive personalities in the hiring process may prove to be more direct than trying to cultivate a proactive work behaviour among team members once they are already part of the organisation.

7.4 Limitations of the research

The most pertinent research limitation was that the data collection relied on self-reported assessments. The questions are in a positive voice: "I often try to bring about improved procedures for the work unit or the department." In most cases, participants find it more comfortable to answer positively to the statement, because the affirmative is more likely to align with the participants' view of themselves. Many factor averages were significantly above the score of 3, possibly because of this "more comfortable" alignment. Participants may have claimed a proactive behaviour, because there was no burden of proof in responding to the survey.

Participants were primarily well-educated, with 96% reporting that they had obtained a diploma or higher, and 83% a Bachelor's degree or higher. The study's findings and recommendations may not apply beyond such relatively highly-educated workers and it may thus be far more challenging to expect unskilled or semi-skilled workers to be self-motivated and proactive in their behaviour.

Two questions were removed from the measurement of learning goal orientation and consideration of future consequences. The questions were removed to increase the construct measurement's validity. The measurement of these two constructs was therefore done with only two items each. Thus, the conclusions reached, or the lack thereof, relating to these constructs can be criticised, based on instrument validity.

A single activating practice was proposed for a limited number of antecedents to proactive behaviour. It is possible, or even likely that more than one activating practice is more effective than only one. In addition, the activating practices were assessed with a single item. Measurement of the practices might be more reliable, if a range of questions were developed to measure them.

It is possible that the management practices tested in this research are not performed by leaders in isolation. Therefore, a positive correlation between a practice and proactive behaviour may be associated with an action or practice that typically occurs with the hypothesised practice, rather than the practice that was tested. Therefore, it may be valuable to look for clusters of practices about role clarity or the celebrating proactive behaviour and evaluate them as a group.

7.5 Suggestions for future research

Proactive behaviours have been argued to exist as more than one overall construct within the work context. To build on this study in light of the work by Parker and Collins (2010), authors may be interested in determining and testing leadership behaviours and management practices that affect a specific subset of proactive behaviour within the organisation. There may be instances, where a leader specifically supports and values proactive strategic behaviour in their team members, where the team members aim to have an impact on the positioning of the organisation within the broader environment. Proactive behaviour relating to the work itself or the fit of individuals with their roles may be desired (Parker & Collins, 2010). Therefore, research about having an impact on a specific type of proactive behaviour would be valuable.

This research isolated single practices to test the associations with proactive behaviour and the antecedents to proactive behaviour. The practice of celebrating proactive behaviour or valuing the mastery of new skills may exist as a group of behaviours. It would be valuable to understand the group of behaviours, possibly to the extent that the grouping of practices once more coalesces into one, or an area of overlap of the leadership styles expanded on in this study. By reaching down to the level of individual practices and behaviours, understanding the extent to which practices are effective in isolation or only as a group of behaviours, would guide practitioners to the simplest and most concrete methods of creating, enhancing, supporting, and maintaining proactive behaviour. This study showed individual practices may have an impact, but the work recommended may find that proactive behaviour must be influenced at leadership style level as opposed to individual practice level. Nonetheless, the practices proposed are associated proactive behaviours at work, and leaders and managers would be well-advised to adopt some or all of them.

8. References

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9. Appendix 1 - Questions and Code book

		Reverse Coding	1	2	3	4	5	6
A	Preamble and Demographic Information							
1	Categorise the problem you were asked to think about: changes in the external environment (e.g., technological, market change, customer dissatisfaction) or internal structural or procedural issues (e.g., inefficiencies).		external environment	internal environment				
2	Gender		Male	Female	Other	Prefer not to say		
3	Age		18 to 26	27 to 35	36 to 44	45 to 53	54 to 63	More than 63
4	Ethnic group		African	Asian/Indian	Coloured	White	Prefer not to say	
5	Highest qualification attained:		High school	Diploma or Certificate	Graduate (Degree / B-Tech)	Post Graduate Specialist Study	Masters Degree	Doctorate
6	Work experience		0 to 5 years	6 to 10 years	10 to 20 years	21 years or more		
7	To what extent do you believe being truthful is indicative of being a good person?		To no extent	To little extent	To some extent	To a large extent	To a very large extent	
8	My intention is to answer the questions as much as possible relating to how I have behaved in the past and I am likely to behave now and NOT how I think I should behave in future?		To no extent	To little extent	To some extent	To a large extent	To a very large extent	
9	I am confident that I will not be identified in any way by completing this survey		Very Confident	Not confident at all				
B	Issue Selling Willingness (How much ...?)							
10	How much effort would you be willing to devote to selling this (the important issue you were asked to think about) issue in your organisation?		Not at all	A little bit	Neutral	Somewhat	A great deal	
11	How much energy would you be willing to devote to selling this issue in your organisation?		Not at all	A little bit	Neutral	Somewhat	A great deal	

		Reverse Coding	1	2	3	4	5	6
12	How much time would you be willing to devote to selling this issue in your organisation?		Not at all	A little bit	Neutral	Somewhat	A great deal	
C	Issue Selling Credibility (Do you agree with the following statements?)							
13	I have a positive track record for selling issues.		Strongly disagree	Disagree	Neutral	Agree	Strongly Agree	
14	I have been successful in the past in selling issues in organisations.		Strongly disagree	Disagree	Neutral	Agree	Strongly Agree	
15	I am known as a successful issue seller.		Strongly disagree	Disagree	Neutral	Agree	Strongly Agree	
D	Strategic Scanning (How frequently do you?)							
16	I actively scan the environment to see what is happening might affect your organisation in the future?		Very infrequently	Infrequently	Sometimes	Frequently	Very frequently	
17	I identify long-term opportunities and threats for the company?		Very infrequently	Infrequently	Sometimes	Frequently	Very frequently	
18	I anticipate organisational changes that might be needed in the light of developments in the environment (e.g., markets, technology)?		Very infrequently	Infrequently	Sometimes	Frequently	Very frequently	
E	Career Initiative (Do you agree with the following statements?)							
20	I have discussed my aspirations with a senior person in the organisation.		Strongly disagree	Disagree	Neutral	Agree	Strongly Agree	
21	I have discussed my career prospects with someone with more experience in the organisation.		Strongly disagree	Disagree	Neutral	Agree	Strongly Agree	
22	I have engaged in career path planning.		Strongly disagree	Disagree	Neutral	Agree	Strongly Agree	
F	Problem Prevention (How frequently do you?)							
23	Try to develop procedures and systems that are effective in the long term, even if they slow things down to begin with?		Very infrequently	Infrequently	Sometimes	Frequently	Very frequently	
24	Try to find the root cause of things that go wrong?		Very infrequently	Infrequently	Sometimes	Frequently	Very frequently	

		Reverse Coding	1	2	3	4	5	6
25	Spend time planning how to prevent reoccurring problems?		Very infrequently	Infrequently	Sometimes	Frequently	Very frequently	
G	Feedback Monitoring (How frequently do you?)							
26	Observe the characteristics of people who are rewarded by your supervisor and use this information?		Very infrequently	Infrequently	Sometimes	Frequently	Very frequently	
27	Observe what performance behaviours your boss rewards and use this as feedback on your own performance?		Very infrequently	Infrequently	Sometimes	Frequently	Very frequently	
28	Pay attention to how your boss acts towards you in order to understand how they perceive and evaluate your work performance?		Very infrequently	Infrequently	Sometimes	Frequently	Very frequently	
H	Individual Innovation (How frequently do you?)							
29	Generate creative ideas?		Very infrequently	Infrequently	Sometimes	Frequently	Very frequently	
30	Search out new techniques, technologies and/or product ideas?		Very infrequently	Infrequently	Sometimes	Frequently	Very frequently	
31	Promote and champion ideas to others?		Very infrequently	Infrequently	Sometimes	Frequently	Very frequently	
I	Voice (How frequently do you?)							
32	Communicate your views about work issues to others in the workplace even if your views differ and others disagree with you?		Very infrequently	Infrequently	Sometimes	Frequently	Very frequently	
33	Speak up and encourage others in the workplace to get involved with issues that affect you?		Very infrequently	Infrequently	Sometimes	Frequently	Very frequently	
34	Keep well informed about issues where your opinion might be useful to your workplace?		Very infrequently	Infrequently	Sometimes	Frequently	Very frequently	
35	Speak up with new ideas or changes in procedures?		Very infrequently	Infrequently	Sometimes	Frequently	Very frequently	
J	Job Change Negotiation (How frequently do you?)							

		Reverse Coding	1	2	3	4	5	6
36	Negotiate with others about your task assignments and role expectations?		Very infrequently	Infrequently	Sometimes	Frequently	Very frequently	
37	Negotiate with others (e.g., supervisor, co-workers) about the demands placed on you?		Very infrequently	Infrequently	Sometimes	Frequently	Very frequently	
38	Negotiate with others (e.g., supervisor, co-workers) about desirable job changes?		Very infrequently	Infrequently	Sometimes	Frequently	Very frequently	
K	Taking Charge (How frequently do you?)							
39	Try to bring about improved procedures in your workplace?		Very infrequently	Infrequently	Sometimes	Frequently	Very frequently	
40	Try to institute new work methods that are more effective?		Very infrequently	Infrequently	Sometimes	Frequently	Very frequently	
41	Try to implement solutions to pressing organisation problems?		Very infrequently	Infrequently	Sometimes	Frequently	Very frequently	
L	Feedback Inquiry (How frequently do you?)							
42	Seek feedback from your supervisor about your work performance?		Very infrequently	Infrequently	Sometimes	Frequently	Very frequently	
43	Seek feedback from your supervisor about potential for advancement within your company?		Very infrequently	Infrequently	Sometimes	Frequently	Very frequently	
44	Seek information from your co-workers about your work performance?		Very infrequently	Infrequently	Sometimes	Frequently	Very frequently	
M	Proactive Personality (To what extent are the following statements true of you?)	0.713						
45	If I believe in an idea, no obstacle can stop me from making it happen		To no extent	To a small extent	To some extent	To an extent	To a great extent	
46	No matter what the odds, if believe in something I will make it happen		To no extent	To a small extent	To some extent	To an extent	To a great extent	
47	I am always looking for better ways to do things		To no extent	To a small extent	To some extent	To an extent	To a great extent	
48	Nothing is more exciting than seeing my ideas turn into reality		To no extent	To a small extent	To some extent	To an extent	To a great extent	

		Reverse Coding	1	2	3	4	5	6
	Consideration for Future Consequences (For the following statements below please indicate whether or not the statement is characteristic of you)							
N								
49	I consider how things might be in the future, and try to influence those things with my day-to-day behaviour		Extremely uncharacteristic	Somewhat uncharacteristic	Uncertain	Somewhat characteristic	Extremely characteristic	
50	Often I engage in a particular behaviour in order to achieve outcomes that may not result for many years		Extremely uncharacteristic	Somewhat uncharacteristic	Uncertain	Somewhat characteristic	Extremely characteristic	
51	My convenience is a big factor in the decisions I make or the actions I take	yes	Extremely characteristic	Somewhat characteristic	Uncertain	Somewhat uncharacteristic	Extremely uncharacteristic	
52	I think it is important to take warnings about negative outcomes seriously even if the negative outcome will not occur for many years		Extremely uncharacteristic	Somewhat uncharacteristic	Uncertain	Somewhat characteristic	Extremely characteristic	
	Learning Goal Orientation and Performance Goal Orientation (Do you agree with the following statements?)							
O								
53	I prefer to do things that I can do well rather than things that I do poorly	yes	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	
54	I am happiest at work when I perform tasks on which I know that I will not make any errors.	yes	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	
55	The opportunity to do challenging work is important to me		Strongly disagree	Disagree	Neutral	Agree	Strongly agree	
56	When I fail to complete a difficult task, I plan to try harder the next time I work on it.		Strongly disagree	Disagree	Neutral	Agree	Strongly agree	
	Role Breadth Self-Efficacy (How confident do you feel ...?)							
P								
57	Analysing a long-term problem to find a solution		Very unconfident	Unconfident	Neutral	Confident	Very confident	
58	Representing your work area in meetings with senior management		Very unconfident	Unconfident	Neutral	Confident	Very confident	

		Reverse Coding	1	2	3	4	5	6
59	Designing new procedures for your work area		Very unconfident	Unconfident	Neutral	Confident	Very confident	
60	Making suggestions to management about ways to improve the working of your section		Very unconfident	Unconfident	Neutral	Confident	Very confident	
Q	Felt Responsibility for Change (How frequently do you ...?)							
61	I often try to institute work methods that are more effective for the company		Very infrequently	Infrequently	Sometimes	Frequently	Very frequently	
62	I often try to implement solutions to pressing organisational problems		Very infrequently	Infrequently	Sometimes	Frequently	Very frequently	
63	I often try to implement new structures, technologies, or approaches to improve efficiency		Very infrequently	Infrequently	Sometimes	Frequently	Very frequently	
64	I often try to bring about improved procedures for the work unit or the department		Very infrequently	Infrequently	Sometimes	Frequently	Very frequently	
R	Initiative in Your Organisation							
65	To what extent do you feel that taking initiative is encouraged in your organisation?		To no extent	To a small extent	To some extent	To an extent	To a great extent	
66	What actions and behaviours did you observe in your organisation to realise that taking initiative is (or is not) encouraged?		Text entry, not coded					
S	Organisational and Leadership Questions							
67	In the past year have you been invited or instructed by your organisation's leadership to consider the long-term impact of your actions or the actions of others?		Very infrequently	Infrequently	Sometimes	Frequently	Very frequently	
68	To what extent have you been made aware of the full extent of the responsibility and authority of your role?		To no extent	To a small extent	To some extent	To an extent	To a great extent	
69	To what extent is the mastery of new skills valued in your organisation?		To no extent	To a small extent	To some extent	To an extent	To a great extent	
70	How often has the positive outcome of one of your colleague's proactive behaviour been celebrated in your organisation?		Not at all	Not very often	Sometimes	Often	Very often	

		Reverse Coding	1	2	3	4	5	6
71	In the past year how frequently have you been asked by your leaders to act proactively or to take initiative?		Very infrequently	Infrequently	Sometimes	Frequently	Very frequently	
72	My role at work requires me to be proactive		To no extent	To a small extent	To some extent	To an extent	To a great extent	

10. Appendix 2 - Question validity

Table 10-1 Question validity testing results

Pearson's correlation		
Issue selling willingness		
How much effort would you be willing to devote to selling this (the important issue you were asked to think about) issue in your organisation?"	r	0.89
	P	0.00
How much time would you be willing to devote to selling this issue in your organisation?"	r	0.88
	P	0.00
How much energy would you be willing to devote to selling this issue in your organisation?"	r	0.93
	P	0.00
Issue selling credibility		
I have a positive track record for selling issues.	r	0.91
	P	0.00
I have been successful in the past in selling issues in organisations.	r	0.90
	P	0.00
I am known as a successful issue seller.	r	0.89
	P	0.00
Strategic scanning		
I actively scan the environment to see what is happening might affect your organisation in the future?	r	0.79
	P	0.00
I identify long-term opportunities and threats for the company?	r	0.86
	P	0.00
I anticipate organisation changes that might be needed in the light of developments in the environment (e.g., markets, technology)?	r	0.82
	P	0.00
Career initiative		
I have discussed my aspirations with a senior person in the organisation.	r	0.89
	P	0.00
I have discussed my career prospects with someone with more experience in the organisation.	r	0.93
	P	0.00
I have engaged in career path planning.	r	0.86
	P	0.00
Problem prevention		
Try to develop procedures and systems that are effective in the long term, even if they slow things down to begin with?	r	0.76
	P	0.00

Pearson's correlation		
Try to find the root cause of things that go wrong?	r	0.78
	P	0.00
Spend time planning how to prevent reoccurring problems?"	r	0.83
	P	0.00
Feedback monitoring		
Observe the characteristics of people who are rewarded by your supervisor and use this information?	r	0.81
	P	0.00
Observe what performance behaviours your boss rewards and use this as feedback on your own performance?	r	0.91
	P	0.00
Pay attention to how your boss acts towards you in order to understand how they perceive and evaluate your work performance?	r	0.83
	P	0.00
Individual innovation		
Generate creative ideas?	r	0.79
	P	0.00
Search out new techniques, technologies and/or product ideas?	r	0.84
	P	0.00
Promote and champion ideas to others?	r	0.82
	P	0.00
Voice		
Communicate your views about work issues to others in the workplace even if your views differ and others disagree with you?"	r	0.73
	P	0.00
Speak up and encourage others in the workplace to get involved with issues that affect you?"	r	0.83
	P	0.00
Keep well informed about issues where your opinion might be useful to your workplace?"	r	0.67
	P	0.00
Speak up with new ideas or changes in procedures?"	r	0.71
	P	0.00
Job change negotiation		
Negotiate with others (e.g., supervisor, co-workers) about the demands placed on you?"	r	0.90
	P	0.00
Negotiate with others (e.g., supervisor, co-workers) about desirable job changes?	r	0.91
	P	0.00
Taking Charge		
Try to bring about improved procedures in your workplace?	r	0.89
	P	0.00

Pearson's correlation		
Try to institute new work methods that are more effective?	r	0.90
	P	0.00
Try to implement solutions to pressing organisation problems?	r	0.89
	P	0.00
Feedback inquiry		
Seek feedback from your supervisor about your work performance?	r	0.86
	P	0.00
Seek feedback from your supervisor about potential for advancement within your company?	r	0.88
	P	0.00
Seek information from your co-workers about your work performance?	r	0.82
	P	0.00
Proactive personality		
If I believe in an idea, no obstacle can stop me from making it happen"	r	0.83
	P	0.00
No matter what the odds, if believe in something I will make it happen"	r	0.86
	P	0.00
I am always looking for better ways to do things"	r	0.64
	P	0.00
Nothing is more exciting than seeing my ideas turn into reality	r	0.57
	P	0.00
Consideration for future consequences		
I consider how things might be in the future, and try to influence those things with my day-to-day behaviour	r	0.802
	P	0.00
Often I engage in a particular behaviour in order to achieve outcomes that may not result for many years	r	0.880
	P	0.00
My convenience is a big factor in the decisions I make or the actions I take	Removed	
	Removed	
I think it is important to take warnings about negative outcomes seriously even if the negative outcome will not occur for many years	Removed	
	Removed	
Learning goal orientation		
I prefer to do things that I can do well rather than things that I do poorly"	r	0.837
	P	0.00
I am happiest at work when I perform tasks on which I know that I will not make any errors."	r	0.859
	P	0.00
The opportunity to do challenging work is important to me"	Removed	
	Removed	

Pearson's correlation		
When I fail to complete a difficult task, I plan to try harder the next time I work on it."	Removed	
	Removed	
Role breadth self-efficacy		
Analysing a long-term problem to find a solution	r	0.73
	P	0.00
Representing your work area in meetings with senior management	r	0.81
	P	0.00
Designing new procedures for your work area	r	0.79
	P	0.00
Making suggestions to management about ways to improve the working of your section	r	0.83
	P	0.00
Felt responsibility for change		
I often try to institute work methods that are more effective for the company	r	0.90
	P	0.00
I often try to implement solutions to pressing organisational problems	r	0.89
	P	0.00
I often try to implement new structures, technologies, or approaches to improve efficiency	r	0.88
	P	0.00
I often try to bring about improved procedures for the work unit or the department	r	0.88
	P	0.00
Initiative in your organisation		
To what extent do you feel that taking initiative is encouraged in your organisation?	r	0.74
	P	0.00
In the past year have you been invited or instructed by your organisation's leadership to consider the long-term impact of your actions or the actions of others?	r	0.63
	P	0.00
To what extent have you been made aware of the full extent of the responsibility and authority of your role?	r	0.66
	P	0.00
To what extent is the mastery of new skills valued in your organisation?	r	0.78
	P	0.00
How often has the positive outcome of one of your colleague's proactive behaviour been celebrated in your organisation?	r	0.72
	P	0.00
In the past year how frequently have you been asked by your leaders to act proactively or to take initiative?	r	0.66
	P	0.00
My role at work requires me to be proactive	r	0.35

Pearson's correlation		
	P	0.00
	N	190.00

11. Appendix 3 - Factor Analysis

Table 11-1 Factor analysis results

Factor Analysis	Correlation Matrix results		Kaiser-Meyer-Olkin measure of sampling adequacy	P	Application of Eigen value "1" rule
Issue selling willingness					# of Factors
How much effort would you be willing to devote to selling this (the important issue you were asked to think about) issue in your organisation?"	r	0.77	0.71	<0.001	1
How much time would you be willing to devote to selling this issue in your organisation?"	r	0.77			
How much energy would you be willing to devote to selling this issue in your organisation?"	r	0.75			
Issue selling credibility					
I have a positive track record for selling issues.	r	0.75	0.74	<0.001	1
I have been successful in the past in selling issues in organisations.	r	0.75			
I am known as a successful issue seller.	r	0.71			
Strategic scanning					
I actively scan the environment to see what is happening might affect your organisation in the future?	r	0.51	0.67	<0.001	1
I identify long-term opportunities and threats for the company?	r	0.61			
I anticipate organisation changes that might be needed in the light of developments in the environment (e.g., markets, technology)?	r	0.61			
Career initiative					
I have discussed my aspirations with a senior person in the organisation.	r	0.81	0.68	<0.001	1
I have discussed my career prospects with someone with more experience in the organisation.	r	0.81			

I have engaged in career path planning.	r	0.70			
Problem prevention					
Try to develop procedures and systems that are effective in the long term, even if they slow things down to begin with?	r	0.43	0.635	<0.001	1
Try to find the root cause of things that go wrong?	r	0.55			
Spend time planning how to prevent reoccurring problems?"	r	0.55			
Feedback monitoring					
Observe the characteristics of people who are rewarded by your supervisor and use this information?	r	0.65	0.651	<0.001	1
Observe what performance behaviours your boss rewards and use this as feedback on your own performance?	r	0.66			
Pay attention to how your boss acts towards you in order to understand how they perceive and evaluate your work performance?	r	0.66			
Individual innovation					
Generate creative ideas?	r	0.48	0.688	<0.001	1
Search out new techniques, technologies and/or product ideas?	r	0.53			
Promote and champion ideas to others?	r	0.53			
Voice					
Communicate your views about work issues to others in the workplace even if your views differ and others disagree with you?"	r	0.53	0.695	<0.001	1
Speak up and encourage others in the workplace to get involved with issues that affect you?"	r	0.53			
Keep well informed about issues where your opinion might be useful to your workplace?"	r	0.41			
Speak up with new ideas or changes in procedures?"	r	0.41			
Job change negotiation					
Negotiate with others (e.g., supervisor, co-workers) about the demands placed on you?"	r	0.64			

Negotiate with others (e.g., supervisor, co-workers) about desirable job changes?	r	0.64			
Taking Charge					
Try to bring about improved procedures in your workplace?	r	0.73	0.737	<0.001	1
Try to institute new work methods that are more effective?	r	0.73			
Try to implement solutions to pressing organisation problems?	r	0.68			
Feedback inquiry					
Seek feedback from your supervisor about your work performance?	r	0.70	0.692	<0.001	1
Seek feedback from your supervisor about potential for advancement within your company?	r	0.70			
Seek information from your co-workers about your work performance?	r	0.56			
Proactive personality					
If I believe in an idea, no obstacle can stop me from making it happen"	r	0.74	0.614	<0.001	1
No matter what the odds, if believe in something I will make it happen"	r	0.74			
I am always looking for better ways to do things"	r	0.40			
Nothing is more exciting than seeing my ideas turn into reality	r	0.28			
Consideration for future consequences					
I consider how things might be in the future, and try to influence those things with my day-to-day behaviour	r	0.42			
Often I engage in a particular behaviour in order to achieve outcomes that may not result for many years	r	0.42			
Learning goal orientation					
I prefer to do things that I can do well rather than things that I do poorly"	r	0.44			
I am happiest at work when I perform tasks on which I know that I will not make any errors."	r	0.44			
Role breadth self-efficacy					
Analysing a long-term problem to find a solution	r	0.46	0.789	<0.001	1

Representing your work area in meetings with senior management	r	0.59			
Designing new procedures for your work area	r	0.58			
Making suggestions to management about ways to improve the working of your section	r	0.58			
Felt responsibility for change					
I often try to institute work methods that are more effective for the company	r	0.74	0.842	<0.001	1
I often try to implement solutions to pressing organisational problems	r	0.74			
I often try to implement new structures, technologies, or approaches to improve efficiency	r	0.71			
I often try to bring about improved procedures for the work unit or the department	r	0.74			
Initiative in your organisation					
To what extent do you feel that taking initiative is encouraged in your organisation?	r	0.66	0.789	<0.001	1
In the past year have you been invited or instructed by your organisation's leadership to consider the long-term impact of your actions or the actions of others?	r	0.38			
To what extent have you been made aware of the full extent of the responsibility and authority of your role?	r	0.41			
To what extent is the mastery of new skills valued in your organisation?	r	0.66			
How often has the positive outcome of one of your colleague's proactive behaviour been celebrated in your organisation?	r	0.62			
In the past year, how frequently have you been asked by your leaders to act proactively or to take initiative?	r	0.40			
Role proactive requirement					
My role at work requires me to be proactive					
	N	190.00			

12. Appendix 3 - Multiple stepwise regression results with organisational initiative factor

Issue selling willingness – Select model 2

Table 12-1 Model Selection - Issue selling willingness

Model Summary ^e									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Change Statistics			
						F Change	df1	df2	Sig. F Change
1	.378 ^a	.143	.138	.65755	.143	31.298	1	188	<.001
2	.403 ^b	.163	.154	.65156	.020	4.473	1	187	.036
3	.407 ^c	.166	.152	.65214	.003	.671	1	186	.414
4	.410 ^d	.169	.151	.65282	.003	.612	1	185	.435

a. Predictors: (Constant), FRFC_Fact

b. Predictors: (Constant), FRFC_Fact, Init_org_Fact

c. Predictors: (Constant), FRFC_Fact, Init_org_Fact, RBSE_Fact

d. Predictors: (Constant), FRFC_Fact, Init_org_Fact, RBSE_Fact, Proactive_pers_Fact

e. Dependent Variable: ISW_Fact

Table 12-2 Model constant and coefficients - Issue selling willingness

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.806	.265		10.608	<.001
	FRFC_Fact	.363	.065	.378	5.595	<.001
2	(Constant)	2.508	.298		8.426	<.001
	FRFC_Fact	.320	.068	.332	4.728	<.001
	Init_org_Fact	.134	.063	.149	2.115	.036
3	(Constant)	2.751	.420		6.550	<.001
	FRFC_Fact	.358	.082	.372	4.353	<.001
	Init_org_Fact	.141	.064	.156	2.203	.029
4	RBSE_Fact	-.095	.116	-.070	-.819	.414
	(Constant)	2.678	.431		6.218	<.001
	FRFC_Fact	.347	.084	.360	4.145	<.001
	Init_org_Fact	.139	.064	.154	2.163	.032
4	RBSE_Fact	-.127	.123	-.093	-1.033	.303
	Proactive_pers_Fact	.066	.084	.062	.782	.435

a. Dependent Variable: ISW_Fact

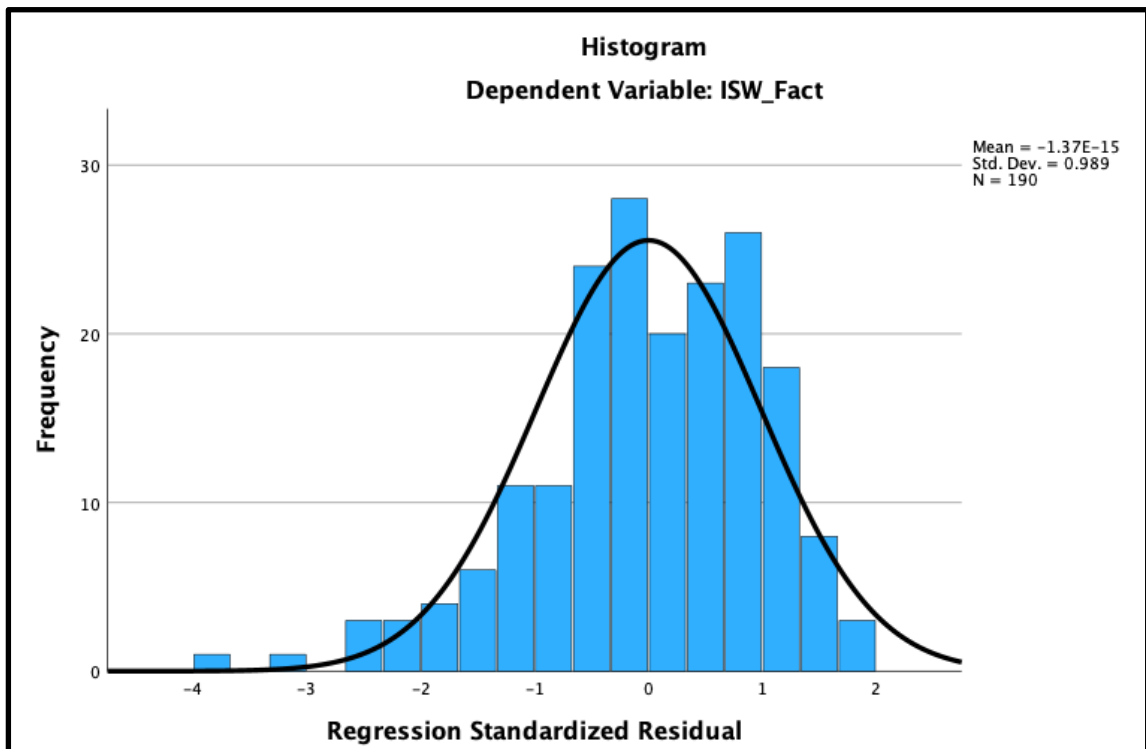


Figure 12-1 Regression standardised residual - issue selling willingness

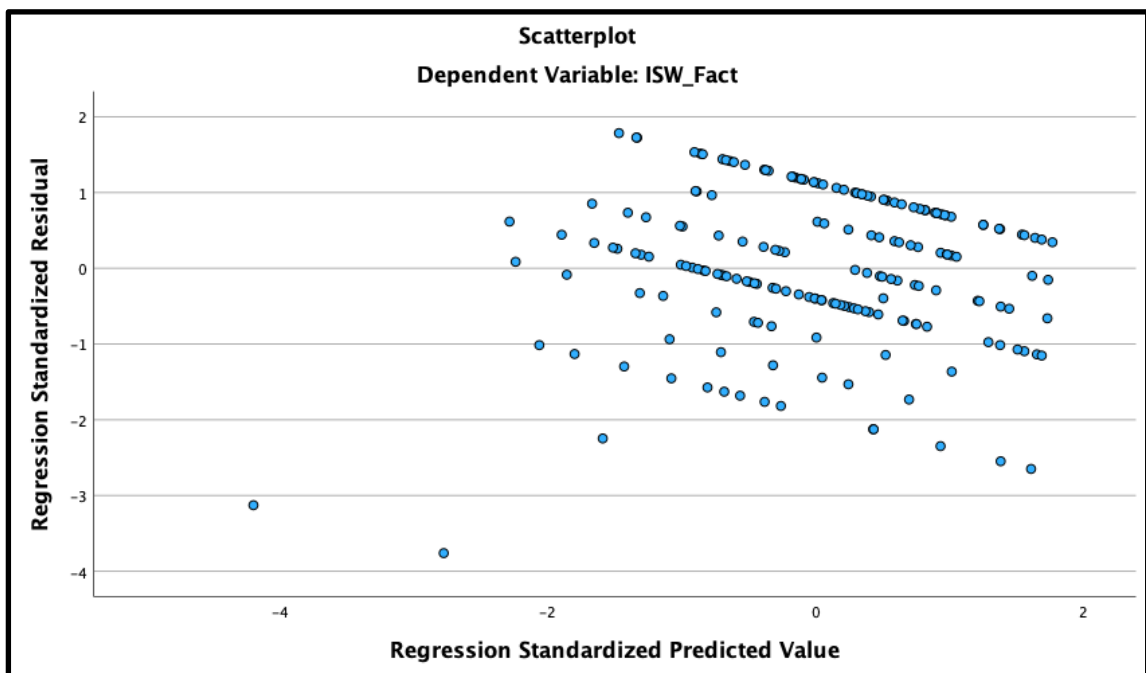


Figure 12-2 Scatterplot - Regression standardised predicted value - Issue Selling willingness

Histograms and scatterplots for the remaining variables can be requested from the author. They are similar to what is shown in Figure 12-1 and Figure 12-2.

Strategic Scanning – Select model 1

Table 12-3 Model Selection - Strategic scanning

Model Summary^f

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Change Statistics			
						F Change	df1	df2	Sig. F Change
1	.399 ^a	.159	.154	.60463	.159	35.536	1	188	<.001
2	.406 ^b	.165	.156	.60413	.006	1.311	1	187	.254
3	.409 ^c	.168	.154	.60473	.003	.628	1	186	.429
4	.411 ^d	.169	.151	.60577	.002	.361	1	185	.549
5	.411 ^e	.169	.147	.60740	.000	.009	1	184	.923

a. Predictors: (Constant), Proactive_pers_Fact

b. Predictors: (Constant), Proactive_pers_Fact, Highest qualification attained:

c. Predictors: (Constant), Proactive_pers_Fact, Highest qualification attained:, Age

d. Predictors: (Constant), Proactive_pers_Fact, Highest qualification attained:, Age, Init_org_Fact

e. Predictors: (Constant), Proactive_pers_Fact, Highest qualification attained:, Age, Init_org_Fact, Work experience

f. Dependent Variable: Strat_Scan_Fact

Table 12-4 Model constant and coefficients - Strategic scanning

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.373	.274		8.675	<.001
	Proactive_pers_Fact	.393	.066	.399	5.961	<.001
2	(Constant)	2.560	.318		8.043	<.001
	Proactive_pers_Fact	.400	.066	.405	6.042	<.001
	Highest qualification attained:	-.046	.041	-.077	-1.145	.254
3	(Constant)	2.512	.324		7.752	<.001
	Proactive_pers_Fact	.393	.067	.398	5.887	<.001
	Highest qualification attained:	-.050	.041	-.083	-1.233	.219
	Age	.029	.037	.054	.792	.429
4	(Constant)	2.436	.349		6.989	<.001
	Proactive_pers_Fact	.385	.068	.390	5.630	<.001
	Highest qualification attained:	-.054	.041	-.089	-1.305	.193
	Age	.031	.037	.056	.824	.411
	Init_org_Fact	.035	.058	.042	.601	.549
5	(Constant)	2.442	.355		6.871	<.001
	Proactive_pers_Fact	.385	.069	.390	5.610	<.001
	Highest qualification attained:	-.054	.042	-.090	-1.303	.194
	Age	.035	.059	.064	.592	.554
	Init_org_Fact	.035	.058	.042	.600	.549
	Work experience	-.007	.076	-.011	-.097	.923

a. Dependent Variable: Strat_Scan_Fact

Career initiative – No suitable model

Table 12-5 Model Selection - Career initiative

Model Summary ^f									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Change Statistics			
						F Change	df1	df2	Sig. F Change
1	.233 ^a	.054	.049	.86268	.054	10.824	1	188	.001
2	.311 ^b	.097	.087	.84540	.042	8.765	1	187	.003
3	.326 ^c	.107	.092	.84306	.010	2.036	1	186	.155
4	.328 ^d	.107	.088	.84496	.001	.168	1	185	.683
5	.328 ^e	.107	.083	.84724	.000	.006	1	184	.936

a. Predictors: (Constant), Proactive_pers_Fact

b. Predictors: (Constant), Proactive_pers_Fact, Age

c. Predictors: (Constant), Proactive_pers_Fact, Age, Work experience

d. Predictors: (Constant), Proactive_pers_Fact, Age, Work experience, Init_org_Fact

e. Predictors: (Constant), Proactive_pers_Fact, Age, Work experience, Init_org_Fact, Highest qualification attained:

f. Dependent Variable: Career_init_Fact

Problem prevention – Select model 3

Table 12-6 Model Selection - Problem prevention

Model Summary ^f									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Change Statistics			
						F Change	df1	df2	Sig. F Change
1	.382 ^a	.146	.141	.56674	.146	32.141	1	188	<.001
2	.410 ^b	.168	.159	.56095	.022	4.898	1	187	.028
3	.432 ^c	.186	.173	.55617	.018	4.229	1	186	.041
4	.434 ^d	.188	.171	.55697	.002	.467	1	185	.495
5	.437 ^e	.191	.169	.55771	.002	.507	1	184	.477

a. Predictors: (Constant), Proactive_pers_Fact

b. Predictors: (Constant), Proactive_pers_Fact, Highest qualification attained:

c. Predictors: (Constant), Proactive_pers_Fact, Highest qualification attained:, Init_org_Fact

d. Predictors: (Constant), Proactive_pers_Fact, Highest qualification attained:, Init_org_Fact, Age

e. Predictors: (Constant), Proactive_pers_Fact, Highest qualification attained:, Init_org_Fact, Age, Work experience

f. Dependent Variable: PP_Fact

Table 12-7 Model constant and coefficients - Problem prevention

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.651	.256		10.340	<.001
	Proactive_pers_Fact	.351	.062	.382	5.669	<.001
2	(Constant)	2.986	.295		10.106	<.001
	Proactive_pers_Fact	.362	.061	.395	5.896	<.001
	Highest qualification attained:	-.083	.038	-.148	-2.213	.028
3	(Constant)	2.753	.314		8.766	<.001
	Proactive_pers_Fact	.337	.062	.367	5.420	<.001
	Highest qualification attained:	-.094	.038	-.167	-2.497	.013
	Init_org_Fact	.110	.053	.140	2.056	.041
4	(Constant)	2.795	.320		8.722	<.001
	Proactive_pers_Fact	.343	.063	.373	5.454	<.001
	Highest qualification attained:	-.091	.038	-.161	-2.382	.018
	Init_org_Fact	.107	.053	.138	2.011	.046
	Age	-.023	.034	-.046	-.683	.495
5	(Constant)	2.753	.326		8.435	<.001
	Proactive_pers_Fact	.340	.063	.370	5.391	<.001
	Highest qualification attained:	-.090	.038	-.161	-2.371	.019
	Init_org_Fact	.107	.054	.138	2.005	.046
	Age	-.054	.054	-.106	-.983	.327
	Work experience	.049	.070	.076	.712	.477

a. Dependent Variable: PP_Fact

Feedback Monitoring – Select model 3

Table 12-8 Model Selection - Feedback monitoring

Model Summary^f

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Change Statistics			
						F Change	df1	df2	Sig. F Change
1	.232 ^a	.054	.049	.83833	.054	10.673	1	188	.001
2	.297 ^b	.088	.078	.82514	.034	7.062	1	187	.009
3	.350 ^c	.123	.108	.81161	.034	7.286	1	186	.008
4	.360 ^d	.130	.111	.81041	.007	1.548	1	185	.215
5	.361 ^e	.130	.107	.81234	.001	.122	1	184	.728

a. Predictors: (Constant), Init_org_Fact

b. Predictors: (Constant), Init_org_Fact, Proactive_pers_Fact

c. Predictors: (Constant), Init_org_Fact, Proactive_pers_Fact, Age

d. Predictors: (Constant), Init_org_Fact, Proactive_pers_Fact, Age, Highest qualification attained:

e. Predictors: (Constant), Init_org_Fact, Proactive_pers_Fact, Age, Highest qualification attained:, Work experience

f. Dependent Variable: FB_mon_Fact

Table 12-9 Model constant and coefficients - Feedback monitoring

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.656	.281		9.455	<.001
	Init_org_Fact	.254	.078	.232	3.267	.001
2	(Constant)	1.808	.422		4.282	<.001
	Init_org_Fact	.211	.078	.192	2.691	.008
	Proactive_pers_Fact	.245	.092	.190	2.658	.009
3	(Constant)	2.117	.431		4.914	<.001
	Init_org_Fact	.203	.077	.185	2.629	.009
	Proactive_pers_Fact	.280	.091	.217	3.057	.003
	Age	-.133	.049	-.187	-2.699	.008
4	(Constant)	2.341	.466		5.019	<.001
	Init_org_Fact	.217	.078	.198	2.786	.006
	Proactive_pers_Fact	.284	.091	.220	3.105	.002
	Age	-.125	.050	-.176	-2.517	.013
	Highest qualification attained:	-.069	.055	-.087	-1.244	.215
5	(Constant)	2.371	.475		4.987	<.001
	Init_org_Fact	.217	.078	.198	2.781	.006
	Proactive_pers_Fact	.286	.092	.222	3.114	.002
	Age	-.104	.079	-.146	-1.308	.192
	Highest qualification attained:	-.069	.056	-.087	-1.245	.215
	Work experience	-.035	.101	-.039	-.349	.728

a. Dependent Variable: FB_mon_Fact

Individual motivation – Select model 3

Table 12-10 Model Selection - Individual motivation

Model Summary^f

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Change Statistics			Sig. F Change
						F Change	df1	df2	
1	.397 ^a	.158	.153	.57652	.158	35.198	1	188	<.001
2	.426 ^b	.181	.173	.56992	.024	5.382	1	187	.021
3	.449 ^c	.202	.189	.56427	.020	4.763	1	186	.030
4	.452 ^d	.204	.187	.56491	.003	.582	1	185	.446
5	.452 ^e	.204	.183	.56638	.000	.037	1	184	.847

a. Predictors: (Constant), Proactive_pers_Fact

b. Predictors: (Constant), Proactive_pers_Fact, Init_org_Fact

c. Predictors: (Constant), Proactive_pers_Fact, Init_org_Fact, Highest qualification attained:

d. Predictors: (Constant), Proactive_pers_Fact, Init_org_Fact, Highest qualification attained:, Work experience

e. Predictors: (Constant), Proactive_pers_Fact, Init_org_Fact, Highest qualification attained:, Work experience, Age

f. Dependent Variable: Indv_Mot_Fact

Table 12-11 Model constant and coefficients - Individual motivation

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.446	.261		9.379	<.001
	Proactive_pers_Fact	.373	.063	.397	5.933	<.001
2	(Constant)	2.130	.292		7.304	<.001
	Proactive_pers_Fact	.342	.064	.364	5.384	<.001
	Init_org_Fact	.125	.054	.157	2.320	.021
3	(Constant)	2.424	.319		7.608	<.001
	Proactive_pers_Fact	.350	.063	.372	5.551	<.001
	Init_org_Fact	.142	.054	.178	2.624	.009
	Highest qualification attained:	-.083	.038	-.145	-2.182	.030
4	(Constant)	2.358	.331		7.135	<.001
	Proactive_pers_Fact	.343	.064	.365	5.376	<.001
	Init_org_Fact	.144	.054	.180	2.650	.009
	Highest qualification attained:	-.086	.038	-.150	-2.243	.026
	Work experience	.034	.044	.051	.763	.446
5	(Constant)	2.360	.331		7.119	<.001
	Proactive_pers_Fact	.343	.064	.364	5.351	<.001
	Init_org_Fact	.144	.054	.180	2.649	.009
	Highest qualification attained:	-.087	.039	-.151	-2.245	.026
	Work experience	.023	.071	.035	.329	.743
	Age	.011	.055	.021	.193	.847

a. Dependent Variable: Indv_Mot_Fact

Individual innovation – Select model 3

Table 12-12 Model Selection - Individual innovation

Model Summary ^f									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Change Statistics			
						F Change	df1	df2	Sig. F Change
1	.397 ^a	.158	.153	.57652	.158	35.198	1	188	<.001
2	.426 ^b	.181	.173	.56992	.024	5.382	1	187	.021
3	.449 ^c	.202	.189	.56427	.020	4.763	1	186	.030
4	.452 ^d	.204	.187	.56491	.003	.582	1	185	.446
5	.452 ^e	.204	.183	.56638	.000	.037	1	184	.847

a. Predictors: (Constant), Proactive_pers_Fact

b. Predictors: (Constant), Proactive_pers_Fact, Init_org_Fact

c. Predictors: (Constant), Proactive_pers_Fact, Init_org_Fact, Highest qualification attained:

d. Predictors: (Constant), Proactive_pers_Fact, Init_org_Fact, Highest qualification attained:, Work experience

e. Predictors: (Constant), Proactive_pers_Fact, Init_org_Fact, Highest qualification attained:, Work experience, Age

f. Dependent Variable: Indv_Inno_Fact

Table 12-13 Model constant and coefficients - Individual innovation

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.446	.261		9.379	<.001
	Proactive_pers_Fact	.373	.063	.397	5.933	<.001
2	(Constant)	2.130	.292		7.304	<.001
	Proactive_pers_Fact	.342	.064	.364	5.384	<.001
	Init_org_Fact	.125	.054	.157	2.320	.021
3	(Constant)	2.424	.319		7.608	<.001
	Proactive_pers_Fact	.350	.063	.372	5.551	<.001
	Init_org_Fact	.142	.054	.178	2.624	.009
	Highest qualification attained:	-.083	.038	-.145	-2.182	.030
4	(Constant)	2.358	.331		7.135	<.001
	Proactive_pers_Fact	.343	.064	.365	5.376	<.001
	Init_org_Fact	.144	.054	.180	2.650	.009
	Highest qualification attained:	-.086	.038	-.150	-2.243	.026
	Work experience	.034	.044	.051	.763	.446
5	(Constant)	2.360	.331		7.119	<.001
	Proactive_pers_Fact	.343	.064	.364	5.351	<.001
	Init_org_Fact	.144	.054	.180	2.649	.009
	Highest qualification attained:	-.087	.039	-.151	-2.245	.026
	Work experience	.023	.071	.035	.329	.743
	Age	.011	.055	.021	.193	.847

a. Dependent Variable: Indv_Inno_Fact

Voice – Select model 2

Table 12-14 Model Selection - Voice

Model Summary^f

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Change Statistics			
						F Change	df1	df2	Sig. F Change
1	.364 ^a	.133	.128	.54071	.133	28.755	1	188	<.001
2	.435 ^b	.190	.181	.52404	.057	13.148	1	187	<.001
3	.443 ^c	.196	.183	.52326	.007	1.556	1	186	.214
4	.453 ^d	.205	.188	.52191	.008	1.962	1	185	.163
5	.453 ^e	.205	.183	.52332	.000	.007	1	184	.932

a. Predictors: (Constant), Proactive_pers_Fact

b. Predictors: (Constant), Proactive_pers_Fact, Init_org_Fact

c. Predictors: (Constant), Proactive_pers_Fact, Init_org_Fact, Highest qualification attained:

d. Predictors: (Constant), Proactive_pers_Fact, Init_org_Fact, Highest qualification attained:, Age

e. Predictors: (Constant), Proactive_pers_Fact, Init_org_Fact, Highest qualification attained:, Age, Work experience

f. Dependent Variable: Voice_Fact

Table 12-15 Model constant and coefficients - Voice

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.586	.245		10.570	<.001
	Proactive_pers_Fact	.316	.059	.364	5.362	<.001
2	(Constant)	2.131	.268		7.948	<.001
	Proactive_pers_Fact	.272	.058	.313	4.653	<.001
	Init_org_Fact	.180	.050	.244	3.626	<.001
3	(Constant)	2.287	.295		7.740	<.001
	Proactive_pers_Fact	.276	.058	.318	4.722	<.001
	Init_org_Fact	.189	.050	.256	3.770	<.001
	Highest qualification attained:	-.044	.035	-.083	-1.248	.214
4	(Constant)	2.206	.300		7.347	<.001
	Proactive_pers_Fact	.265	.059	.305	4.501	<.001
	Init_org_Fact	.193	.050	.261	3.853	<.001
	Highest qualification attained:	-.051	.036	-.095	-1.424	.156
	Age	.045	.032	.094	1.401	.163
5	(Constant)	2.202	.306		7.189	<.001
	Proactive_pers_Fact	.265	.059	.305	4.474	<.001
	Init_org_Fact	.193	.050	.261	3.842	<.001
	Highest qualification attained:	-.051	.036	-.095	-1.419	.158
	Age	.042	.051	.087	.813	.418
	Work experience	.006	.065	.009	.085	.932

a. Dependent Variable: Voice_Fact

Job change negotiation – Select model 1

Table 12-16 Model Selection - Job change negotiation

Model Summary^f

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Change Statistics			
						F Change	df1	df2	Sig. F Change
1	.189 ^a	.036	.031	.91077	.036	6.986	1	188	.009
2	.194 ^b	.037	.027	.91242	.002	.320	1	187	.572
3	.196 ^c	.038	.023	.91442	.001	.185	1	186	.668
4	.196 ^d	.039	.018	.91685	.000	.015	1	185	.902
5	.197 ^e	.039	.013	.91924	.000	.037	1	184	.848

a. Predictors: (Constant), Proactive_pers_Fact

b. Predictors: (Constant), Proactive_pers_Fact, Init_org_Fact

c. Predictors: (Constant), Proactive_pers_Fact, Init_org_Fact, Highest qualification attained:

d. Predictors: (Constant), Proactive_pers_Fact, Init_org_Fact, Highest qualification attained:, Work experience

e. Predictors: (Constant), Proactive_pers_Fact, Init_org_Fact, Highest qualification attained:, Work experience, Age

f. Dependent Variable: JC_Neg_Fact

Table 12-17 Model constant and coefficients - Job change negotiation

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.988	.412		4.825	<.001
	Proactive_pers_Fact	.263	.099	.189	2.643	.009
2	(Constant)	1.865	.467		3.994	<.001
	Proactive_pers_Fact	.251	.102	.181	2.462	.015
	Init_org_Fact	.049	.087	.042	.566	.572
3	(Constant)	1.959	.516		3.793	<.001
	Proactive_pers_Fact	.253	.102	.182	2.477	.014
	Init_org_Fact	.054	.088	.046	.619	.537
	Highest qualification attained:	-.027	.062	-.031	-.430	.668
4	(Constant)	1.941	.536		3.619	<.001
	Proactive_pers_Fact	.251	.104	.181	2.426	.016
	Init_org_Fact	.055	.088	.046	.622	.535
	Highest qualification attained:	-.027	.062	-.032	-.438	.662
	Work experience	.009	.072	.009	.124	.902
5	(Constant)	1.939	.538		3.604	<.001
	Proactive_pers_Fact	.252	.104	.182	2.425	.016
	Init_org_Fact	.054	.088	.046	.612	.541
	Highest qualification attained:	-.026	.063	-.031	-.418	.676
	Work experience	.026	.115	.027	.227	.821
	Age	-.017	.090	-.023	-.192	.848

a. Dependent Variable: JC_Neg_Fact

Feedback inquiry – Select model 2

Table 12-18 Model Selection - Feedback inquiry

Model Summary^f

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Change Statistics			Sig. F Change
						F Change	df1	df2	
1	.260 ^a	.067	.062	.88259	.067	13.585	1	188	<.001
2	.299 ^b	.089	.080	.87443	.022	4.523	1	187	.035
3	.304 ^c	.093	.078	.87526	.003	.648	1	186	.422
4	.306 ^d	.094	.074	.87703	.001	.248	1	185	.619
5	.307 ^e	.094	.070	.87923	.000	.074	1	184	.786

a. Predictors: (Constant), Age

b. Predictors: (Constant), Age, Init_org_Fact

c. Predictors: (Constant), Age, Init_org_Fact, Proactive_pers_Fact

d. Predictors: (Constant), Age, Init_org_Fact, Proactive_pers_Fact, Work experience

e. Predictors: (Constant), Age, Init_org_Fact, Proactive_pers_Fact, Work experience, Highest qualification attained:

f. Dependent Variable: FB_inq_Fact

Table 12-19 Model constant and coefficients - Feedback inquiry

		Coefficients^a				
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.601	.181		19.944	<.001
	Age	-.196	.053	-.260	-3.686	<.001
2	(Constant)	2.990	.339		8.828	<.001
	Age	-.195	.053	-.258	-3.701	<.001
	Init_org_Fact	.172	.081	.148	2.127	.035
3	(Constant)	2.734	.465		5.885	<.001
	Age	-.201	.053	-.266	-3.775	<.001
	Init_org_Fact	.158	.083	.136	1.906	.058
	Proactive_pers_Fact	.079	.099	.058	.805	.422
4	(Constant)	2.780	.474		5.859	<.001
	Age	-.168	.085	-.223	-1.970	.050
	Init_org_Fact	.158	.083	.136	1.903	.059
	Proactive_pers_Fact	.083	.099	.060	.833	.406
	Work experience	-.054	.109	-.056	-.498	.619
5	(Constant)	2.833	.515		5.506	<.001
	Age	-.166	.086	-.220	-1.933	.055
	Init_org_Fact	.162	.084	.139	1.918	.057
	Proactive_pers_Fact	.084	.099	.061	.841	.402
	Work experience	-.055	.110	-.057	-.500	.618
	Highest qualification attained:	-.016	.060	-.020	-.272	.786

a. Dependent Variable: FB_inq_Fact

Consideration of future consequences – Select model 1

Table 12-20 Model Selection - Consideration of future consequences

Model Summary^f									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Change Statistics			
						F Change	df1	df2	Sig. F Change
1	.228 ^a	.052	.047	.64742	.052	10.304	1	188	.002
2	.262 ^b	.069	.059	.64335	.017	3.388	1	187	.067
3	.269 ^c	.072	.057	.64390	.003	.678	1	186	.411
4	.271 ^d	.073	.053	.64530	.001	.195	1	185	.659
5	.272 ^e	.074	.049	.64673	.001	.184	1	184	.668

a. Predictors: (Constant), Proactive_pers_Fact

b. Predictors: (Constant), Proactive_pers_Fact, Init_org_Fact

c. Predictors: (Constant), Proactive_pers_Fact, Init_org_Fact, Highest qualification attained:

d. Predictors: (Constant), Proactive_pers_Fact, Init_org_Fact, Highest qualification attained:, Age

e. Predictors: (Constant), Proactive_pers_Fact, Init_org_Fact, Highest qualification attained:, Age, Work experience

f. Dependent Variable: Cons_FC_Fact

Table 12-21 Model constant and coefficients - Consideration of future consequences

		Coefficients ^a		Standardized Coefficients		
Model		Unstandardized Coefficients		Beta	t	Sig.
		B	Std. Error			
1	(Constant)	3.000	.293		10.243	<.001
	Proactive_pers_Fact	.227	.071	.228	3.210	.002
2	(Constant)	2.717	.329		8.253	<.001
	Proactive_pers_Fact	.199	.072	.200	2.774	.006
	Init_org_Fact	.112	.061	.133	1.841	.067
3	(Constant)	2.590	.364		7.124	<.001
	Proactive_pers_Fact	.196	.072	.197	2.722	.007
	Init_org_Fact	.105	.062	.124	1.707	.090
	Highest qualification attained:	.036	.044	.059	.824	.411
4	(Constant)	2.622	.371		7.061	<.001
	Proactive_pers_Fact	.200	.073	.201	2.751	.007
	Init_org_Fact	.104	.062	.123	1.675	.096
	Highest qualification attained:	.038	.044	.063	.873	.384
	Age	-.018	.040	-.032	-.442	.659
5	(Constant)	2.592	.378		6.849	<.001
	Proactive_pers_Fact	.198	.073	.199	2.712	.007
	Init_org_Fact	.104	.062	.122	1.669	.097
	Highest qualification attained:	.039	.044	.063	.875	.383
	Age	-.039	.063	-.070	-.611	.542
	Work experience	.035	.081	.049	.429	.668

a. Dependent Variable: Cons_FC_Fact

Learning goal orientation – No suitable model

Table 12-22 Model Selection - Learning goal orientation

Model Summary ^f									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Change Statistics			
						F Change	df1	df2	Sig. F Change
1	.091 ^a	.008	.003	.90895	.008	1.558	1	188	.213
2	.118 ^b	.014	.003	.90875	.006	1.081	1	187	.300
3	.127 ^c	.016	.000	.91015	.002	.428	1	186	.514
4	.138 ^d	.019	-.002	.91130	.003	.529	1	185	.468
5	.144 ^e	.021	-.006	.91298	.002	.319	1	184	.573

a. Predictors: (Constant), Proactive_pers_Fact

b. Predictors: (Constant), Proactive_pers_Fact, Highest qualification attained:

c. Predictors: (Constant), Proactive_pers_Fact, Highest qualification attained:, Age

d. Predictors: (Constant), Proactive_pers_Fact, Highest qualification attained:, Age, Work experience

e. Predictors: (Constant), Proactive_pers_Fact, Highest qualification attained:, Age, Work experience, Init_org_Fact

f. Dependent Variable: LGO_Fact

Role based self-efficacy – Select model 2

Model Summary^f

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Change Statistics			
						F Change	df1	df2	Sig. F Change
1	.509 ^a	.259	.255	.44800	.259	65.741	1	188	<.001
2	.541 ^b	.293	.285	.43881	.034	8.955	1	187	.003
3	.550 ^c	.302	.291	.43701	.010	2.541	1	186	.113
4	.554 ^d	.307	.292	.43680	.004	1.180	1	185	.279
5	.554 ^e	.307	.289	.43783	.001	.134	1	184	.715

a. Predictors: (Constant), Proactive_pers_Fact

b. Predictors: (Constant), Proactive_pers_Fact, Init_org_Fact

c. Predictors: (Constant), Proactive_pers_Fact, Init_org_Fact, Highest qualification attained:

d. Predictors: (Constant), Proactive_pers_Fact, Init_org_Fact, Highest qualification attained:, Work experience

e. Predictors: (Constant), Proactive_pers_Fact, Init_org_Fact, Highest qualification attained:, Work experience, Age

f. Dependent Variable: RBSE_Fact

Table 12-23 Model constant and coefficients - Role based self-efficacy

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.807	.203		13.848	<.001
	Proactive_pers_Fact	.396	.049	.509	8.108	<.001
2	(Constant)	2.493	.225		11.101	<.001
	Proactive_pers_Fact	.366	.049	.470	7.470	<.001
	Init_org_Fact	.125	.042	.188	2.993	.003
3	(Constant)	2.326	.247		9.426	<.001
	Proactive_pers_Fact	.361	.049	.464	7.401	<.001
	Init_org_Fact	.115	.042	.174	2.754	.006
	Highest qualification attained:	.047	.030	.099	1.594	.113
4	(Constant)	2.254	.256		8.819	<.001
	Proactive_pers_Fact	.354	.049	.454	7.168	<.001
	Init_org_Fact	.117	.042	.177	2.797	.006
	Highest qualification attained:	.044	.030	.092	1.483	.140
	Work experience	.037	.034	.068	1.086	.279
5	(Constant)	2.252	.256		8.787	<.001
	Proactive_pers_Fact	.354	.049	.455	7.160	<.001
	Init_org_Fact	.117	.042	.176	2.774	.006
	Highest qualification attained:	.045	.030	.095	1.507	.134
	Work experience	.053	.055	.096	.966	.335
	Age	-.016	.043	-.036	-.365	.715

a. Dependent Variable: RBSE_Fact

Felt responsibility for change – Select model 2

Table 12-24 Model Selection - Felt responsibility for change

Model Summary ^f									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Change Statistics			
						F Change	df1	df2	Sig. F Change
1	.435 ^a	.189	.185	.66475	.189	43.820	1	188	<.001
2	.487 ^b	.237	.229	.64633	.048	11.871	1	187	<.001
3	.490 ^c	.240	.228	.64700	.002	.609	1	186	.436
4	.491 ^d	.241	.225	.64829	.001	.264	1	185	.608
5	.491 ^e	.241	.220	.65004	.000	.005	1	184	.944

a. Predictors: (Constant), Proactive_pers_Fact

b. Predictors: (Constant), Proactive_pers_Fact, Init_org_Fact

c. Predictors: (Constant), Proactive_pers_Fact, Init_org_Fact, Age

d. Predictors: (Constant), Proactive_pers_Fact, Init_org_Fact, Age, Highest qualification attained:

e. Predictors: (Constant), Proactive_pers_Fact, Init_org_Fact, Age, Highest qualification attained:, Work experience

f. Dependent Variable: FRFC_Fact

Table 12-25 Model constant and coefficients - Felt responsibility for change

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.040	.301		6.785	<.001
	Proactive_pers_Fact	.480	.073	.435	6.620	<.001
2	(Constant)	1.508	.331		4.559	<.001
	Proactive_pers_Fact	.428	.072	.388	5.938	<.001
	Init_org_Fact	.211	.061	.225	3.445	<.001
3	(Constant)	1.579	.343		4.598	<.001
	Proactive_pers_Fact	.436	.073	.395	5.983	<.001
	Init_org_Fact	.209	.061	.223	3.409	<.001
	Age	-.031	.039	-.050	-.780	.436
4	(Constant)	1.653	.373		4.431	<.001
	Proactive_pers_Fact	.438	.073	.396	5.986	<.001
	Init_org_Fact	.214	.062	.228	3.441	<.001
	Age	-.028	.040	-.046	-.705	.482
	Highest qualification attained:	-.023	.044	-.034	-.514	.608
5	(Constant)	1.648	.380		4.332	<.001
	Proactive_pers_Fact	.437	.073	.396	5.953	<.001
	Init_org_Fact	.214	.062	.228	3.431	<.001
	Age	-.032	.063	-.052	-.497	.620
	Highest qualification attained:	-.023	.044	-.034	-.511	.610
	Work experience	.006	.081	.007	.071	.944

a. Dependent Variable: FRFC_Fact

13. Appendix 4 - Multiple stepwise regression results with individual items making up the organisational initiative factor (selected examples)

Strategic scanning – Select model 1

Table 13-1 Model selection - Strategic scanning

Model Summary ^j									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Change Statistics			
						F Change	df1	df2	Sig. F Change
1	.399 ^a	.159	.154	.60463	.159	35.536	1	188	<.001
2	.412 ^b	.169	.161	.60247	.010	2.347	1	187	.127
3	.420 ^c	.176	.163	.60164	.007	1.520	1	186	.219
4	.423 ^d	.179	.161	.60228	.003	.603	1	185	.438
5	.425 ^e	.181	.159	.60318	.002	.449	1	184	.504
6	.426 ^f	.181	.154	.60465	.000	.109	1	183	.741
7	.426 ^g	.182	.150	.60615	.000	.092	1	182	.761
8	.426 ^h	.182	.146	.60778	.000	.028	1	181	.868
9	.426 ⁱ	.182	.141	.60946	.000	.002	1	180	.963

a. Predictors: (Constant), Proactive_pers_Fact

b. Predictors: (Constant), Proactive_pers_Fact, To what extent have you been made aware of the full extent of the responsibility and authority of your role?

c. Predictors: (Constant), Proactive_pers_Fact, To what extent have you been made aware of the full extent of the responsibility and authority of your role?, Highest qualification attained:

d. Predictors: (Constant), Proactive_pers_Fact, To what extent have you been made aware of the full extent of the responsibility and authority of your role?, Highest qualification attained:, To what extent is the mastery of new skills valued in your organisation?

e. Predictors: (Constant), Proactive_pers_Fact, To what extent have you been made aware of the full extent of the responsibility and authority of your role?, Highest qualification attained:, To what extent is the mastery of new skills valued in your organisation?, Age

f. Predictors: (Constant), Proactive_pers_Fact, To what extent have you been made aware of the full extent of the responsibility and authority of your role?, Highest qualification attained:, To what extent is the mastery of new skills valued in your organisation?, Age, How often has the positive outcome of one of your colleague's proactive behaviour been celebrated in your organisation?

g. Predictors: (Constant), Proactive_pers_Fact, To what extent have you been made aware of the full extent of the responsibility and authority of your role?, Highest qualification attained:, To what extent is the mastery of new skills valued in your organisation?, Age, How often has the positive outcome of one of your colleague's proactive behaviour been celebrated in your organisation?, In the past year have you been invited or instructed by your organisation's leadership to consider the long term impact of your actions or the actions of others?

h. Predictors: (Constant), Proactive_pers_Fact, To what extent have you been made aware of the full extent of the responsibility and authority of your role?, Highest qualification attained:, To what extent is the mastery of new skills valued in your organisation?, Age, How often has the positive outcome of one of your colleague's proactive behaviour been celebrated in your organisation?, In the past year have you been invited or instructed by your organisation's leadership to consider the long term impact of your actions or the actions of others?, Work experience

i. Predictors: (Constant), Proactive_pers_Fact, To what extent have you been made aware of the full extent of the responsibility and authority of your role?, Highest qualification attained:, To what extent is the mastery of new skills valued in your organisation?, Age, How often has the positive outcome of one of your colleague's proactive behaviour been celebrated in your organisation?, In the past year have you been invited or instructed by your organisation's leadership to consider the long term impact of your actions or the actions of others?, Work experience, In the past year how frequently have you been asked by your leaders to act proactively or to take initiative?

i. Dependent Variable: Strat Scan Fact

Table 13-2 Model constant and coefficients (shortened) - Strategic scanning

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.373	.274		8.675	<.001
	Proactive_pers_Fact	.393	.066	.399	5.961	<.001
2	(Constant)	2.187	.298		7.325	<.001
	Proactive_pers_Fact	.379	.066	.384	5.700	<.001
	To what extent have you been made aware of the full extent of the responsibility and authority of your role?	.064	.042	.103	1.532	.127

Problem prevention – Select model 3

Table 13-3 Model selection - Problem prevention

Model Summary ⁱ									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Change Statistics			
						F Change	df1	df2	Sig. F Change
1	.382 ^a	.146	.141	.56674	.146	32.141	1	188	<.001
2	.414 ^b	.172	.163	.55962	.026	5.810	1	187	.017
3	.445 ^c	.198	.185	.55209	.026	6.137	1	186	.014
4	.448 ^d	.201	.183	.55275	.002	.553	1	185	.458
5	.450 ^e	.203	.181	.55348	.002	.515	1	184	.474
6	.452 ^f	.205	.178	.55439	.002	.396	1	183	.530
7	.454 ^g	.206	.176	.55533	.002	.385	1	182	.536
8	.456 ^h	.208	.173	.55610	.002	.496	1	181	.482

a. Predictors: (Constant), Proactive_pers_Fact

b. Predictors: (Constant), Proactive_pers_Fact, In the past year have you been invited or instructed by your organisation's leadership to consider the long term impact of your actions or the actions of others?

c. Predictors: (Constant), Proactive_pers_Fact, In the past year have you been invited or instructed by your organisation's leadership to consider the long term impact of your actions or the actions of others?, Highest qualification attained:

d. Predictors: (Constant), Proactive_pers_Fact, In the past year have you been invited or instructed by your organisation's leadership to consider the long term impact of your actions or the actions of others?, Highest qualification attained:, Age

e. Predictors: (Constant), Proactive_pers_Fact, In the past year have you been invited or instructed by your organisation's leadership to consider the long term impact of your actions or the actions of others?, Highest qualification attained:, Age, To what extent have you been made aware of the full extent of the responsibility and authority of your role?

f. Predictors: (Constant), Proactive_pers_Fact, In the past year have you been invited or instructed by your organisation's leadership to consider the long term impact of your actions or the actions of others?, Highest qualification attained:, Age, To what extent have you been made aware of the full extent of the responsibility and authority of your role?, Work experience

g. Predictors: (Constant), Proactive_pers_Fact, In the past year have you been invited or instructed by your organisation's leadership to consider the long term impact of your actions or the actions of others?, Highest qualification attained:, Age, To what extent have you been made aware of the full extent of the responsibility and authority of your role?, Work experience, How often has the positive outcome of one of your colleague's proactive behaviour been celebrated in your organisation?

h. Predictors: (Constant), Proactive_pers_Fact, In the past year have you been invited or instructed by your organisation's leadership to consider the long term impact of your actions or the actions of others?, Highest qualification attained:, Age, To what extent have you been made aware of the full extent of the responsibility and authority of your role?, Work experience, How often has the positive outcome of one of your colleague's proactive behaviour been celebrated in your organisation?, To what extent is the mastery of new skills valued in your organisation?

i. Dependent Variable: PP_Fact

Table 13-4 Model constant and coefficients (shortened) - Problem prevention

		Coefficients^a				
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.651	.256		10.340	<.001
	Proactive_pers_Fact	.351	.062	.382	5.669	<.001
2	(Constant)	2.476	.263		9.402	<.001
	Proactive_pers_Fact	.333	.061	.363	5.421	<.001
	In the past year have you been invited or instructed by your organisation's leadership to consider the long term impact of your actions or the actions of others?	.085	.035	.162	2.410	.017
3	(Constant)	2.831	.297		9.543	<.001
	Proactive_pers_Fact	.345	.061	.376	5.666	<.001
	In the past year have you been invited or instructed by your organisation's leadership to consider the long term impact of your actions or the actions of others?	.092	.035	.176	2.655	.009
	Highest qualification attained:	-.092	.037	-.164	-2.477	.014

14. Appendix 5 - Ethical clearance

**Gordon Institute
of Business Science**
University of Pretoria

Ethical Clearance
Approved

Dear Marten Daling,

Please be advised that your application for **Ethical** Clearance has been approved.
You are therefore allowed to continue collecting your data.
We wish you everything of the best for the rest of the project.

[Ethical Clearance Form](#)

Kind Regards

This email has been sent from an unmonitored email account. If you have any comments or concerns, please contact the GIBS Research Admin team.

GIBS ETHICAL CLEARANCE APPLICATION FORM 2021/22

G. APPROVALS FOR/OF THIS APPLICATION

When the applicant is a student of GIBS, the applicant must please ensure that the supervisor and co-supervisor (where relevant) has signed the form before submission

STUDENT RESEARCHER/APPLICANT:

29. I affirm that all relevant information has been provided in this form and its attachments and that all statements made are correct.

Student Researcher's Name in capital letters: MARTEN THEO DALING

Date: 14 Aug 2022

Supervisor Name in capital letters: KERRIN MYRES

Date: 14 Aug 2022

Co-supervisor Name in capital letters:

Date: 14 Aug 2022

Note: GIBS shall do everything in its power to protect the personal information supplied herein, in accordance to its company privacy policies as well the Protection of Personal Information Act, 2013. Access to all of the above provided personal information is restricted, only employees who need the information to perform a specific job are granted access to this information.

Decision:

Approved

REC comments:

Goodluck

Date: 19 Aug 2022

15. Appendix 6 - Declaration of assistance

25. APPENDIX 6 CERTIFICATION OF ADDITIONAL SUPPORT

(Additional support retained or not - to be **completed by all students**)

Please note that failure to comply and report on this honestly will result in disciplinary action

I hereby certify that (please indicate which statement applies):

- **I DID NOT RECEIVE** any additional/outside assistance (i.e. statistical, transcriptional, and/or editorial services) on my research report:
.....

- **I RECEIVED** additional/outside assistance (i.e. statistical, transcriptional, and/or editorial services) on my research report ✓
.....

If any additional services were retained– **please indicate below which:**

- Statistician**
- Transcriber**
- Editor**
- Other (please specify:.....)**

Please provide the name(s) and contact details of all retained:

NAME: Barbara Wood

EMAIL ADDRESS: woodlandsmedia@gmail.com

CONTACT NUMBER: +27 44 873 5445

TYPE OF SERVICE: Editing

NAME:

EMAIL ADDRESS:

CONTACT NUMBER:

TYPE OF SERVICE:

NAME:


EMAIL ADDRESS:

CONTACT NUMBER:

TYPE OF SERVICE:

I hereby declare that all *statistical write-ups and thematic interpretations of the results for my study* were completed by myself without outside assistance

NAME OF STUDENT: Marten Theo Daling
.....

SIGNATURE: 
.....

STUDENT NUMBER:
22038427
.....

STUDENT EMAIL ADDRESS:
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