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# **Gordon Institute of Business Science**

University of Pretoria

**The *Janus* face of professional trade unions – an organisational justice  
perspective**

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A research project submitted to the Gordon Institute of Business Science, University of Pretoria, in partial fulfilment of the requirements for the degree of Master of Business Administration.

10 November 2014

## **Abstract**

This research study investigated the concept of professional workers' propensity to embark on industrial action in the context of organisational justice on an individual level; as well as the collective conditions of union commitment and professionalism. The study also made enquiries into the perceived Janus face of professional trade unions in terms of how they aim to be perceived as professional associations, acting as guardians of standards, professionalism and their members' status, which is contradicted by their organisational mandates to extract concessions from employers through industrial action on a collective level. Data was collected through a quantitative approach, using survey questionnaires which were distributed to scheduled airline pilots in South Africa in their capacity as professional workers. The survey questionnaires elicited 199 responses, which provided valuable insights into professional workers' propensity to embark on industrial action in the context of organisational justice.

The responses, on average, were instructive, aside from the fact that no significance could be attributed to professionalism as a moderator of professional workers' propensity to embark on industrial action. Contrary to expectations and prior research, it was found that the collective conditions captured by union commitment were statistically more significant than any individual factors, represented by organisational justice constructs, on professional workers' propensity to embark on industrial action. Professional trade unions are indeed Janus-faced; a duality that presents trade unions with a dichotomy in that on the one hand they have a mandate to extract concessions from employers, but on the other hand are expected to remain professional and uphold the status and standards of the industries that they represent.

## **Key Words**

Professional Workers, Organisational Justice, Union Commitment, Industrial Action.

## **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.

de Villiers Engelbrecht

10 November 2014

## Dedication

Denise and Alex; thank you for your love, patience, support and understanding –

*...I wish I was as fortunate, as fortunate as me...;*

*...I wish I was a messenger and all the news was good...;*

*...I wish I was the souvenir you kept your house key on...;*

*...I wish I was the pedal brake that you depended on...;*

*...I wish I was the verb “to trust” and never let you down...;*

*...I wish I was a radio song, the one that you turned up...*

*Pearl Jam, 1998*

To my friends and family - thank you for taking a pause and your unquestioned support. Thank you for reminding me of the more important things in life.

## **Acknowledgements**

I wish to extend my sincere gratitude to Professor Albert Wöcke for his guidance in converting my burning curiosity into a subject of academic research, which is presented herein.

Thank you to Ms Jaclyn de Klerk for performing the statistical analysis of this research study and providing assistance at a critical time in the research process; your professionalism is sincerely appreciated.

I wish to thank the chief executive officer, Mr Foster, and my colleagues at SA Airlink Proprietary Limited, for their unwavering support during the last two years and their professionalism in dealing with an often absent and distant colleague.

Thank you to all the respondents in the data collection process in the absence of which the research project would not have been possible. A special word of thanks for your explicit support, in no particular order – Captain Lintvelt, Captain Henning, Captain Aitken, Captain Mes, Mr Foster (SA Airlink Proprietary Limited), Mr Venter (Comair Limited) and Mr Bezuidenhout (Mango Airlines SOC Limited).

Finally, a word of gratitude to the faculty and administration support staff at the Gordon Institute of Business Science, University of Pretoria. Thank you to my fellow students, for sharing this journey of knowledge and discovery. Thank you to Mr Lloyd Hughes, Mr Gerhard Bester, Mr Jason Knock, Mr Jamie de Abrieu, Mr Chad Reimers, Mr Neill Andrews and Mr Christo Lotter for the mutual support, camaraderie and the humour.

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## **1. Introduction**

### **1.1 The Janus face of professional trade unions**

Historically, organised labour performed three functions; labour recognition, redistribution of economic utility from capital to labour, and the facility of labour with a voice in the business, political and legal settings (Crain, 2006). Trade unions performed an important role in societal justice as they served to protect the interests of their members, emphasised the human aspects of labour commodities, sought to shorten the power distance between labour and management, and fostered democratic values and culture (D'Art & Turner, 2008).

Ebbinghaus, Göbel and Koos (2011) attributed trade union membership to various theoretical frameworks, the first of which was a rational-choice explanation that assumed that individuals are utility maximisers and that their decision to retain trade union membership depended on whether the expected benefits of membership exceeded the opportunity cost of membership (Olson, 1965, cited by Ebbinghaus et al., 2011). From a sociological perspective however, individuals joined trade unions to assert their personal interests, obtain reputation or status, seek solidarity or to form or partake in a specific identity that they related to. This concept of social capital projected the principle of trust and provided a structural element of involvement in networks and associations (Ebbinghaus et al., 2011).

Ebbinghaus et al. (2011) continued that individual characteristics also affected trade union membership, with specific reference to age, gender, political orientation and education. The authors found that highly skilled and better educated individuals had higher individual bargaining power and were more aligned with management. Highly skilled and better educated individuals were therefore less inclined to join a trade union than their lesser educated or skilled peers. This perspective was confirmed by Pernicka and Lücking (2012), who observed that knowledge workers drew on their individual primary and structural power, as opposed to collective power, to further their interests.

Buttigieg, Deery and Iverson (2008) found that trade unions were facing a crisis in industrialised economies. Trade unions experienced a protracted decline in membership density rates with a corresponding decline in political and industrial influence; a trend confirmed by Ebbinghaus et al. (2011) and Darlington (2012), with

the latter noting that incidents of industrial action had declined over the last 30 years. Ebbinghaus and Visser (1999) attributed this decline to the velocity of change in many developed economies, with manufacturing employment transforming to knowledge work, thereby shifting an increasing level of employment to an employee demographic that should theoretically be less inclined to join a trade union (Ebbinghaus et al., 2011). D'Art and Turner (2008) found that employees in higher level occupations with job autonomy and higher levels of remuneration were less likely to join a trade union, confirming the findings of Ebbinghaus et al. (2011). Still, Pernicka and Reichel (2014) more recently observed an increase in trade union membership amongst highly skilled workers, which could be attributed to the de-professionalisation, formalisation, bureaucracy and division of professional work by employers.

Notwithstanding the general decline in trade union membership, the increase in trade union membership of professional workers is noteworthy when considering the concepts of professionalism and professional perception, which directly contradicted the mandate of trade unions to extract concessions from employers through the use of methods such as industrial action, which did not accord with the perception of professionalism; hence the reference to the Janus face of professionals and professional trade unions.

## **1.2 Research scope and relevance**

Cloutier, Denis and Bilodeau (2012) noted that limited research has focused on the individual agency of employees' propensity to initiate industrial action. This view was confirmed by Ebbinghaus et al. (2011), who remarked that the relationships between institutions, organisational traits and individual traits have been ignored from an empirical perspective. Moreover, most of the research in this field has been performed on routine-task workers as opposed to professional workers.

Having regard for the above and the increase in trade union membership of professional workers as observed by Pernicka and Reichel (2014), as well as the manifest contradictions between academics on the constructs of professionalism and the propensity of professional workers to belong to trade unions and embark on industrial action, this research study aimed to gain a better understanding of professional workers' propensity to embark on industrial action in the context of organisational justice. On a collective level, the research study was interested in the ambiguity that manifests in professional trade unions, which are perceived to act as the

custodian of the standards, status and professionalism of their members, but often contradict this position through their mandate to extract concessions from employers through collective or industrial action.

There were sufficient contradictions in current academic literature on the constructs of professionalism, organisational justice and the propensity of professional workers to embark on industrial action to motivate additional research on these constructs. This research study tested the thresholds of perceived organisational injustices which may cause a professional worker to embark on industrial action on an individual level; as well as the moderating effects of the perception of professionalism imbued by professional trade unions, as opposed to the aggravating effects of trade union commitment on a collective level. This research study aimed to provide more clarity on the constructs upon which academics have substantially failed to agree to date. The study has relevance to the manner in which employers engage with professional workers from an organisational justice perspective, due to the material financial consequences of professional workers embarking on industrial action (Kaufman, 2004).

The study is also relevant to trade unions and will provide a better understanding in regards to the duality, or conflict, which exists within professional trade unions, which act as the custodians of the standards and professional standings of their members, but are often required to extract concessions from employers through their mandate as trade unions.

Literature on organisational behaviour, human resource management and sociology was of interest for this research study.

### **1.3 The South African context**

The Republic of South Africa ('South Africa') is an emerging market economy (International Monetary Fund, 2013) that demonstrates characteristics of a liberal market economy in which exchange occurs at arm's length and formal contracting is the dominant legal institution (Hall & Soskice, 2001). The South African economy does however share attributes of coordinated market economies, including, but not limited to, its labour regulations. The post-apartheid political economy is characterised by politically and institutionally powerful trade unions and could therefore be described as a mixed market economy from a political economy perspective (Natrass, 2013). This may have a positive effect on trade unions' perceived bargaining power from a

sovereign perspective.

Chapter 18 of the Constitution of South Africa, Act 108 of 1996, guarantees South African citizens the right of freedom of association. Chapter 23 (Labour Relations) of the Constitution determines that “Everyone has the right to fair labour practices. Every worker has the right to form and join a trade union; to participate in the activities and programmes of a trade union; and to strike.” (International Labour Organization, 2011). Strike action and lock-outs are regulated by chapter IV (chapters 64 to 77) of the Labour Relations Act, 66 of 1995 (‘the Labour Relations Act’). In addition to the Labour Relations Act, the relationship between South African employees and employers are regulated by a range of acts, including but not limited to the Basic Conditions of Employment Act, 1998; the Employment Equity Act, 1998; the Skills Development Act, 1998; and the Occupational Health and Safety Act, 1993.

The International Labour Organization (2014) measured South Africa’s total union density rate at 29.7% of the total working population in 2010, with the mining industry leading the sectorial density rates at 73.7% followed by public administration with a density rate of 40.4%. South Africa has experienced a material increase in industrial action in recent years, with days of work lost due to strikes and lock-outs increasing from 1,526,796 days in 2009 to 3,309,884 in 2012, with the biggest work day losses recorded in the mining industry, which recorded a near eight-fold increase from 413,449 days in 2009 to 2,729,843 days in 2012 (International Labour Organization, 2014). The World Bank (2014) described labour strife as being one of the major contributing factors for South Africa’s declining growth rate from 3.5% in 2011 to 2.5% in 2012, noting that mining output had contracted by 4.3% over the same period. Industrial action is currently topical in the context of South Africa, featuring in various debates with reference to its effects, both perceived and tangible, on the economic future of the country.

The available academic literature suggests ambivalence regarding professional workers’ propensity to organise collectively (Pernicka & Lücking, 2012). Aside from teachers, police officers and nurses employed within the South African public administration who were mostly affiliated with the Congress of South African Trade Unions, union affiliation by professional workers was not common in South Africa; let alone professional workers embarking on industrial action. In the most recent case of possible industrial action by professional workers, the Commission for Conciliation, Mediation and Arbitration (‘CCMA’) issued a strike certificate in favour of the Solidarity

trade union, acting on behalf of the Mango Airlines SOC Limited pilot body, on 22 January 2014, pursuant to a dispute that arose from a three-year wage agreement signed between the parties during 2011. On 28 January 2014 it was however reported that the trade union had acquiesced to a request from the CCMA to continue with negotiations with the company in a bid to arrest industrial action (SAPA, 2014). No industrial action took place, which begged the question: To what extent do professional workers, in this specific case airline pilots, have the propensity to embark on industrial action?

#### **1.4 The professional worker union context**

Pernicka and Reichel (2014) observed an increase in union membership of highly skilled workers, which could be attributed to the de-professionalisation, formalisation, bureaucracy and division of professional work by employers. Bennet (2006), quoted by Harvey and Turnbull (2012), explained that most prospective airline pilots, as professional workers, reside in middle or upper-middle class households and were expected to hold more moderate perspectives on industrial action, given their socio-economic background. While this may appear to be a gross generalisation, the authors explained that airline pilots' ambivalence towards industrial action could be explained by their collective desire to be viewed as a professional body and their trade union as a professional association. This explained the professional trade unions' attempted separation from other union movements by abandoning the label of union in favour of an *association*, which appeared to be more professional.

The Air Line Pilots' Association of South Africa ('ALPA-SA'), as an example, differentiated itself from traditional trade unions by declaring that it is the only organisation that caters exclusively for the need of airline pilots. ALPA-SA strived "... for a safer system of air transportation and applying professional standards throughout the industry; representation of our members at all relevant national and international forums; exchanging pertinent technical, industrial and professional information, upholding the honour and dignity of all members and staff and ensuring responsible, accurate and informed publicity regarding the affairs of the Association and the industry". The association expected its members "... to strive for co-operation in all aspects that affect their common interests, whilst respecting individual employment rights and privileges" (Air Line Pilots' Association of South Africa, 2014).



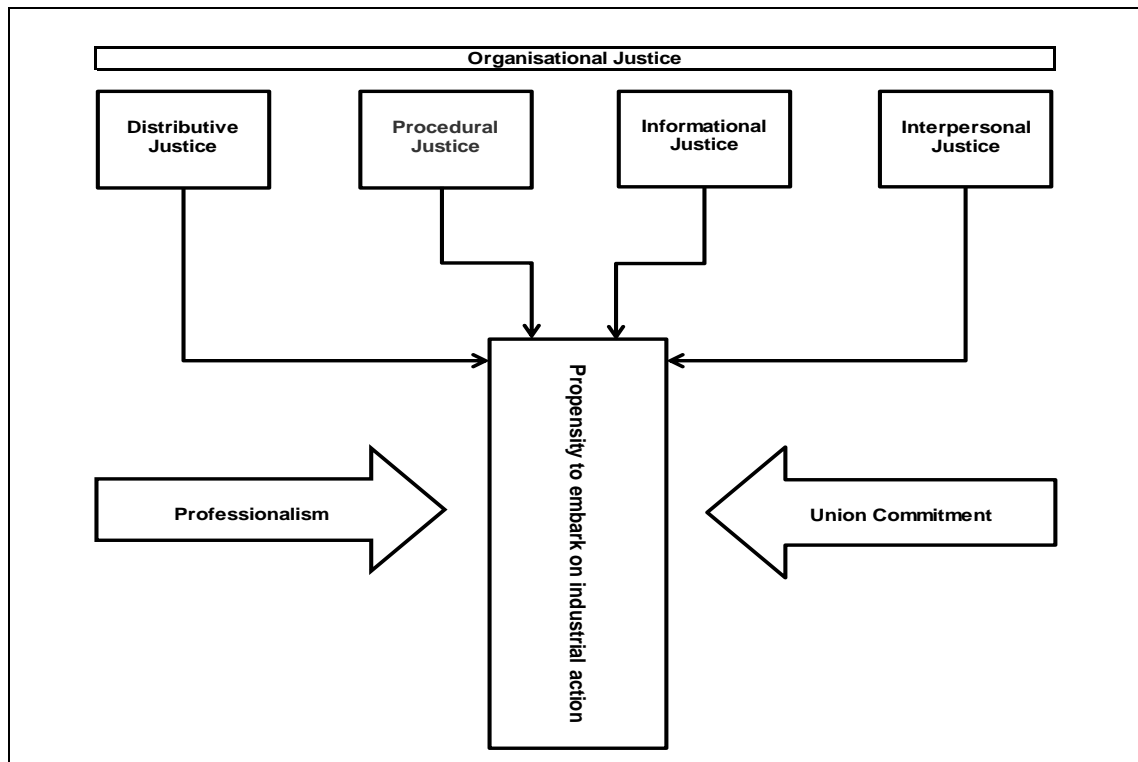
## 1.5 Research problem

The scope of this research study was to develop the current academic literature on professional workers' propensity to embark on industrial action, by testing the thresholds of perceived organisational injustices which may cause professional workers to embark on industrial action from an individual agency perspective. In addition, the research investigated the moderating effects of professionalism as opposed to the aggravating effects of union commitment on industrial action. This research study explored the Janus-faced professional trade unions and the tensions caused by their duality in terms of their desire to be perceived as a professional association, which contradicts their mandate to extract concessions from employers in their capacity as trade unions.

In summary, this study researched –

1. The context of perceived organisational injustices that cause professional workers to embark on industrial action;
2. The extent to which union commitment aggravates professional workers' propensity to embark on industrial action, if at all;
3. The extent to which the perception of the union as a professional association moderates professional workers' propensity to embark on industrial action, if at all; and
4. The tensions created by the professional unions' duality, which are ostensibly caused by their desire to be perceived as professional associations, which contradicts their mandate as unions to extract concessions from employers through collective and industrial action; therefore professionalism as a moderating factor and union commitment as an aggravating factor for professional workers to embark on industrial action.

**Figure 1: Professional workers' propensity to embark on industrial action**



## 1.6 Outline of the research report

This research report is presented as follows -

- Chapter 2      A literature review that provides insight into the different academic constructs of interest for this research study, as well as a review of the significant and relevant literature available on the research topic;
- Chapter 3      The research questions or hypotheses derived from the existing theories and previous empirical studies;
- Chapter 4      The research methodology and an explanation of how the data collection, analysis and interpretation took place to test the hypotheses presented in Chapter 3;
- Chapter 5      The results and findings of the study;
- Chapter 6      A discussion of the findings of the study; and

## Chapter 7

The conclusion of the study where limitations and recommendations for further research are outlined.

## **2. Theory and literature review**

### **2.1 Introduction**

The theory and literature review offers a review of the significant and relevant literature available on the research topic. The review critically evaluates the relevant literature of significance to the research question.

The theory and literature review follows a structure of briefly defining the philosophical dynamic between working class power (employees) and capitalist-class interests (employers), followed by a general overview of the bargaining power dynamic in the professional worker and employer relationship. The review then narrows towards the elements which are important to the context of the research problem by discussing the available academic literature on the constructs of professionalism, organisational justice and trade union commitment.

The theory and literature review concludes with a summary which relates the existing academic literature to the research hypotheses listed in chapter 3 and provides context to the research topic (Saunders & Lewis, 2012).

### **2.2 Working class power (labour) and capital-class interests (employers)**

The implicit monopolistic power of working class associations within labour markets interfered with their efficient operation, resulting in trade unions extracting monopoly rents from employers that perpetuated the inefficient allocation of scarce resources in the form of higher wages at the expense of the capitalist class and non-unionised workers. This game of class struggle was not only determined by capitalism, but depended on multiple interdependent economic, institutional and political conditions (Wright, 2000). Crain (2006) built on this power dynamic thesis between the working class and the capital class and inferred that organised labour performs three basic functions: labour recognition; redistribution of economic utility from capital to labour through bargaining; and providing labour with a voice in the business, political and legal locales.

Buttigieg et al. (2008) observed that trade unions face a crisis in industrialised economies and have experienced a protracted decline in trade union density rates with a corresponding decline in political and industrial influence, a trend confirmed by

Ebbinghaus et al. (2011), Campbell (2013) and Darlington (2012), with the latter noting that incidents of industrial action have declined over the last 30 years. Ebbinghaus and Visser (1999) attributed this decline to the speed of change in many developed economies, whereby manufacturing or routine-task employment shifted to knowledge work, thereby increasing the level of employment amongst an employee demographic that should theoretically be less inclined to join a trade union. This shift in employment was confirmed by Campbell (2013), who observed an increase in the professionalisation of employees as well as professionalism in the work environment.

D'Art and Turner (2008) suggested that modern methods of management and employee engagement, empowerment, and the establishment of a new psychological contract have changed employees' beliefs, which in turn may have led to a decline in trade union membership. Pernicka and Lücking (2012) agreed with this observation and attributed the decline in observed trade union densities to structural labour market changes towards a service and knowledge economy, as well as behavioural changes that have manifested in workers leaning towards a more individual orientation compared to traditional collective orientations.

Cloutier et al. (2012) defined strike or industrial action as the prevention of employers' economic output to impose costs on employers for the purpose of persuading employers to improve the employees' working conditions, principally by increasing wages and improving employment benefits. Strike propensity was defined by Martin and Sinclair (2001) as reflecting trade union members' readiness to embark on industrial action in support of the collective goals of a trade union. Strike propensity was expected to increase when employees believed that a group with whom they identified was treated unreasonably, and that collective action in protest would be effective in addressing said injustice (Klandermans, 2002). Klandermans (2002) identified three factors that influence an employee's strike propensity as perceived injustice, identification with the collective, and perceived utility of participation, or instrumentality in trade union parlance. Kelloway, Francis, Catano and Teed (2007) noted that the propensity to embark on protest or industrial action was a strong predictor of actual participation.

Cloutier et al. (2012) noted that limited research has focused on the individual agency of employees' propensity to initiate industrial action. This view was confirmed by Ebbinghaus et al. (2011), who remarked that the relationships between institutions, organisational and individual traits have been ignored from an empirical perspective.

These individual agencies and relational constructs may, or may not, have explained the decline in industrial action over the last 30 years (Darlington, 2012); a theme that was built on in this research study with specific reference to professional workers from an organisational justice perspective; a factor specifically identified by Klandermans (2002) in predicting strike propensities and referred to by Campbell (2013), D'Art and Turner (2008), and Pernicka and Lucking (2012).

### **2.3 Professionalism / Professional workers**

Professionalism is a subjective concept which is difficult to define. There appears to be little consensus between academics about the constructs that define professions or professionalism, and the term has become diluted to the extent that professionalism is referred to as a societal class, akin to, for example, middle class, where any individual could claim to be a professional. From an academic perspective however, professionalism referred to the observance of a collection of qualities that are associated with generally accepted practice within a given area of activity. The concept implied openness and exposure to scrutiny, whereby an individual's values and actions could be analysed for validity against accepted norms and standards (Feather, 2014).

In attempting to define professional workers for the purposes of this research study, the concept was found to be used synonymously and interchangeably with knowledge workers. Drucker (2002) described knowledge workers as workers who have gained material theoretical knowledge through formal education and the continuous acquisition of knowledge in a specific field. Knowledge workers identify themselves as professionals and enjoy an association with other professionals who are engaged in specialised fields. Knowledge work is often attributed to varied and complex work as opposed to routine and operational tasks (Benson & Brown, 2007). Knowledge and professional workers rely on theoretical knowledge and intellectual skills, and have the ability to learn and operate with high autonomy (Pernicka & Lücking, 2012). Campbell (2013) and Feather (2014) defined professions by the presence of a regulatory body vested with the authority to protect the interests of the public, as well as the management of the credentials, standards and discipline of its members. Knowledge workers are often described as working in the technology, business and information sectors, or as having a professional status such as an attorney, doctor or engineer. Knowledge workers are deemed to add tangible and intangible value to their organisations and their retention is perceived to be of importance to the organisation

(Benson & Brown, 2007).

Professional workers are in a contradictory class location in terms of traditional class theories, given that professional workers own their individual intellectual capital and, as a result, could either work autonomously or in a completely captive employment relationship (Wright, 1978). This construct of professionalism sets those apart who work in specialised environments as opposed to employees in routine-task positions (Feather, 2014). This perception was confirmed by Benson and Brown (2007) who observed three dimensions of knowledge work: its dynamic nature; its interdependence with other functions in an organisation; and the degree of autonomy that knowledge workers enjoy. Pernicka and Reichel (2014) continued on the theme proposed by Wright (2000) regarding a class struggle being dependent on multiple factors, including the institutional factors discussed in section 2.2, by arguing that highly skilled workers differ in their normative orientations and propensities to join trade unions, as opposed to lower level or routine task workers. The authors devised an ideal-typology based on institutional logics, which are frames of reference that motivate workers' actions and their sense of self identity (Thornton, Acasio, & Lounsbury, 2012). Based on the institutional logics approach the authors identified two types of highly skilled workers: the employed professional or professional worker; and the knowledge worker.

The professional workers' prevailing institutional logics relate to a career trajectory that depends on the interests of being employed (professional logics), whereas the knowledge workers' careers were more closely related to the market than to that of an organisation (market logic).

The approach of Pernicka and Reichel (2014) was a clear departure from that of Benson and Brown (2007), and their work drew a definitive distinction between professional workers and knowledge workers which was useful for the purposes of this research study. This research study focused on the employed professional, or professional worker, as defined by Pernicka and Reichel (2014), and aimed to explore beyond the binary outcome of employment exit or substitution studied by Pernicka and Reichel (2014) by way of considering the context of perceived organisational injustices that may, or may not, have increased the propensity of professional workers to embark on industrial action (Klandermans, 2002).

### **2.3.1 Professional perception**

Highly skilled workers identify more with the objectives of their employers and their professional peers than with lower level employees or trade unions (Pernicka & Reichel, 2014). Highly skilled workers are thus expected to develop concurrence as opposed to conflict with their employers, and have a higher attitudinal devotion to their employers with a lower intention to depart from their employ (Benson & Brown, 2007). Knowledge workers' level of attitudinal and behavioural commitment are more likely to be influenced by organisational factors than their routine-task co-workers, which was of specific interest from an organisational justice perspective, especially considering the observations of Klandermans (2002) that employees' propensity to embark on industrial action increases in the presence of perceived injustice.

The institutional aspects discussed in section 2.3 played a material role in trade union membership, bringing about a sense of identity and solidarity; and in the case of professional workers, professionalism (Pernicka & Reichel, 2014). Campbell (2013) added to this theme by noting that a trade union represents its members' interests with regards to their employers in a bid to maintain its monopoly labour interests; while the profession represents the public's interests. Having regard for the contradiction afore, Campbell (2013) added that professional workers' commitment to their craft may lead to their use of industrial action to achieve economic as well as professional goals.

The discussion above regarding the professional and social perceptions of professional workers highlights the contradiction of professionals and professional trade unions, in that on the one hand the trade unions act as the custodian of the standards, status and professionalism of its members, but on the other hand they extract concessions from employers through collective or industrial action.

### **2.3.2 Bargaining power of professional workers**

Following from section 2.2, Kelly (1998), Wright (2000), Blyton and Turnbull (2004), as quoted by Harvey and Turnbull (2012), noted that trade union power, and the company's power reciprocally, is determined by a range of interdependent factors, including the environmental context in which capital and labour interact. Trade union monopoly power was used to countervail employer power in wage negotiations, which resulted in more favourable terms and conditions of employment (Kaufman, 2005). The inelastic demand for labour was considered a crucial ingredient for trade union success or power (Kaufman, 2004), which was certainly the case for professional workers given the relatively high barriers of entry to employment in terms of skills,



training and capital required, as opposed to routine-task workers. It was therefore fair to expect professional trade unions to exercise meaningful bargaining power in their negotiations with employers.

Wright (2000) and Kaufman (2004) agreed that most classical economists perceive trade unions as being labour market monopolists whose purpose it is to enhance the wellbeing of their members by setting wages above the market level and thereby extracting union-imposed monopoly rents on employers, non-union workers and consumers. Trade unions gained agency through their control of labour, as well as the potential threat of industrial action and its associated costs (Kaufman, 2004), which was of interest for this research study as knowledge and professional workers were deemed to add tangible and intangible value to their organisations and their retention was perceived to be of importance to the organisation (Benson & Brown, 2007).

Campbell (2013) noted that professional workers were increasingly employed by organisations as opposed to the historical self-employed model of liberal professions. Pernicka and Reichel (2014) found that the increase in trade union membership of highly skilled workers, as opposed to a general decline in trade union membership (Buttigieg et al., 2008), could be attributed to the de-professionalisation, formalisation, bureaucracy and division of professional work by employers to abate the position of professions (Pernicka & Lücking, 2012; Feather, 2014). Feather (2014) observed that professions or professionalism could be described as a Janus identity, where the one face depicts a professional that complies with practices laid down by management and the other face adheres to practices true to their respective professions. Professions are challenged and threatened by organisations, with professional workers being described as passive victims, without power against the demands of bureaucracy, standardisation and control creep which lead professions to become commoditised (Evetts, 2011). Yet this portrayal of professional workers as passive victims appears overly dramatic due to their observed propensity to organise collectively (Pernicka & Reichel, 2014). In contradiction to Evetts (2011), Harvey and Turnbull (2012), in concurrence with Kaufman (2004), observed that professional workers were traditionally well positioned to extract concessions from their employers due to their strategic skills and the financial impact of industrial action or even the threat thereof.

Directly contradicting the findings of Harvey and Turnbull (2012) and Kaufman (2004), however, D'Art and Turner (2008) concluded a study indicating that employees in higher level occupations with job autonomy and higher levels of remuneration were

less likely to join a trade union. This confirmed the findings of Ebbinghaus et al. (2011) and Pernicka and Lücking (2012), who observed that professional workers traditionally drew on their individual primary and structural power, as opposed to collective power, to extract concessions from employers. Even though professional workers may have been interested in collective action, such interest may not necessarily have resulted in trade union membership (Pernicka & Lücking, 2012).

The findings of Pernicka and Lücking (2012) and D'Art and Turner (2008) were however contradicted by Campbell and Haiven (2008), as cited in Campbell (2013), who observed that although professional workers have traditionally not subscribed to collective action, the situation has changed materially in recent times as professional workers have become more affiliated to trade unions. Less evident from the respective studies referred to above were the organisational justice perceptions that may cause professional workers to organise collectively or not.

Ownership of their own intellectual capital contributes to a secure professional identity, but employment dependency may provoke professional workers to unite against the employers' power, which opens up new perspectives on professional workers' bargaining power, notwithstanding the fact that professionals are often opposed to trade union membership as competing options for occupational power (Crouch, 1982; Parkin, 1979, cited in Campbell & Haiven, 2008). Benson and Brown (2007) found that knowledge workers, or professional workers in their definition, have a higher attitudinal commitment and a lower intention to quit employment than their routine-task colleagues, contradicting the findings of Cohen (1992), as quoted by Campbell (2013), that higher status occupations have traditionally shown lower organisational commitment. Benson and Brown (2007) concluded in their study that the attitudinal and behavioural commitment of knowledge workers are more likely to be influenced by organisational factors, which was of interest for this study with specific reference to organisational justice.

Judging from the above, it is fair to conclude that there is a material degree of contradiction between the various theoretical concepts and empirical studies on the propensity of professional workers to organise collectively, a concept that will be further explored from an organisational justice perspective in this research study.

## **2.4 Organisational justice**

### **2.4.1 The evolution of organisational justice research**

According to Kelly (1998), justice should form the central agenda for industrial relations. In the context of social exchange, the concept of justice reflects the degree of reciprocity between employers and employees (Colquitt, Scott, Rodell, Long, Zapata, Conlon & Wesson, 2013). Research in the constructs of organisational justice has increased materially in recent years, following the realisation that the perception of fair treatment results in positive employee behavioural outcomes (Zapata-Phelan, Colquitt, Scott, & Livingston, 2009). Organisational justice describes the role of fairness inasmuch as it relates to the ways in which employees determine if they have been treated fairly in the workplace (Moorman, 1991). Whereas initial studies focused solely on distributive justice, Tyler and Blader (2003) found that notwithstanding the notable findings related to distributive justice, concerns were raised that distributive justice perceptions were often biased, as employees more often than not believed that they were more deserving of more favourable distributive outcomes than what may practically have been the case. Moorman (1991) identified a two-factor model of organisational justice: distributive justice, which describes the fairness of the remuneration an employee receives; and procedural justice, which describes the procedural fairness used to determine such remuneration.

As justice research developed it was observed that the perceived fairness of procedures and respect played more important roles than distributive justice in the experience of organisational justice, which led to a strong focus on procedural justice in subsequent justice research (Tyler & Blader, 2003). This completely contradicted Kelloway et al.'s (2007) finding that distributive justice significantly predicts the propensity to embark on industrial action and that procedural justice plays a lesser role in such propensity.

Whereas Moorman (1991) identified a two-factor model of organisational justice, Johnson and Jarley (2004) employed a three-factor model in their work on justice and trade union participation, which expanded on the constructs of distributive and procedural justice and included the concept of interactional justice, albeit from the union's perspective and not the employer's. They noted that even though employees may not be satisfied with the outcomes related to distributive justice, they may still be satisfied with the result if they perceive the decision processes to be fair (procedural justice) and if the results of such processes are communicated to the employees in a courteous manner, which they referred to as interactional justice. Johnson and Jarley

(2004), in agreement with Tyler and Blader (2003), referred to respect, or interactional justice, as a relevant concept in organisational justice.

Building on the perspectives of Greenberg (1993), Colquitt (2001), through confirmatory factor analysis, proved that a four-factor model for the conceptualisation of organisational justice is significantly superior to lesser factor models. Colquitt designed the construct of a four-factor organisational justice model which included distributive, procedural, interpersonal and informational justice concepts; based on seminal works in the organisational justice fields. Yet despite his findings, the two-factor model, distributive and procedural justice, remains the most commonly used conceptualisation in justice literature.

Employees are more likely to identify with the collective interests of a group, which leads to increased strike propensity in the event of a perceived injustice (Buttigieg et al., 2008). Kelloway et al. (2007) also observed that perceptions of organisational injustice are a material precursor for collective action. Kelly (1998) agreed with the above and suggested that the concept of organisational injustice serves as the primary organising principle for collective action and offers a powerful theory for understanding industrial relations.

#### **2.4.2 Distributive and procedural justice**

Distributive justice is concerned with fairness perceptions regarding the absolute level of outcomes, for example remuneration, benefits and promotions, whereas procedural, interpersonal and informational justice has relevance to the decision making progress in determining the level of distributive outcomes (Cloutier et al., 2012). Employees assess the fairness of their distributive outcome by comparing the ratio of their outcomes to their respective inputs. In the event that their outcomes are perceived to be low when compared with their input, the employees may be motivated to restore equity through various means, including industrial action (Colquitt, 2001). Tyler and Blader (2003) found that notwithstanding the notable findings related to distributive justice, concerns were raised that distributive justice perceptions were often biased as employees often believed that they were more deserving of more favourable distributive outcomes than what had actually been the case.

Procedural justice addresses the perceived fairness of the processes used to establish the distributive outcomes. When employees perceive that the rules and procedures

are fair, the resulting outcomes will be seen as being fair; a justice perception purported through *voice* in the decision making process and perceived influence over the distributive outcomes. Prior studies have proven that procedural justice has a material influence on the perception of distributive justice (Colquitt, 2001). It therefore follows that perceptions of procedural justice have a material influence on the perception of distributive justice.

### **2.4.3 Interpersonal and informational justice**

The interpersonal perspective of justice addresses the quality of the relationship dynamic taking place between the employee and employer, while the perceptions of relational justice reflect the degree to which workers are treated with dignity, respect, esteem and empathy (Cloutier et al., 2012). The relational perspective of organisational justice posits that employees not only strive for distributive outcomes from their employers, but also social outcomes such as respect and dignity, which are captured in the concept of interpersonal justice (Colquitt, 2001). Blau (1964), cited in Colquitt (2001), observed that when employees receive positive social outcomes they feel obliged to return the social debt in various ways, including the maintenance of their relationship with their employer, to guarantee positive distributive outcomes in the future.

The final form of organisational justice, informational justice, is concerned with the quality of information provided to employees with regards to the way that decisions are made or procedures followed. Justifications for decisions or procedures must therefore be clear, concise, logical and adequate in the event that such decisions have an influence over workers' conditions of employment (Cloutier et al., 2012). Employees believe that they are entitled to know when and what decisions affect them. Perceived informational justice depends on the credibility of the information provided by employers, and it therefore follows that information provided to employees must be understandable, truthful, sufficient in content and make logical sense (Colquitt, 2001). Colquitt (2001) continued by stating that when the information provided by employers does not meet the standards as explained above, employees are more likely to be circumspect in regards to the motives of the employers.

### **2.4.4 Organisational justice model for the purposes of this research study**

Aside from the fact that the two-factor model of organisational justice as proposed by

Moorman (1991) was the most widely used construct in justice literature, the expanded scope of organisational justice as proposed by Colquitt (2001) was considered by this researcher to be more appropriate for the purposes of this research study, given that highly skilled workers identify more with the goals of their employers than routine-task workers (Pernicka & Reichel, 2014). This rendered interpersonal and informational justice relevant for the purposes of organisational justice in the context of professional workers. Benson and Brown (2007) found that knowledge workers have a higher attitudinal commitment to their organisations and highly skilled workers are accordingly expected to develop concurrence as opposed to conflict with their employers. The perceived organisational injustices that increase professional workers' propensity to embark on industrial action were therefore of interest, pursuant to Martin and Sinclair's (2001) observation that strike propensities were volitional and fluctuate due to changing perceptions of discrete circumstances.

In analysing the prevalence of industrial action, researchers have generally focused on the agency of relative bargaining power between trade unions and employers, with a focus on variables such as economic conditions, labour market conditions, product market demand and unemployment, amongst others (Cloutier et al., 2012). Limited research to date has focused on the individual agency of employees' propensity to initiate industrial action. From an individual agency perspective, perceived organisational injustices in the form of perceived wage inequity (Martin, 1986) and job discontent (McClendon & Klass, 1993) may prompt employees to embark on industrial action, an area of research that warrants further investigation.

Buttigieg et al. (2008) encouraged a better understanding of the importance of injustice as an organising principle underlying the agency of employees to initiate industrial action. Kelly (1998), cited in Buttigieg et al. (2008), argued that employees with a perceived sense of injustice are more likely to identify with the collective interests of a group than otherwise. The authors concluded their study with an observation that the perception of organisational injustice, the allocation of culpability to an employer by a trade union, solidarity with fellow employees and a perception of trade union effectiveness or instrumentality, are critical to the effective mobilisation of labour in exercising its collective bargaining power.

Zapata-Phelan et al. (2009) remarked that scholars have mostly researched the relationships between justice and beneficial behaviours, such as organisational citizenship behaviour and rule compliance, without understanding the mediators or

moderators that cause such positive relationships. As an example, the authors noted that without understanding the mediators that support the justice-task performance relationship, it will not be possible to comprehend why justice will have positive task related consequences. As such their study focused on intrinsic motivation as a possible mediator. The perception of professionalism was accordingly considered to be a mediator, or moderator, for the purposes of this research study. Equally, this research study considered aggravating factors such as union commitment on professional workers' propensity to embark on industrial action.

## **2.5 Trade union commitment**

Trade union commitment was described by Gordon, Philpot, Burt, Thompson, and Spiller (1980) as the "members' loyalty to their trade union, the responsibility toward and willingness to work for the trade union, and a belief in unionism". Union commitment was considered central to the bargaining power of a trade union (Batstone, 1988, cited in Harvey & Turnbull, 2012). Meyer and Allen (1997), cited in Campbell (2013), developed a three-component model of organisational commitment, with the first component of commitment linked to belief systems; the second socialisation and rules bound structures; and the third the commitment component arising through continued participation and investment of resources in the profession. While the three-component model confirmed the observations of Benson and Brown (2007) that professional workers have a higher attitudinal commitment to their employers, it also explained professional workers' commitment to their trade union, or association, insofar as it was representative of their professions.

Klandermans (2002), cited in Kelloway et al. (2007), observed that employees were most likely to engage in collective action in the presence of a perceived injustice and with the conviction that such collective action would resolve the injustice. Kelloway et al. (2007) hypothesised three predictors of industrial action from a union commitment perspective: union loyalty, union instrumentality and union militancy.

### **2.5.1 Trade union loyalty**

Trade union loyalty increases the propensity of individuals to participate in industrial action, with the most important aspect of trade union loyalty being the extent to which individuals are attached or committed to a group (Kelloway et al., 2007). Group identification and loyalty is considered to be the most important consideration for an

individual in their decision making as to whether to engage in protest on behalf of a group (Klandermans, 2002); a concept referred to as 'affective commitment' by organisational psychologists (Kelloway et al., 2007). Being very committed to a group increases an individual's propensity to embark on protest or industrial action, and could be gauged as an accurate predictor for such action, yet Kelloway et al. (2007) found that trade union loyalty did not significantly predict employees' intent to participate in protests.

With regard to the increase in trade union participation of professional workers as observed by Campbell and Haiven (2008), this research study analysed whether professional workers' identification and loyalty to a professional trade union will increase their collective propensity to embark in industrial action, especially in light of the contradictory findings of Benson and Brown (2007) who found that knowledge workers, or professional workers in their definition, have a higher attitudinal commitment and a lower intention to quit employment than their routine-task colleagues; contradicting the findings of Cohen (1992), cited in Campbell (2013), that higher status occupations have traditionally shown lower organisational commitment.

### **2.5.2 Trade union instrumentality**

Trade union instrumentality was described by Kelloway et al. (2007) as the perceived effectiveness of collective action. Individuals were more inclined to participate in collective action if they believed that such action would lead to change, said Barling, Fullager and Kelloway (1992), cited in Kelloway et al. (2007). The authors found that trade union instrumentality was a consistent predictor of collective behaviour, as individuals were more likely to engage in protest actions if they believed that such actions, through their involvement therein, would contribute to a change in the target of their actions. Kelloway and Barling (1993) observed that beliefs around trade union instrumentality could also be used to predict trade union participation, i.e. employees were more likely to join a trade union if they believed that participation in the trade union activities may lead to change. Kelloway et al. (2007) found that trade union instrumentality and distributive justice significantly predicted individuals' intent to participate in protests.

The concepts of trade union instrumentality and professional workers become interesting when one considers the observations by academics that professional workers are in a contradictory class location in terms of traditional class theories, due



to the fact that they own their individual intellectual capital and can work autonomously as a result (Wright, 1978). This was confirmed by Benson and Brown (2007) who observed three dimensions to knowledge work: its dynamic nature; its interdependence with other functions in an organisation; and the degree of autonomy that knowledge workers enjoy. It would therefore appear that professional workers possess a stronger internal locus of control and should therefore be less dependent on collective instrumentally to achieve their goals. On the other hand, professional workers are well positioned to exploit trade union instrumentality and collective action, as Kaufman (2004) observed that inelastic demand for labour is a crucial ingredient for trade union success or power. This is certainly the case for professional workers given the relatively high barriers of entry to employment in terms of the skills, training and capital required, as opposed to routine-task workers.

### **2.5.3 Trade union militancy**

Monnot, Wagner and Beehr (2011) distinguished between militant action and non-militant action, with the former being intended to interfere with the employer and the latter taking place side-by-side with the employers' activities without interference. Trade union militancy refers to the extent that individuals are prepared to take action on behalf of a trade union in achieving its collective goals (Kelloway et al., 2007). Such actions include industrial action or a slowdown. Industrial action includes a momentary withholding of labour, whereas a slowdown is described as a deliberate decrease in productivity. Both actions intend to cause temporary harm to the employers' stakeholders, ostensibly to achieve longer term benefits for employees. Research on trade union militancy is not readily available due to its emotive and controversial nature, with academic research focusing on propensities, intentions and willingness to embark on industrial action instead (Monnot et al., 2011).

A high degree of trade union militancy has been found to be positively related to an individual's propensity to participate in industrial action (Kelloway et al., 2007). While it may be counterintuitive to associate professional workers with militant as opposed to non-militant action, Campbell and Haiven (2008), cited in Campbell (2013), observed that apart from the fact that professionals have historically not belonged to trade unions, recent evidence supports a higher degree of militancy amongst professional workers, especially teachers and nurses. Monnot et al. (2011) however observed that white collar workers, which would include professional workers, evidenced a stronger relationship between commitment and non-militant action as opposed to militant action,

due to the fact that they have more leverage within the organisation and a greater stake in the success thereof. White collar workers were found to serve the trade union through non-militant action as opposed to militant action.

#### **2.5.4 Trade union commitment by professional workers**

Insofar as trade union commitment related to professional workers is concerned, Bennet (2006), quoted by Harvey and Turnbull (2012), explained that most prospective airline pilots, as professional workers, reside in middle or upper-middle class households and may be expected to have less militant views on industrial action. Harvey and Turnbull added however, that airline pilots' ambivalence towards industrial action could be explained by their collective desire to be viewed as a professional body and the trade union as a professional association. This could be explained further by the professional trade unions' attempted separation from other trade union movements by abandoning the label of trade union in favour of an *association*. D'Art and Turner (2008) found that employees in higher level occupations with job autonomy and higher levels of remuneration were less likely to join a trade union, confirming the findings of Ebbinghaus et al. (2011), Bennet (2006) and Pernicka and Lücking (2012), who noted that professional workers draw on their individual primary and structural power as opposed to collective power.

Yet Harvey and Turnbull (2012) concluded their study by arguing that British airline pilots retain the capacity to disrupt airline services in pursuit of their own welfare. Analysing the study in further detail, it is not clear how the authors could have come to such a conclusion given the structure of the survey questionnaire included in the study and the absence of any questions to support such a conclusion.

## **2.6 Summary**

Chapter 2 provided a review of the relevant academic literature available on the research problem. Judging from the literature reviewed there appears to be little agreement between academics on the propensity of professional workers to organise collectively and embark on industrial action. There also appears to be ambivalence between scholars on the significance of the various constructs of injustice on the propensity to embark on industrial action, which justified additional research in the organisational justice field.

Taking into account the increased affiliation of professional workers' with trade unions, further research was required to determine the individual factors that increase professional workers' (Buttigieg et al., 2008), as opposed to routine-task workers', propensity to organise collectively, with specific reference to the expanded concept of organisational justice postulated by Colquitt (2001). This concept considered the distributive, procedural, interpersonal and informational perceptions of justice, as well as the agency of relative bargaining power, which appeared to be comprehensively researched (Cloutier et al., 2012).

In the setting of social exchange theory, justice influences the reciprocal interactions between employees and employers in their respective social exchange relationships. The question therefore was how to best capture those relationships (Colquitt et al., 2013). The literature review revealed that scholars have mostly researched the relationships between justice and beneficial behaviours such as organisational citizenship behaviour and rule compliance, without understanding the mediators or moderators that cause such positive relationships (Zapata-Phelan et al., 2009), or the aggravating factors for that matter.

With regard to the above, further research was warranted into professional workers' propensity to embark on industrial action by testing the thresholds of perceived organisational injustices which may cause professional workers to embark on industrial action; as well as the perceived moderating effects of professionalism imbued by professional trade unions or associations, as opposed to the perceived aggravating effects of trade union commitment.

With the background provided by the theory and literature review above, the researcher focused on the research questions and hypotheses as laid out in chapter 3, which were tested for the purposes of this research study.

### **3. Research question and hypotheses**

#### **3.1 Research question**

Notwithstanding the academic literature that was available on the subject matter of professional workers belonging to trade unions and their concomitant bargaining power, material contradictions between academics suggested that further research on professional workers' propensity to embark on industrial action was warranted, specifically from an organisational justice, as opposed to a relative bargaining, perspective.

Existing research has failed to develop hypotheses linking strike propensities with motivational mechanisms (Martin & Sinclair, 2001). This research study set out to explore that question with specific reference to professional workers in South Africa, by first considering the context of the perceived organisational injustices, on an individual level, that would increase professional workers' propensity to embark on industrial action; and secondly, the moderating effects of perceived professionalism imbued by professional trade unions, as opposed to the perceived aggravating effects of trade union commitment, from a collective perspective.

#### **3.2 Research hypotheses**

Following from the theory and literature review in chapter 2, this research study posed three research hypotheses which are described in detail below. Each research hypothesis was stated as a directional research hypothesis, which indicated explicitly defined relationships between variables. The research hypotheses acted as both a base and scale against which the actual outcome of the study could be measured. Research hypotheses always refer to samples, as opposed to null hypotheses which refer to populations (Salkind, 2010). Salkind (2010) observed that a good hypothesis theorises an expected relationship between variables. The research questions were in most cases developed from existing academic literature to confirm or reject the directional research hypothesis.

This study researched –

1. The *context* of individual determinants of perceived justices (distributive, procedural, interpersonal and informational), which decreased the professional

workers' propensity to embark on industrial action on an individual level. It was therefore hypothesised that –

*Hypothesis I*                      *The perception of organisational justice was negatively related to professional workers' propensity to embark on industrial action.*

2. Having regard for the *context* of perceived organisational justice, professional workers' trade union commitment, as a collective *condition*, increased professional workers' propensity to embark on industrial action. It was therefore hypothesised that –

*Hypothesis II*                      *Trade union commitment was positively related to professional workers' propensity to embark on industrial action.*

3. Having regard for the *context* of perceived organisational justice, professional workers' perceptions of professionalism, as a collective *condition*, decreased professional workers' propensity to embark on industrial action. It was therefore hypothesised that –

*Hypothesis III*                      *Perception of professionalism was negatively related to professional workers' propensity to embark on industrial action.*

Upon establishing the explicit relationships as hypothesised above, the study considered and commented on the tensions created by the professional trade union's duality, ostensibly caused by its desire to be perceived as a professional body, which contradicted its mandate as a union to extract concessions from employers through collective and industrial action.

## **4. Research methodology**

### **4.1 Introduction**

Chapter 4 provides a description of the research methodology employed for this research study. This chapter describes the research philosophy on which the study was established, before elaborating on the research method and research design. The population for the research study is also defined, followed by a description of the sampling method and the unit of analysis used. The chapter continues by explaining the data collection and data analysis methodology, before concluding with the potential research limitations that the research methodology presented.

### **4.2 Research philosophy**

Daft (1983), quoted by Clark (2006), likened the craft-like process of academic research to a journey of discovery, where surprises along the journey make the research journey worthwhile. It is not the data as such that is important, but the continuous questioning of the data which leads to the discovery of real knowledge by the researcher.

Given the researcher's research paradigm, this research study was based on the philosophy of post-positivism, which refers to *thought after positivism*. Saunders and Lewis (2012) defined positivism as the study of variables which can be measured under governed conditions, with the law of cause and effect at the core of the positivist's research philosophy. This research approach could also be described as deductive in nature, given that it involves the testing of pre-determined research hypotheses through an approach specifically designed for the testing thereof; in this case through a descriptive study (Saunders & Lewis, 2012). Saunders and Lewis (2012) explained that deduction comprises the testing of theoretical hypotheses by using research devices explicitly designed for such hypotheses, with the key feature of deduction being to explain causal relationships between the variables.

The researcher however believed that knowledge claims arise from actions, situations and consequences as opposed to pre-set conditions, and that one can never be positive about claims of knowledge considering the behaviour and actions of human beings (Creswell, 2003). This was especially relevant for this research study into the propensity of professional workers to embark on industrial action. Creswell (2003)

explained that post-positivists examine the causes that determine outcomes. The knowledge developed through this approach is anchored in the observations and measurement of objective realities; numeric measurements of observations in studying the behaviour of human beings are of great importance to the post-positivist approach. Creswell (2003) added that post-positivists commence their research with a theory or hypothesis and then collect data that either supports or rejects the stated theory, before making adjustments where necessary and doing additional tests.

Phillips and Burbules (2000), cited in Creswell (2003), noted that a post-positivist researcher starts a research project with certain assumptions about how and what he will learn during the research project in the form of a theory or research hypotheses. The researcher then collects data on measures completed by participants or observations recorded by the researcher, in a bid to explain or describe the underlying relationships of interests. This observation was confirmed by Saunders and Lewis (2012), who noted that descriptive research assists the researcher in organising findings that can be explained and validated. The authors noted the importance of objectivity in the post-positive approach and emphasised that research methods must be tested for validity and reliability, as explained in section 4.8. Throughout this journey of discovery it was important to remember that knowledge is notional and that absolute truth can most likely never be found, which rendered the knowledge fallible and in need of further consideration, hence the research philosophy of post-positivism (Creswell, 2003).

### **4.3 Research design**

Academic literature on the research subject was generally available and a literature review was performed as an initial and exploratory research approach. On completion of the literature review, the study followed a descriptive, or quantitative, approach by distributing survey questionnaires to professional workers. Creswell (2003) described the quantitative research approach as an approach where the researcher employs post-positivist thinking using variables, hypotheses, measurements and observations; and collects data through pre-determined research devices which are reduced to statistical data in the development of knowledge.

Survey questionnaires are typically used as one of two strategies of research in terms of the post-positivist research philosophy, with the other being experiments (Creswell, 2003). Babbie (1990), cited in Creswell (2003), described survey questionnaires as

cross-sectional and longitudinal studies using questionnaires for the collection of data, with the intention of drawing conclusions from samples which are in turn inferred on populations.

#### **4.4 Population**

Scheduled airline pilots employed by scheduled air service providers in South Africa were considered professional workers, as opposed to knowledge workers, for the purposes of this research study, due to their structured employment and career trajectory. This consideration was reinforced by Campbell (2013), who defined professions by the presence of a regulatory body that manages the credentials, standards and discipline of its members and acts in the interest of the public at large. In the case of scheduled airline pilots employed in South Africa, such authority resides with the South African Civil Aviation Authority and to a certain extent the professional association, ALPA-SA. It was important to the researcher that the population fit the definition of professional workers as defined in order to mitigate against the risk of concept subjectivity, as described by Feather (2014) in section 2.3. It was also fitting that the scheduled airline industry has traditionally demonstrated high trade union density rates and is generally well organised from a collective perspective.

The population of the research study comprised all scheduled airline pilots employed in South Africa by South African Airways SOC Limited, South African Express Airways SOC Limited, Mango Airlines SOC Limited, SA Airlink Proprietary Limited and Comair Limited (including the brands British Airways and Kulula.com). The population included sample units from legacy and low-cost carriers, as well as private, publicly listed and state owned entities, which presented variance.

With the assistance of the employers, the total population size was estimated at approximately 1,693 sample units, with 778 scheduled airline pilots employed by South African Airways SOC Limited, 245 by South African Express Airways SOC Limited, 106 by Mango Airlines SOC Limited, 152 by SA Airlink Proprietary Limited and 205 by Comair Limited. The scheduled airline pilots employed by South African Airways SOC Limited, South African Express SOC Limited, SA Airlink Proprietary Limited and Comair Limited were represented by the trade union ALPA-SA, whereas Solidarity represented the airline pilots employed by Mango Airlines SOC Limited. ALPA-SA was therefore the dominant trade union representing airline pilots in the industry.



## 4.5 Sampling

Employee records, including the sample units' contact details, were not made available to the researcher for reasons of confidentiality and employee privilege. A probability sampling technique was therefore not possible in the absence of a sampling frame and the researcher was obliged to employ a non-probability sampling technique for sampling purposes (Saunders & Lewis, 2012).

Given the restricted access to the sampling units, a snowballing sample technique was used in terms of which the respective human resources executives of South African airline companies were requested to distribute the electronic survey questionnaires to the sample units. Snowball sampling is a non-probability sampling technique which is generally used when it is difficult to identify the sample units. After the first sample unit, in this case the respective human resources executives of South African airline companies, subsequent sample units were identified by the earlier sample units (Saunders & Lewis, 2012). The respective human resources executives were encouraged to increase the initial sample sizes for snowballing to the greatest extent possible, given the researcher's concerns about the prospective respondents' response rate.

The restriction of not having access to the respondents' contact details placed a constraint on the researcher's ability to encourage prospective respondents to complete the survey questionnaires through the use of electronic reminders facilitated by the web-based survey software provided by SurveyMonkey®. Having regard for the potential sensitivity of the research study, the purpose and research approach were explained to the trade unions, ALPA-SA and Solidarity in separate meetings prior to the distribution of the survey questionnaires. Although initially cynical about the aims of the research study due to the researcher's involvement in the domestic scheduled airline industry, both trade unions provided consent for the distribution of the survey questionnaire to their members, provided that their participation was not compulsory, was anonymous and that individual responses were kept confidential.

South African Airways SOC Limited and South African Express Airways SOC Limited declined to participate in the research study, which excluded approximately 1,023 sample units from the proposed sampling method. The researcher however continued with the proposed snowballing sampling method with Mango Airlines SOC Limited, SA Airlink Proprietary Limited and Comair Limited, which provided access to approximately

670 prospective sample units. In addition to the abovementioned, the director of flight operations, chief pilot and three fleet captains employed by SA Airlink Proprietary Limited distributed the survey questionnaire web-link to their colleagues and peers in the South African airline industry as a secondary snowball sampling, and encouraged the recipients to distribute same to their colleagues and peers in the industry. It is important to note that the secondary snowball sampling technique may have reached prospective respondents employed by the companies that declined to participate in the research study.

The primary snowball sampling of prospective respondents employed by Mango Airlines SOC Limited, SA Airlink Proprietary Limited and Comair Limited commenced on 2 July 2014, followed by the secondary snowball sampling through the director of flight operations, chief pilot and the three fleet captains employed by SA Airlink Proprietary Limited on 23 July 2014. Notwithstanding the apparent endorsement of the trade unions, ALPA-SA and Solidarity, the data collection process experienced a material diminishing response rate and the data collection process was closed on 22 August 2014.

#### **4.6 Data collection**

Salkind (2010) advised that the data collection process can be the most exhaustive process of the research study; a process that requires careful and meticulous planning to ensure that the data collected can be used to adequately answer the research hypotheses (Saunders & Lewis, 2012).

Survey questionnaires are typically used as one of two strategies of research in terms of the post-positivist research philosophy and deductive approach explained in section 4.3 (Creswell, 2003). Babbie (1990), cited in Creswell (2003), described survey questionnaires as cross-sectional and longitudinal studies using questionnaires for the collection of data with the intention of drawing conclusions from samples which are in turn inferred on populations. Saunders and Lewis (2012) stated that survey questionnaires are widely used to collect data where all respondents are asked to answer the same set of questions in the same order. Survey questionnaires can be distributed personally by an interviewer, by telephone, by hand, by post or by electronic means through electronic mail providing access to an internet or web-based questionnaire. As such, the researcher distributed the survey questionnaires to prospective respondents in electronic format, which was deemed appropriate on the

assumption that most airline pilots, as professional workers, would have access to an e-mail address and the internet.

The survey questionnaires were designed with web-based subscribed software available from SurveyMonkey®. The online surveys provided convenience and utility for both the researcher and the respondent. The researcher benefited from the ease of use and flexibility, as well as from the fact that the software stored and archived the data generated by the respondents to the surveys in a standardised format for subsequent use. The respondents in turn benefited from the anonymity and confidentiality provided by the electronic platform, as well as the ease of access to the survey questionnaires.

Leading from the observations in section 4.2, a survey questionnaire is only useful to the extent that it collects data that is required to address the research question, that it meets the research objectives, that data is collected from a large enough number of respondents, and that the questions are understood and interpreted by the respondents in the way the researcher designed it to be understood and interpreted (validity). The validity of the data set resulting from the survey questionnaire was tested by using exploratory factor analysis. The distribution of the survey questionnaires was also preceded by a practice session with seven respondents on a set of pilot data to test the validity of the questions (Salkind, 2010). A Consistency Matrix, attached as Appendix C, was used during the proposal phase of the research study to ensure that the research questions in the survey questionnaires were covered by the relevant theory and literature reviewed in chapter 2. The Consistency Matrix assisted the researcher to link each research hypothesis to the relevant literature, as well as the applicable data collection tools and analysis.

Related to the concept of validity is internal consistency and reliability, in terms of which it had to be established if the questions in the survey questionnaire were consistent with each other in representing one dimension or area of interest (Salkind, 2010). For the purposes of reliability and internal consistency, Cronbach's Alpha was computed. In a further bid to ensure validity and reliability, the research questions were based on existing peer reviewed academic literature. Notwithstanding this, the data set resulting from the survey questionnaire was tested for reliability as described in section 4.8.3.

Part 1 of the survey questionnaire covered the demographic information of respondents. These demographic variables were included for use as control measures for the questionnaire results and were of specific interest for descriptive statistics. The following control variables were included in Part 1 of the survey questionnaire –

1. Age;
2. Gender;
3. Race;
4. Length of service at current employer;
5. Seniority;
6. Private company or state owned company employment;
7. Trade union membership;
8. Perception of professionalism;
9. Academic qualifications; and
10. Whether or not the respondents' trade union was currently engaged in negotiations with employers.

Parts 2 to 4 of the questionnaire were constructed to measure the respondents' attitudes towards perceived organisational justices, trade union commitment, professional and social perceptions, as well as their propensity to embark on industrial action. The research questions were in most cases developed from existing peer reviewed academic literature. The survey questionnaire design was based on a five point Likert type scale, with 1 being *strongly agree*, 2 *agree*, 3 *neither agree nor disagree*, 4 *disagree* and 5 *strongly disagree*; presenting the respondents with questions to which they were requested to indicate the extent to which they agree or disagree with each statement.

Part 2 of the survey questionnaire addressed perceived organisational justice and was based on the Colquitt (2001) scales as recommended by Cloutier et al. (2012). As discussed, Colquitt, through confirmatory factor analysis, proved that a four-factor model was significantly superior to lesser factor models for the conceptualisation of organisational justice.

Part 3 of the survey questionnaire dealt with trade union commitment and perceived professional standing, and was principally based on the work of Kelloway et al. (2007). Trade union loyalty measurements were adapted from a six-item scale developed by Kelloway, Catano and Southwell (1992), referenced by Kelloway et al. (2007). Trade

union instrumentality was measured by adapting a six-item measurement scale developed by Kelloway and Barling (1993) and used by Kelloway et al. (2007). For the purposes of trade union militancy, Kelloway et al. recommended the use of a six-item measurement scale developed by Martin (1986), of which only two measurements were used for this questionnaire as the other measurements were not deemed relevant in the context of professional workers. The following three questions were included in Part 3 to assess the perception of professionalism on the part of the respondents, in order to build on the observations of Pernicka and Reichel (2014) that institutional aspects play a material role in trade union membership, bringing about a sense of identity and solidarity, and in the case of professional workers, professionalism, as described in section 2.3.1 –

1. Belonging to the trade union or association contributes to my professional standing as a scheduled airline pilot;
2. Belonging to the trade union or association contributes to my status as a professional worker; and
3. The trade union or association upholds and guards the professional standards of my occupation as a scheduled airline pilot from a safety, technical and industrial perspective.

Part 4 of the survey questionnaire, which dealt with professional workers' propensity to embark on industrial action, was initially designed as a one-item measure due to the binary nature of the measure of propensity to embark on industrial action –

1. I am prepared to engage in strike or industrial action in support of the ideals of the trade union or association,

One-item measures have however been discouraged in research (Kelloway et al., 2007), so the following two self-designed measures were included in Part 4 of the survey questionnaire for the purposes of this research study –

2. By engaging in industrial action in support of the ideals of the trade union or association I will enhance the professional standing of my profession; and
3. By engaging in industrial action in support of the ideals of the trade union or association I will enhance the standing of the trade union or association.

The complete survey questionnaire is included in Appendix B of this research study.

#### **4.7 Unit of analysis**

Scheduled airline pilots employed by scheduled air service providers in South Africa, in their capacity as professional workers, were the units of analysis for this research study (Saunders & Lewis, 2012).

#### **4.8 Data analysis**

The data analysis for this research study was performed by an independent statistician, who was briefed by the researcher with specific reference to the purpose of the research study and the research hypotheses. The data collection process was closed on 22 August 2014, after which the survey data was extracted from SurveyMonkey® to Microsoft Excel®. The data was coded in Microsoft Excel® and provided to the statistician who performed the data analysis in IBM SPSS®.

##### **4.8.1 Descriptive statistics**

The data analysis phase commenced with descriptive statistics, which were used to organise and describe the data set for the continuous and categorical variables in Part 1 of the survey questionnaire (Salkind, 2010).

##### **4.8.2 Exploratory factor analysis**

The descriptive statistics were followed by an exploratory factor analysis, a process which is often used in the initial stages of data analysis to determine the interrelationships between a large set of variables to determine the validity thereof, as recommended by Saunders and Lewis (2012) in section 4.2. Two important considerations were included to establish if the data set was suitable for exploratory factor analysis - a sample size of at least 150 cases or a ratio of cases to test items of at least ten times; and the strength of the interrelationship between the variables (Pallant, 2007).

Descriptive statistics and exploratory factor analysis were performed for the categorical variables in Part 2 (Perceived organisational injustice) and Part 3 (Union commitment and professional perception) of the survey questionnaire. Descriptive statistics were

performed for Part 4 (Propensity to strike) of the survey questionnaire, but factor analysis was not performed as there were not sufficient variables present for exploratory factor analysis. Principle Axis Factoring was used as the data extraction method for the exploratory factor analysis, with Varimax rotation and Direct Oblimin rotation as the first order and second order factor analysis techniques respectively. These were used as they are the two most commonly used techniques for exploratory factor analysis (Pallant, 2007).

First, a review was performed to identify reverse scoring in the data set, if at all present. This was followed by reviewing the correlation between data items which indicated the strength of relationships between variables in the data set. Correlation values higher than 0.3 indicated a strong correlation between variables in the data set. The Kaiser Meyer-Olkin Measure of Sampling Adequacy ('KMO') was then calculated, where a value higher than 0.6 indicated that the data set was suitable for factor analysis, followed by the Barlett's Test of Sphericity, which was significant for factor analysis at levels below 0.05 (Pallant, 2007).

Upon determining that the data set qualified for factor analysis, the measures of sampling adequacy between variables was tested by calculating the Anti-image Correlation. A Measure of Sampling Adequacy of higher than 0.6 was deemed acceptable for data items to be included. The data set was then tested for Communalities, which indicated how much of the variance in each question could be explained in the context of the data set. Communality values higher than 0.3 indicated that the specific question fitted well with the other questions in the survey questionnaire (Pallant, 2007).

The following step in the exploratory factor analysis was to consider the number of factors that accounted for the majority of the variance in the data set. This was calculated by using the Eigenvalue rule to determine the number of factors to retain for the purposes of the factor analysis. The Eigenvalue of a factor explains the amount of the total variance in the data set that is represented by that factor. Eigenvalues above 1 were considered significant. Before a final decision was made on the number of factors to include in the factor analysis, the number of questions that loaded onto each factor identified by the Eigenvalue rule were ranked per factor, with values below 0.25 ignored. The result of this factor analysis was then compared with the grouping of questions in the original survey questionnaire to confirm if the factor analysis supported the structure of questions in the survey questionnaire (Pallant, 2007).

For the purposes of the second order factor analysis, all the tests performed for the first order factor analysis were repeated using Direct Oblimin rotation with the same thresholds for explanatory factor analysis as the first order, mainly to determine new constructs that may not have been revealed in the first order exploratory factor analysis (Pallant, 2007).

#### **4.8.3 Reliability**

In the event that the data set was found to be valid, it did not imply that it was reliable and therefore had to be tested for internal consistency and reliability. The survey questionnaire's internal consistency and reliability referred to the degree to which the survey items related to each other; it was therefore important to confirm the reliability of the survey questionnaire with the sample. For the purposes of internal consistency and reliability, the Cronbach's Alpha was computed as it is one of the most commonly used indicators of reliability. Reliability was indicated firstly by a positive score, and secondly, the closer to 1.00 the Cronbach's Alpha value was, the more reliable the survey questionnaire content was, with any value above 0.7 considered reliable and a value above 0.8 preferable (Pallant, 2007).

#### **4.8.4 Inferential statistics**

The descriptive statistics and exploratory factor analysis were followed by inferential statistics in order to make inferences on the data pertinent to the research hypotheses posed in chapter 3.

The first step for inferential statistics was to calculate the Pearson correlation coefficients between the independent and dependent variables to indicate the strength and direction of the linear relationship between the variables, within a range between -1 and 1 where the absolute value of the coefficient indicates the strength of the correlation relationship. Importantly, the correlation coefficient could not be used to predict the significance or the value of the dependent variable (Pallant, 2007).

The correlation coefficient calculations were followed by multiple regression calculations which were ostensibly based on correlation, but which provided a more intricate probe of the interrelationship between a set, or sets, of independent variables and dependent variables. Multiple regressions were used to predict a specific outcome



based on independent variables, as well as the relative contribution of each independent variable in determining the dependent variable. The multiple regressions were used to determine the statistical significance of the model and the statistical significance of the independent variables on the dependent variable (Pallant, 2007). Salkind (2010) advised that regressions were often successfully used in social and behavioural sciences as a powerful device for examining complex behaviours; ideal for use in research reports and journal articles. For the purposes of this research study a standard multiple regression technique was used, where all the independent variables were entered into the equation concurrently and each variable were considered in terms of its independent prognostic agency. The usefulness of the multiple regression technique was dependent on a large enough sample size and sensitivity to the presence of multi-collinearity and outliers, the presence of which were tested for and reported on before the multiple regression results were considered (Pallant, 2007).

For the purposes of this research study the statistical significance was set at a p-value of 0.05. It therefore followed that significance values lower than 0.05 indicated that an independent variable made a significant contribution to the prediction of the dependent variable, and values higher than 0.05 indicated no significant contributions.

In the spirit of post-positivism (Creswell, 2003), interesting observations were made with regards to the difference in responses from respondents employed by private companies as opposed to state owned companies, which were considered important enough to report on in this research study. Accordingly, a T-test for independent means was performed to establish if there were any statistically significant differences in the mean responses of the respondents employed by private companies, compared with those of the respondents employed by state owned companies. The categorical independent variables were private employment and state owned employment, and the continuous dependent variables were the mean scores for each question in Part 2 to Part 4 of the survey questionnaire (Pallant, 2007).

#### **4.9 Research methodology limitations**

The snowball sampling method discussed in section 4.5 may present a research limitation, as it did not guarantee a representative sample of all demographic constituents of professional workers intended to be sampled and measured. The specific snowball sampling technique described may also be prone to sampling bias, given the fact that South African Airways SOC Limited and South African Express SOC

Limited declined to participate in the research study. Sampling bias occurs when a sample is collected in a manner that may exclude some sample units of the population, which may result in a non-random sample of a population in which all sample units are not likely to be selected on an equal basis, which in turn may lead to insufficient variance in the sample. Sample bias can have a material effect on the results of the research study and may lead to erroneous conclusions being inferred on the population (Taylor-Powell, 2009). This specific risk of sample bias was however mitigated by the secondary snowball sampling, whereby the director of flight operations, chief pilot and three fleet captains employed by SA Airlink Proprietary Limited distributed a web-link to the survey questionnaire to their colleagues and peers in the South African airline industry, including airline pilots employed by the companies that declined to participate in the survey.

The respondents may also have been prone to response bias, as the researcher is a senior official in the South African airline industry, notwithstanding the anonymity and confidentiality guaranteed in the introduction of the survey questionnaire. Response bias is prevalent in research studies that involve survey questionnaires and can have a material effect on the validity of the questionnaire. Response bias includes a range of biases that may influence the respondents to respond in a manner that is not accurate or truthful, which may lead the researcher to infer erroneous conclusions on the population. Response bias can also be attributed to multiple factors, as human beings integrate numerous elements when generating a response to a given question or situation as opposed to one single consideration. As an example, the trade unions representing the potential respondents to the survey questionnaire could have been in negotiations with employers, which would have increased the risk of response bias. Response bias is prevalent in Likert type ratings as used in this research study, and may have caused the respondents to respond in ways that are socially appropriate (Smith, 2014).

Related to response bias is subject bias, as the respondents, in their capacity as professional workers, may have provided false responses given the risk that a truthful response may reflect poorly on them or their profession (Saunders & Lewis, 2012). In such cases respondents may also conceal their true responses by using the middle scale category or even respond randomly in the event that they may be suspicious of the true nature of the research questionnaire and in what manner the data may be used (Podsakoff, Mackenzie, & Podsakoff, 2012). In this research study, response biases may also be attributed to general cynicism in regards to the motives of the

research study, as experienced in discussions with the trade unions, ALPA-SA and Solidarity, prior to the data collection process. Competitive considerations may have also contributed to response bias due to the high market concentration of airline companies in South Africa and the resultant oligopoly structure of the industry.

The researcher mitigated the risk of response bias by excusing himself from the current year's salary negotiations at his employer, and explicitly explained that responses to the research questionnaire were anonymous and proprietary in nature in the introduction to the research questionnaire. The risk of subject bias was also mitigated by explaining to the prospective respondents in the introduction to the research study that it was purely academic in nature (Podsakoff et al., 2012). The risk of duplicate or multiple responses by a respondent was mitigated by the web-based software available from SurveyMonkey®, which prohibited duplicate or multiple responses from a respondent's internet protocol address, which is a unique string of digits that identifies each device that communicates over a network.

## **5. Results**

### **5.1 Introduction**

Following from the research methodology described in chapter 4, chapter 5 defines the attributes of the sample, and is followed by a discussion of the results of the research study in chapter 6. The sample attributes and response rate achieved are described, followed by an exploratory factor analysis on the research instrument, in this case a survey questionnaire, for the purposes of validity and reliability (Saunders & Lewis, 2012). Descriptive statistics are used to describe the common attributes of the sample, followed by the findings of the inferential statistics in response to the research question and research hypotheses presented in chapter 3. Chapter 5 ends with concluding remarks and additional observations, where appropriate.

Data cases were only considered for the data analysis if all the questions for the specific research hypothesis were completed.

### **5.2 Sample response rate**

At the closure of the data collection period on 22 August 2014, the survey questionnaire received 199 responses of which 179 were completed in full for purposes of the inferential statistics, resulting in a completion rate of 89.95%. Based on an approximate population of 1,693 sample units, 11.75% of the population as defined responded to the research questionnaire. Unfortunately South African Airways SOC Limited and South African Express SOC Limited declined to participate in the survey which denied the researcher direct access to approximately 1,023 potential sample units. The sample size was however deemed sufficient to answer the research question and research hypotheses posed in chapter 3.

### **5.3 General demographic attributes of the sample**

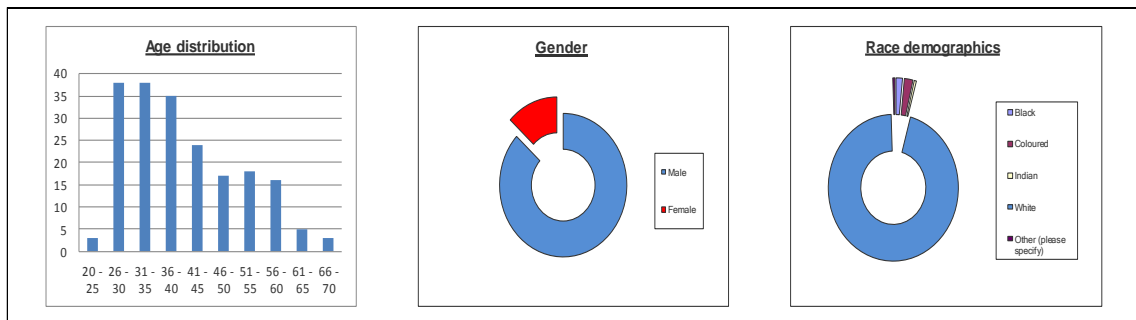
#### **5.3.1 Sample age, gender and race demographics**

187 of the 199 responses were considered for questions 1, 2 and 3 of the survey questionnaire with reference to the respondents' age, gender and race demographics.

One respondent indicated an age of '12' which was manifestly incorrect and excluded

for purposes of the description. The minimum and maximum ages recorded were 23 years and 70 years respectively. The mean age of the respondents was 40.43 years with a standard deviation of 10.61 years. A median age of 38.50 years, a lowest mode of 28 years, and a highest mode of 30 years were recorded. 163 (87.17%) of the respondents were male as opposed to 24 (12.83%) female. Three respondents (1.61%) were black, four (2.14%) were coloured, one (0.53%) was of Indian descent, and 179 (95.72%) were white. The sample could therefore be described as relatively young and representative of an industry perceived as dominated by white males.

**Figure 2: Age, gender and race demographics**

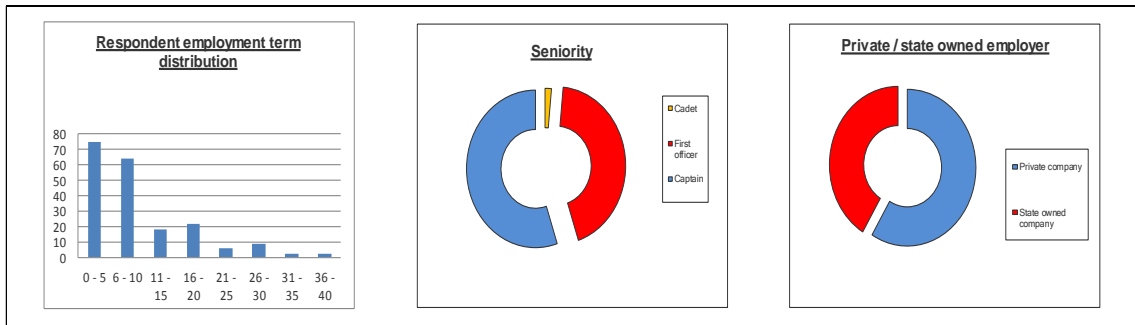


### 5.3.2 Employee and employer attributes

187 of the 199 responses were considered for questions 4, 5 and 6 of the survey questionnaire with reference to the respondents' employee and employer attributes.

The minimum and maximum periods of employment recorded were less than one year and 36 years respectively. The mean period of employment of the respondents was 9.33 years, with a standard deviation of 8.26 years. A median period of employment of six years and a mode of six years were recorded. Three (1.60%) of the respondents were training cadets, 78 (41.72%) were first officers and 106 (56.68%) were captains. 109 (58.29%) of the respondents were employed by private companies, compared with 78 (41.71%) of the respondents employed by state owned companies. The better than expected response from respondents employed by state owned companies addressed, to an extent, the concerns in regards to sample bias explained in section 5.2. The secondary snowball sampling technique described in section 4.5 appeared to have reached respondents employed by the state owned companies, as inferred by the 41.71% representation in the response.

**Figure 3: Employment term, seniority and private/state owned employer**

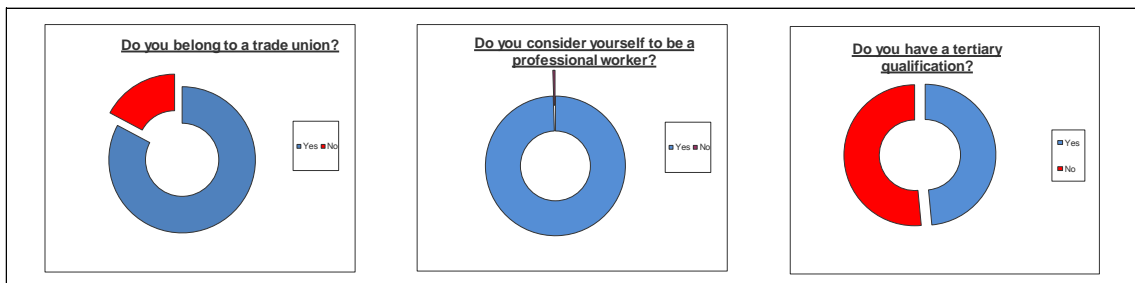


### 5.3.3 Trade union participation and perception of professional status

187 of the 199 respondents answered questions 7 to 10 of the survey questionnaire with reference to the respondents' trade union participation and perception of professional status.

155 (82.89%) of the respondents indicated that they belong to a trade union or association. This observation was consistent with expectations, given that the pilot fraternity was known to have high trade union participation and was highly organised, as indicated in section 4.4. 129 (68.98%) of the respondents indicated that their trade unions were engaged in negotiations with their respective employers. This implies that approximately 83.23% of the respondents who indicated that they belong to a trade union were being represented by their trade union in negotiations with their respective employers at the time of their response, which may have increased the risk of response bias. 186 (99.47%) of the respondents perceived themselves as professional workers, although only 91 (48.66%) of the respondents had a tertiary qualification.

**Figure 4: Trade union membership, professional perception and qualifications**



## 5.4 Research instrument validity

A survey questionnaire is only useful to the extent that it collects data that is required to address the research question and meet the research objectives, collects data from a

large enough number of respondents, and the questions are understood and interpreted by the respondents in the way the researcher intended.

Exploratory factor analysis was performed on Part 2 (Organisational Injustice) and Part 3 (Union Commitment and Professional Perception) of the survey questionnaire. Factor analysis was not performed on Part 4 (Propensity to Strike) as there were insufficient variables for exploratory factor analysis. The results of the factor analysis performed on Part 2 (Perceived Organisational Injustice) and Part 3 (Union Commitment and Professional Perception) will be discussed below.

#### 5.4.1 Research instrument validity – Organisational justice

187 respondents completed Part 2 of the survey questionnaire with regards to organisational injustice. From Table 25 it can be established that each question received a response between 1 and 5, with the lowest mean score at 2.12 for question 2.3.1 (My employer treats me in a polite manner) and the highest mean score of 3.14 for question 2.4.4 (My employer communicates in a timely manner with me in regards to salary negotiations), therefore the former had the highest agreement and the latter had the lowest agreement. 18.90% of the respondents replied with *neither agree nor disagree*, which may be attributed to the respondents concealing their true response by using the middle scale category in the event that they may be suspicious of the true nature of the research questionnaire (Podsakoff et al., 2012).

The Component Matrix in Table 26 indicated that there was no reverse scoring in the data set that required subsequent adjustment. The table below indicates the results of the initial factor analysis, which are described in detail in Table 27 to Table 30.

**Table 1: Statistics – organisational justice**

	Actual	Minimum	Maximum	Threshold
Correlation	-	0.015	1.000	> 0.300
KMO	0.891	-	-	> 0.700
Bartlett's test of Sphericity	0	-	-	< 0.050
Measures of Sampling Adequacy	-	0.837	0.949	> 0.600
Communalities	-	0.310	0.906	> 0.300

The majority of the correlation values were in excess of 0.3, with the minimum correlation at 0.015 and the maximum at 0.896. The KMO value was calculated at 0.891, above the threshold of 0.7. The Bartlett's test of Sphericity value of 0 was below the threshold of 0.05. Based on the findings above, the data set qualified in all material respects for factor analysis (Pallant, 2007). The Measure of Sampling Adequacy ranged between 0.837 and 0.949, with all scores above the minimum threshold of 0.6, which meant that no items had to be excluded for the factor analysis. The minimum and maximum Communalities recorded were 0.310 and 0.906 respectively, with all scores above the minimum threshold of 0.3, which implied that all the questions fitted well with the other questions in the survey questionnaire.

The number of factors that accounted for the majority of the variance in the data set was calculated by using the Eigenvalue rule. The Eigenvalue of a factor explains the amount of the total variance in the data set that was represented by that factor. Eigenvalues above 1 were considered significant.

**Table 2: Eigenvalues – organisational justice**

Total Variance Explained									
Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	Variance	%	Total	Variance	%	Total	Variance	%
1	7.512	41.733	41.733	7.226	40.143	40.143	3.513	19.517	19.517
2	3.238	17.987	59.720	3.060	17.002	57.145	3.450	19.164	38.681
3	1.868	10.377	70.097	1.500	8.332	65.478	3.155	17.528	56.209
4	1.047	5.819	75.916	.739	4.106	69.584	2.407	13.375	69.584
5	.885	4.916	80.832						
6	.529	2.936	83.768						
7	.467	2.597	86.365						
8	.457	2.541	88.906						
9	.363	2.015	90.921						
10	.297	1.650	92.571						
11	.279	1.550	94.121						
12	.256	1.425	95.545						
13	.195	1.081	96.627						
14	.181	1.005	97.631						
15	.134	.746	98.377						
16	.112	.623	99.001						
17	.095	.528	99.528						
18	.085	.472	100.000						

Following from the table above, four factors explained 75.916% of the variance in the data set. Next, the number of questions that loaded onto each factor identified by the Eigenvalue rule was ranked per factor, as illustrated in the Rotated Factor Matrix presented in the table below.



**Table 3: Rotated factor matrix – organisational justice**

Rotated Factor Matrix				
	Factor			
	1	2	3	4
Q2.1.1	.914			
Q2.1.3	.909			
Q2.1.4	.904			
Q2.1.2	.894			
Q2.3.2		.877		.289
Q2.3.3		.866		.304
Q2.3.1		.812		
Q2.3.4		.733		.379
Q2.2.4			.725	
Q2.2.3			.725	.256
Q2.2.5	.266		.677	
Q2.2.6			.666	
Q2.2.1		.294	.615	
Q2.2.2			.532	
Q2.4.3		.339	.322	.732
Q2.4.4		.257	.266	.730
Q2.4.2		.368		.680
Q2.4.1		.472		.568

Values below 0.25 were ignored. Based on the Rotated Factor Matrix, questions 2.1.1 to 2.1.4 (Distributive justice) grouped with the first factor; questions 2.3.1 to 2.3.4 (Interpersonal justice) grouped with the second factor; questions 2.2.1 to 2.2.6 (Procedural justice) grouped with the third factor; and questions 2.4.1 to 2.4.4 (Informational justice) grouped with the fourth factor. The result of this factor analysis therefore supported the structure of the questions in the survey questionnaire (Pallant, 2007) and the research instrument was considered valid. Although not intended, this exploratory factor analysis confirmed the validity of the Colquitt (2001) scales and supported his findings with regards to the suitability of the four-factor model, as opposed to lesser factor models for the conceptualisation of organisational justice as discussed in section 4.6, with specific reference to professional workers.

#### **5.4.2 Research instrument validity – Union commitment and professional perception**

185 respondents completed Part 3 of the survey questionnaire that addressed union commitment and professional perception. Table 33 indicated that each question received a response between 1 and 5. The lowest mean score was recorded for question 3.4.3 at 2.10, which indicated that the respondents agreed, on average, that their union or association upheld and guarded the professional standards of their

occupation as scheduled airline pilots from a safety, technical and industrial perspective. The highest mean score was recorded for question 3.3.2 with a value of 4.25, which indicated that, on average, most respondents were not prepared to vote in favour of unprotected industrial action. The same question recorded a median of 4, a mode of 5 and the lowest standard deviation of all questions in the data set at 0.874, which indicated a strong agreement between respondents on the rejection of the concept of unprotected industrial action.

18.90% of the respondents replied with *neither agree nor disagree*, equal to Part 2 of the survey questionnaire, which may be attributed to the respondents concealing their true response by using the middle scale category in the event that they may have been suspicious of the true nature of the research questionnaire (Podsakoff et al., 2012). The Component Matrix in Table 34 indicated that question 3.2.4 (There is not much use in participating in industrial action or union activities) was reverse scored and the scoring was adjusted accordingly. The table below indicates the results of the initial factor analysis phase, which are described in more detail in Table 35 to Table 38.

**Table 4: Statistics – union commitment and professional perception**

	Actual	Minimum	Maximum	Threshold
Correlation	-	(0.115)	0.890	> 0.300
KMO	0.900	-	-	> 0.700
Bartlett's test of Sphericity	0	-	-	< 0.050
Measures of Sampling Adequacy	-	0.609	0.946	> 0.600
Communalities	-	0.162	0.830	> 0.300

The majority of the correlation values were in excess of 0.3, with the minimum correlation recorded at -0.115 and the maximum at 0.890. The KMO value was calculated at 0.9, above the threshold of 0.7, and the Bartlett's test of Sphericity value of 0 was below the threshold of 0.05. Based on the findings above, the data set qualified in all material respects for factor analysis (Pallant, 2007). The Measure of Sampling Adequacy ranged between 0.609 and 0.946, with all scores being above the minimum threshold of 0.6 which meant that no items had to be excluded. The lowest value of 0.609 was recorded on question 3.3.2 (I am prepared to vote in favour of unprotected industrial action). The minimum and maximum Communalities recorded were 0.162 and 0.830 respectively, with all scores above the minimum threshold of 0.3,

except for question 3.3.2 (I am prepared to vote in favour of unprotected industrial action), which implied that all the questions fitted well with the others in the survey questionnaire, save for question 3.3.2. The various independent observations around question 3.3.2 were interesting in the context of the research study and indicated a strong opposition to unprotected industrial action by the respondents.

The table below lists the Eigenvalues of the factors identified in Part 3 of the survey questionnaire.

**Table 5: Eigenvalues – union commitment and professional perception**

Total Variance Explained									
Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	Variance	%	Total	Variance	%	Total	Variance	%
1	7.427	49.513	49.513	7.130	47.533	47.533	6.448	42.986	42.986
2	2.432	16.213	65.725	1.991	13.271	60.803	2.673	17.817	60.803
3	.992	6.611	72.337						
4	.863	5.753	78.090						
5	.712	4.750	82.839						
6	.545	3.631	86.470						
7	.401	2.673	89.144						
8	.361	2.406	91.550						
9	.296	1.974	93.524						
10	.257	1.712	95.235						
11	.198	1.323	96.559						
12	.166	1.105	97.663						
13	.142	.947	98.610						
14	.119	.790	99.401						
15	.090	.599	100.000						

There were only two factors with a value above 1, which explained 65.725% of the variance in the data set. Next, the number of questions that loaded onto each factor identified by the Eigenvalue rule was ranked per factor, as illustrated in the Rotated Factor Matrix presented in the table below.

**Table 6: Rotated factor matrix – union commitment and professional perception**

Rotated Factor Matrix		
	Factor	
	1	2
Q3.1.1	.900	
Q3.1.2	.899	
Q3.1.4	.884	
Q3.1.5	.876	
Q3.1.3	.873	
Q3.1.6	.830	
Q3.4.3	.771	
Q3.4.1	.725	
Q3.4.2	.677	.265
Q3.2.2		.816
Q3.2.1		.783
Q3.3.1		.706
rQ3.2.4	.332	.553
Q3.2.3		.426
Q3.3.2		.387

Values below 0.25 were ignored. Based on the Rotated Factor Matrix, question 3.1 (Union loyalty) and question 3.4 (Professional perception) grouped with the first factor; while question 3.2 (Trade union instrumentality) and question 3.3 (Trade union militancy) grouped with the second factor. The result of the factor analysis did not confirm the structure of the questions in the survey questionnaire (Pallant, 2007), but grouped the questions around the two common themes of Part 3 – the perception of loyalty and professionalism as opposed to the perception of instrumentality and militancy.

The research instrument was considered valid for purposes of the research study, save for question 3.3.2 (I am prepared to vote in favour of unprotected industrial action), which was excluded for further use and inferential statistics as a result of its outlier status on all indicators of inclusion during the factor analysis. This exclusion rendered the construct of union militancy as a one-item measure which is generally discouraged (Kelloway et al., 2007), but it was deemed acceptable for this research given the binary nature of the construct of industrial action.

#### **5.4.3 Research instrument validity – Propensity to strike**

As indicated earlier, no factor analysis was performed on Part 4 (Propensity to strike) of the survey questionnaire, as there were insufficient variables to perform a meaningful

factor analysis. Table 41 indicated that 179 respondents completed Part 4 of the survey questionnaire, with all three questions recording a mean above 3. All three questions received a response between 1 and 5. The lowest mean of 3.08 was recorded for question 4.1 (I am prepared to engage in strike or industrial action in support of the ideals of the union or association) and the highest mean of 3.45 was recorded for question 4.2 (By engaging in industrial action in support of the ideals of the union or association I will enhance the professional standing of my profession).

On average, the respondents therefore disagreed with the concept of industrial action, especially when considered in the context of professionalism, as opposed to the response under union commitment where the respondents indicated a greater willingness to embark on industrial action, provided that it is protected, as described in section 5.4.2. Not only did fewer respondents complete Part 4 of the survey questionnaire when compared with Part 2 and Part 3, but a larger percentage, 23.10% as opposed to 18.90%, of the respondents responded with *neither agree nor disagree*. This supported the observations of Podsakoff et al. (2012) that the respondents may have wanted to conceal their true responses by using the middle scale category if they were suspicious of the true nature of the research questionnaire and the manner in which the data may be used, as well as the fact that the respondents may have found it difficult to answer the questions truthfully given the social associations with industrial action (Smith, 2014).

## **5.5 Research instrument reliability**

Related to the concept of validity was that of internal consistency and reliability, in terms of which it had to be established if the questions in the survey questionnaire were consistent with each other and represented one dimension or area of interest (Salkind, 2010).

### **5.5.1 Research instrument reliability – Organisational justice**

The table below is a summary of the Cronbach's Alphas calculated per factor within the survey questionnaire for organisational justice.

**Table 7: Cronbach's Alpha – organisational justice**

<b>Construct</b>	<b>Questions</b>	<b>Factor</b>	<b>Cronbach's Alpha</b>	<b>Number of items</b>
Distributive justice	2.1.1 to 2.1.4	Factor 1	0.960	4
Procedural justice	2.2.1 to 2.2.6	Factor 3	0.854	6
Interpersonal justice	2.3.1 to 2.3.4	Factor 2	0.946	4
Informational justice	2.4.1 to 2.4.4	Factor 4	0.874	4

The Cronbach's Alphas calculated for the four factors within organisational injustice were above 0.8 for each measurement and were considered internally consistent and reliable for purposes of this research study.

### **5.5.2 Research instrument reliability – Union commitment and professional perception**

The table below summarises the Cronbach's Alphas calculated per factor identified in the survey questionnaire for union commitment and professional perception.

**Table 8: Cronbach's Alpha – union commitment and professional perception**

<b>Construct</b>	<b>Questions</b>	<b>Factor</b>	<b>Cronbach's Alpha</b>	<b>Number of items</b>
Trade union loyalty	3.1.1 to 3.1.6	Factor 1	0.955	9
Professional perception	3.4.1 to 3.4.3	Factor 1		
Trade union instrumentality	3.2.1 to 3.2.4	Factor 2	0.802	6
Trade union militancy	3.3.1 to 3.3.2	Factor 2		

The Cronbach's Alphas calculated for the two factors within union commitment and professional perception were above 0.8 and were considered internally consistent and reliable for the purposes of this research study. When question 3.3.2 was removed for further analysis as described in section 5.4.2, the Cronbach's Alpha increased to 0.819.

## **5.6 Results by hypothesis**

### **5.6.1 Research hypothesis I**

Hypothesis I explored the relationship between the perception of organisational justice and professional workers' propensity to embark on industrial action, with the research hypothesis stating that the perception of organisational justice was negatively related to

professional workers' propensity to embark on industrial action. This implied that the higher the perception of organisational justice, the lower the propensity would be to embark on industrial action. It was therefore appropriate to perform a standard multiple regression to explore how much of the variance in the dependent variable, propensity to strike, could be explained by the independent variable, perception of organisational justice. The independent variable was also divided into the four-factor model of organisational justice proposed by Colquitt (2001) to establish the relative contribution of each independent variable.

179 respondents completed the questions for the independent variables and independent variable in full, which were therefore considered for the analysis. The sample size was considered to be sufficiently large for the purposes of multiple regressions. No outliers were identified that had to be excluded. All four independent variables were negatively correlated with the dependent variable, but only interpersonal justice and informational justice indicated a correlation above 0.3, with the dependent variables at -0.345 and -0.435 respectively. The highest bivariate correlation was recorded at 0.669 between interpersonal justice and informational justice. The bivariate correlation was however below the threshold of 0.80, and all independent variables were retained for purposes of the multiple regressions as there were no indications of multi-collinearity. The correlation coefficients for procedural, interpersonal and informational justice were statistically significant.

The correlation coefficients and statistical significance between the variables are indicated in Table 9 below.

**Table 9: Correlations – organisational justice / propensity to strike**

Correlations		Mean_PropStrike	Mean_DistrJustice	Mean_ProcJustice	Mean_InterpJustice	Mean_InformJustice
Pearson Correlation	Mean_PropStrike	1.000	-.189	-.201	-.345	-.435
	Mean_DistrJustice	-.189	1.000	.327	.161	.109
	Mean_ProcJustice	-.201	.327	1.000	.416	.457
	Mean_InterpJustice	-.345	.161	.416	1.000	.669
	Mean_InformJustice	-.435	.109	.457	.669	1.000
Sig. (1-tailed)	Mean_PropStrike		.006	.004	.000	.000
	Mean_DistrJustice	.006		.000	.016	.072
	Mean_ProcJustice	.004	.000		.000	.000
	Mean_InterpJustice	.000	.016	.000		.000
	Mean_InformJustice	.000	.072	.000	.000	

The Tolerance and VIF scores for all four independent variables were calculated at values above 0.10 and below 10 respectively, which indicated that there were no

concerns that too much of the variability of a specific independent variable was explained by another independent variable, which may have had an undesired effect on the results of the multiple regressions (Pallant, 2007).

**Table 10: Multi-collinearity – organisational justice / propensity to strike**

Coefficients				
Model		t	Collinearity Statistics	
			Tolerance	VIF
1	(Constant)	16.193		
	Mean_DistrJustice	-2.149	.887	1.128
	Mean_ProcJustice	.785	.700	1.428
	Mean_InterpJustice	-.930	.534	1.873
	Mean_InformJustice	-4.149	.510	1.960

The Adjusted R Square value in Table 11 below indicated that 19.7% of the variance in the dependent variable, propensity to strike, could be explained by the independent variables with a standard error of estimate of 0.947 (Pallant, 2007). From Table 12 it could be inferred that the independent variables jointly accounted for the variance in the dependent variable on a statistically significant basis.

**Table 11: Multiple regression – organisational justice / propensity to strike**

Multiple regression model summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.464	.216	.197	.947

**Table 12: ANOVA – organisational justice / propensity to strike**

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	42.841	4	10.710	11.952	.000
	Residual	155.925	174	.896		
	Total	198.766	178			

Further analysis indicated that informational justice, with a standardised beta coefficient of -.390, made the biggest relative contribution to the variance in the dependent variable, followed by distributive justice (-0.153), interpersonal justice (-0.085) and procedural justice (0.063) (Table 13). Of the four independent variables, only distributive justice and informational justice made a statistically significant unique contribution to the variance in the dependent variable, with p-values of 0.033 and 0.000



respectively, both below the statistically significant level of 0.05 (Pallant, 2007).

**Table 13: Coefficients (II) – organisational justice / propensity to strike**

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.902	.303		16.193	.000
	Mean_DistrJustice	-.143	.067	-.153	-2.149	.033
	Mean_ProcJustice	.083	.106	.063	.785	.434
	Mean_InterpJustic	-.099	.106	-.085	-.930	.354
	Mean_InformJustic	-.445	.107	-.390	-4.149	.000

In conclusion, research hypothesis I was confirmed; the perception of organisational justice is negatively related to professional workers' propensity to embark on industrial action. The four constructs of organisational justice jointly explained 19.7% of the variance in the propensity to embark on industrial action in a statistically significant manner, although the effect size of organisational justice on the professional worker's propensity to embark on industrial action could be considered in the borderline medium range (Salkind, 2010). On an individual construct basis, only distributive justice and informational justice made a statistically significant contribution to the variance in the propensity to embark on industrial action. Procedural justice and interpersonal justice, as individual constructs, did not make a statistical significant contribution to the variance in the dependent variable, notwithstanding the fact that the correlation coefficients for both independent variables were found to be statistically significant (Pallant, 2007).

### 5.6.2 Research hypotheses II and III

Following the study of the context of the perceived organisational injustice and professional workers' propensity to embark on industrial action at an individual level, it was hypothesised that trade union commitment, as a collective condition, would increase professional workers' propensity to embark on industrial action; while professional workers' perception of professionalism, as a collective condition, would decrease professional workers' propensity to embark on industrial action.

To study the relationships explained above, two multiple regression models were performed. The first model assessed the statistical significance of the individual constructs of trade union commitment; union loyalty, union instrumentality and union

militancy; and professional perception, as independent variables, on the variance in the dependent variable - propensity to embark on industrial action. The second multiple regression model assessed the statistical significance of the sum of the three constructs of trade union commitment as a single independent variable construct, and professional perception as the other independent variable construct, on the variance in the dependent variable.

179 respondents completed the questions for the independent variables and dependent variable in full and were therefore considered for the analysis. The sample size was considered to be large enough for the purposes of standard multiple regression. Question 3.3.2 (I am prepared to vote in favour of unprotected industrial action) was identified as an outlier during the exploratory factor analysis as explained in section 5.4.2 and was thus excluded for the purposes of the multiple regression. The data cases numbered 35, 87 and 105 were also identified as outliers and were excluded from the sample, which rendered the sample size 176 items, which was still large enough for the purposes of multiple regression.

All four independent variables were positively correlated with the dependent variable, with union instrumentality and union militancy indicating the highest correlation with the dependent variable at correlation values of 0.756 and 0.758 respectively. The highest bivariate correlation was recorded at 0.795 between union loyalty and union professional perception. Even though the bivariate correlation between the two variables was above 0.70 and considered high, it was still below 0.80, and all independent variables were therefore retained for the multiple regression given that all four correlations' coefficients were found to be statistically significant with p-values at 0.000 in the absence of multi-collinearity. It was interesting to note that the two independent variables with the highest bivariate correlation grouped together as one factor in the exploratory factor analysis explained in Table 6, section 5.4.2. The correlation coefficients and statistical significance between the variables are indicated in Table 14 below.

**Table 14: Correlations - union commitment and professional perception**

Correlations						
		Mean_PropStrike	Mean_UnionLoyalty	Mean_UnionInstrum	Mean_UnionMilitancy	Mean_ProfPercept
Pearson Correlation	Mean_PropStrike	1.000	.433	.756	.758	.421
	Mean_UnionLoyalty	.433	1.000	.400	.361	.795
	Mean_UnionInstru	.756	.400	1.000	.659	.414
	Mean_UnionMilitan	.758	.361	.659	1.000	.379
	Mean_ProfPercept	.421	.795	.414	.379	1.000
Sig. (1-tailed)	Mean_PropStrike	.000	.000	.000	.000	.000
	Mean_UnionLoyalty	.000	.000	.000	.000	.000
	Mean_UnionInstru	.000	.000	.000	.000	.000
	Mean_UnionMilitan	.000	.000	.000	.000	.000
	Mean_ProfPercept	.000	.000	.000	.000	.000

Table 15 shows that the Tolerance and VIF scores for all four independent variables were calculated at values above 0.10 and below 10 respectively, which indicates that there were no concerns that too much of the variability of a specific independent variable was explained by another independent variable, which may have had an undesired effect on the results of the multiple regression.

**Table 15: Coefficients – union commitment and professional perception**

Coefficients				
Model		t	Collinearity Statistics	
			Tolerance	VIF
1	(Constant)	3.254		
	Mean_UnionLoyalty	1.638	.361	2.772
	Mean_UnionInstrum	7.374	.531	1.884
	Mean_UnionMilitancy	7.841	.552	1.813
	Mean_ProfPercept	-.182	.354	2.822

The regression indicated that 69.3% of the variance in the dependent variable, propensity to strike, could be explained by the independent variables jointly with a standard error of estimate of 0.578 (Table 16). From Table 17 it can be inferred that the independent variables jointly account for the variance in the dependent variable on a statistically significant basis.

**Table 16: Multiple regression – union commitment and professional perception**

Multiple regression model summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.837	.700	.693	.578

**Table 17: ANOVA – union commitment and professional perception**

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	133.096	4	33.274	99.700	.000
	Residual	57.070	171	.334		
	Total	190.166	175			

Union militancy and union instrumentality made the largest relative contributions to the variance in the dependent variable with standardised beta coefficients of 0.442 and 0.424 respectively, as well as a statistically significant unique contribution to the variance in the dependent variable with p-values of 0.000 each. Union loyalty had a standardised beta coefficient of 0.114, but was not statistically significant in contributing to the variance of the dependent variable with a p-value of 0.103. Aside from the positive correlation indicated in Table 14, professional perception had a negative standardised beta coefficient of -0.13, but it was not statistically significant in contributing to the variance of the dependent variable with a p-value of 0.856.

**Table 18: Coefficients (II) – union commitment and professional perception**

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficient	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.517	.159		3.254	.001
	Mean_UnionLoyalty	.118	.072	.114	1.638	.103
	Mean_UnionInstrum	.508	.069	.424	7.374	.000
	Mean_UnionMilitancy	.379	.048	.442	7.841	.000
	Mean_ProfPercept	-.014	.075	-.013	-.182	.856

The second multiple regression model assessed the statistical significance of the sum of the three constructs of trade union commitment as a single independent variable construct, and professional perception as the other independent variable construct, on the variance in the dependent variable. Union commitment and professional perception both positively correlated with the dependent variable, with correlation coefficients of 0.678 and 0.438 respectively, which were statistically significant. The bivariate correlation between two independent variables was 0.743, below the threshold of 0.80, and both independent variables were retained given that they were found to be statistically significant with p-values of 0.000 (Table 19).

**Table 19: Correlation – union commitment and professional perception (single independent variables)**

Correlations				
		Mean_PropStrike	Mean_UnionCommit	Mean_ProfPercept
Pearson Correlation	Mean_PropStrike	1.000	.678	.433
	Mean_UnionCommit	.678	1.000	.743
	Mean_ProfPercept	.433	.743	1.000
Sig. (1- tailed)	Mean_PropStrike		.000	.000
	Mean_UnionCommit	.000		.000
	Mean_ProfPercept	.000	.000	

The regression model indicated that 46.6% of the variance in the dependent variable could be explained by the independent variables jointly with a standard error of estimate of 0.772 (Table 20). The independent variables jointly accounted for the variance in the dependent variable on a statistically significant basis.

**Table 20: Multiple regression – union commitment and professional perception (single independent variables)**

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.687 <sup>a</sup>	.472	.466	.772

Union commitment made the largest relative contribution to the variance in the dependent variable with a standardised beta coefficient of 0.797, and made a statistically significant unique contribution to the variance with a p-value of 0.000. Notwithstanding the positive correlation referred to above, professional perception had a negative standardised beta coefficient of -0.16, but it was not statistically significant in contributing to the variance of the dependent variable with a p-value of 0.053 (Table 21).

**Table 21: Coefficients – union commitment and professional perception (single independent variables)**

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.990	.191		5.175	.000
	Mean_UnionCommit	1.057	.109	.797	9.737	.000
	Mean_ProfPercept	-.171	.088	-.160	-1.951	.053

Following the two standard regression models it was concluded that research hypothesis II was confirmed. Union commitment, considered as a single independent variable, is positively related to professional workers' propensity to embark on industrial action in a statistically significant manner. Union commitment had a standardised beta coefficient of 0.797, which indicated that the independent variable had a large effect on the dependent variable given that it was above 0.500 (Salkind, 2010). Upon interrogation of the three unique elements of union commitment, it was found that union instrumentality and union militancy had the largest, albeit medium, effect on professional workers' propensity to embark on industrial action, with standardised beta coefficients of 0.424 and 0.442 respectively, on a statistically significant basis.

Professional perception, on the other hand, indicated no statistical significant relationship with professional workers' propensity to embark on industrial action whatsoever, save for the observation that both regression models indicated a negative relationship between it and the dependent variable. Both observations were however not statistically significant and research hypothesis III, that the perception of professionalism is negatively related to professional workers' propensity to embark on industrial action, could therefore not be confirmed, although on each occasion the independent variable indicated an acceptable correlation coefficient with the dependent variable on a statistically significant basis. This may be attributed to the difficulty in the construction of the concept of professionalism in the context of the research study as explained in the literature review, which led to the research questions being self-designed as opposed to using research questions from earlier studies.

## **5.7 Other findings**

The trade unions representing the respondents enjoyed a high degree of agency with the respondents, as well as with the employers; it became apparent during the data collection period that there is a high degree of mutual respect between the employers and trade unions. Employers were reluctant to provide their consent to participate in the research study in the absence of the express consent of the representative trade unions. This observation was especially apparent at one of the state owned companies, to the extent that it appeared that the trade union enjoyed a higher degree of agency over the respondents than the employer. Another interesting observation was that none of the respondents have access to a company electronic mail address, and while this may be specific to the South African airline industry, it did raise a question as to what extent the employers communicate with their employees in their

capacity as professional workers from an informational and interpersonal justice perspective, as opposed to other departments in the organisations where the employees have access to company electronic mail addresses. Why would the respondents be excluded from such a basic access to information in the normal course of business, especially when they can be classified as an absent workforce, which already complicates communication in the normal course of business?

This observation led to the question of how the various variable constructs were perceived by the respondents employed by private companies and state owned companies respectively, and if there were any statistically significant differences between the mean scores for the respective groups of respondents. Accordingly an independent-samples T-test was performed to compare the mean scores for the variable constructs between the two groups of respondents. Table 23 provides the Levene's test for equality of variances. If the Sig. was indicated as higher than 0.05 the first line in the table was used to test for statistical significance in difference of means for each dependent variable; if not, the second line was used. If the value in the Sig. (2-tailed) column was equal or less than 0.05, there was a statistical significant difference in the mean scores of the dependent variables (Pallant, 2007). Based on the findings summarised in Table 23, the mean scores for all the variables were statistically significantly different, save for the perception of procedural justice (Pallant, 2007).

In summary, following from Table 22, the respondents employed by state owned companies, on average, had a higher perception of distributive justice as compared with their counterparts, which accords with the researcher's anecdotal experience in the industry as it was an accepted fact that the state owned companies' remuneration levels are above those of their private peers. State owned company employees also had a lower sense of interpersonal and informational justice, and a distinctly higher sense of trade union commitment, professional perception and propensity to embark on industrial action than their counterparts.

**Table 22: Group statistics – T-test for independent samples**

Group Statistics - T-test for independent samples					
		N	Mean	Std. Deviation	Std. Error Mean
Mean_DistrJustice	Private	109	3.20	1.097	.105
	State owned	78	2.05	.910	.103
Mean_ProcJustice	Private	109	2.85	.823	.079
	State owned	78	2.83	.817	.093
Mean_InterpJustice	Private	109	2.12	.895	.086
	State owned	78	2.52	.987	.112
Mean_InformJustice	Private	109	2.64	.889	.085
	State owned	78	3.34	.868	.098
Mean_UnionLoyalty	Private	107	2.60	.927	.090
	State owned	78	1.78	.948	.107
Mean_UnionInstrum	Private	107	3.06	.859	.083
	State owned	78	2.63	.816	.092
Mean_UnionMilitancy	Private	107	3.01	1.232	.119
	State owned	78	2.42	1.134	.128
Mean_ProfPercept	Private	107	2.66	.958	.093
	State owned	78	2.05	.938	.106
Mean_UnionCommit	Private	107	2.80	.777	.075
	State owned	78	2.15	.648	.073
Mean_PropStrike	Private	103	3.50	1.039	.102
	State owned	76	2.88	.977	.112

**Table 23: Independent sample T-test**

Independent Samples Test												
		Levene's Test for Equality of Variances		t-test for Equality of Means						95% Confidence Interval of the Difference		
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower		Upper	
									Lower	Upper	Lower	Upper
Mean_DistrJustice	Equal variances assumed	11.204	.001	7.619	185	.000	1.156	.152	.857	1.455		
	Equal variances not assumed			7.857	180.910	.000	1.156	.147	.866	1.446		
Mean_ProcJustice	Equal variances assumed	.485	.487	.126	185	.900	.015	.122	-.225	.255		
	Equal variances not assumed			.126	166.743	.900	.015	.122	-.225	.255		
Mean_InterpJustice	Equal variances assumed	3.812	.052	-2.880	185	.004	-.399	.139	-.672	-.126		
	Equal variances not assumed			-2.833	155.750	.005	-.399	.141	-.677	-.121		
Mean_InformJustice	Equal variances assumed	.091	.763	-5.418	185	.000	-.708	.131	-.965	-.450		
	Equal variances not assumed			-5.441	168.402	.000	-.708	.130	-.964	-.451		
Mean_UnionLoyalty	Equal variances assumed	.172	.679	5.851	183	.000	.815	.139	.540	1.090		
	Equal variances not assumed			5.830	163.866	.000	.815	.140	.539	1.091		
Mean_UnionInstrum	Equal variances assumed	.584	.446	3.498	183	.001	.438	.125	.191	.685		
	Equal variances not assumed			3.527	170.792	.001	.438	.124	.193	.683		
Mean_UnionMilitancy	Equal variances assumed	2.565	.111	3.303	183	.001	.586	.177	.236	.936		
	Equal variances not assumed			3.347	173.324	.001	.586	.175	.241	.932		
Mean_ProfPercept	Equal variances assumed	.094	.760	4.307	183	.000	.609	.141	.330	.888		
	Equal variances not assumed			4.322	168.032	.000	.609	.141	.331	.887		
Mean_UnionCommit	Equal variances assumed	3.361	.068	6.085	183	.000	.657	.108	.444	.870		
	Equal variances not assumed			6.260	179.626	.000	.657	.105	.450	.864		
Mean_PropStrike	Equal variances assumed	1.677	.197	4.075	177	.000	.624	.153	.322	.927		
	Equal variances not assumed			4.114	166.994	.000	.624	.152	.325	.924		

The mean scores of the variables, save for procedural justice, were statistically significantly different between the respondents employed by private companies as compared with state owned companies, which led to the conclusion that the results of the multiple regression models performed for the three research hypotheses may have been very different in the event that they had been done for the two groups separately and independently. It is therefore suggested for future reference that the research



study be repeated for professional employees employed by private and state owned companies respectively and independently.

## **5.8 Summary**

The study revealed interesting insights into both the individual and collective motivational constructs of professional workers' propensity to embark on industrial action, especially with regard to the material contradictions that exist in the current academic literature on professional workers. From a research methodology perspective, the validity and reliability of the four-factor model of organisational justice included in the Colquitt (2001) scales were proven.

Research hypothesis I was confirmed; the perception of organisational justice is negatively related to professional workers' propensity to embark on industrial action. The four constructs of organisational justice jointly explained 19.7% of the variance in the propensity to embark on industrial action in a statistically significant manner, although the effect size of organisational justice on the professional worker's propensity to embark on industrial action was considered to be in the borderline medium range. When the four measures of organisational justice were measured on an individual basis, only distributive justice and informational justice made a statistically significant unique contribution to the variance in the propensity to embark on industrial action.

Research hypothesis II was confirmed; union commitment, considered to be a single independent variable, was positively related to professional workers' propensity to embark on industrial action in a statistically significant manner, with union instrumentality and union militancy the most material contributors to the variance in professional workers' propensity to embark on industrial action. Research hypothesis III, perception of professionalism is negatively related to professional workers' propensity to embark on industrial action, could not be confirmed, ostensibly due to the ambivalent nature of the concept and possibly due to the construction of the research questions included in the survey questionnaire.

It was also found that there were statistically significant differences in the observations of the variables between respondents employed by private and state owned companies, to the extent that further research may be warranted. The findings discussed above will be discussed in further detail and in the context of the current academic literature in chapter 6.

## **6. Discussion of results**

### **6.1 Introduction**

Chapter 6 leads a discussion and interpretation the results of the research study in the context of existing academic literature. Before the results of the research hypotheses were discussed, additional commentary was made on the nature and attributes of the sample, as well as the constructs of the research questions with specific reference to the use of the Colquitt (2001) scales as a four-factor model of organisational justice. Observations on the respondents' propensity to embark on industrial action were also made, as it was important to understand the results of the data analysis in the context of professional workers' propensity to embark on industrial action.

### **6.2 Sample attributes**

The risk of sample bias was comprehensively discussed in sections 4.9 and 5.2, with the concomitant risk that a homogenous sample may not be representative enough of the population to present sufficient variance. On the strength of the findings discussed in sections 5.3 and 5.7, it did however appear that there was sufficient variance in the sample and that the sample appeared sufficiently representative of the population. The observations made in section 5.7 were particularly interesting, having regard for the statistically significant different observations of the variables between respondents employed by private as opposed to state owned companies. The mean scores for the two distinct groups were significantly different for all variables, save for procedural justice, to motivate a separate research study based on the same assumptions, variables and hypotheses for the two groups separately and independently.

The risk of response and subject bias existed as the respondents in their capacity as professional workers may have provided false information, given that a truthful response may have reflected poorly on them or their profession. 82.83% of the respondents who belonged to a trade union indicated that their trade unions were in negotiations with their respective employers at the time of the survey questionnaire, which may have increased the response bias. Such biases may also be reflected in the high percentage of responses in the middle scale category.

### **6.3 Research methodology – Organisational justice**

Research in the constructs of organisational justice has increased materially in recent years, following the realisation that the perception of fair treatment results in positive employee behavioural outcomes (Zapata-Phelan et al., 2009). Whereas initial studies focused only on distributive justice, Tyler and Blader (2003) found that notwithstanding the notable findings related to distributive justice, concerns were raised that distributive justice perceptions were often biased as employees commonly believed that they were more deserving of more favourable distributive outcomes than what may practically have been the case. Moorman (1991) identified a two-factor model of organisational justice; distributive justice, describing the fairness of the remuneration an employee receives, and procedural justice, describing the procedural fairness used to determine such remuneration. As justice research developed, it was observed that perceived fairness of procedures and respect plays a more important role than distributive justice in the experience of organisational justice, which led to a strong focus on procedural justice in subsequent justice research (Tyler & Blader, 2003).

Johnson and Jarley (2004) employed a three-factor model in their work on justice and trade union participation, which expanded on the constructs of distributive and procedural justice and included the concept of interactional justice, albeit from a trade union perspective as opposed to an employer perspective. Elaborating on the perspectives of Greenberg (1993), Colquitt (2001), through confirmatory factor analysis, proved that a four-factor model for the conceptualisation of organisational justice was significantly superior to lesser factor models. Colquitt (2001) designed the construct of a four-factor organisational justice model which included distributive, procedural, interpersonal and informational justice concepts, based on seminal works in the organisational justice fields. Regardless of the findings of Colquitt (2001) and judging from subsequent research studies, the two-factor model remained the most commonly used conceptualisation in organisational justice literature. Colquitt's (2001) four-factor model of organisational justice was however considered more appropriate for this research study, given the fact that highly skilled workers identified more with the goals of their employers as opposed to routine-task workers (Pernicka & Reichel, 2014). This rendered interpersonal and informational justice relevant in the context of professional workers.

Accordingly, an exploratory factor analysis was performed to determine the validity of the research questionnaire used in the research study, specifically with reference to organisational justice, a process fully described in section 4.8.2. The results of the exploratory factor analysis supported the structure of the questions in the survey

questionnaire and the research instrument was considered valid (Pallant, 2007). Although not initially intended, this exploratory factor analysis confirmed the validity of the Colquitt (2001) scales and supported his findings with regard to the suitability of the four-factor model, as opposed to lesser factor models for the conceptualisation of organisational justice. The Colquitt (2001) scales were found to be highly reliable as well, as discussed in section 5.5.1.

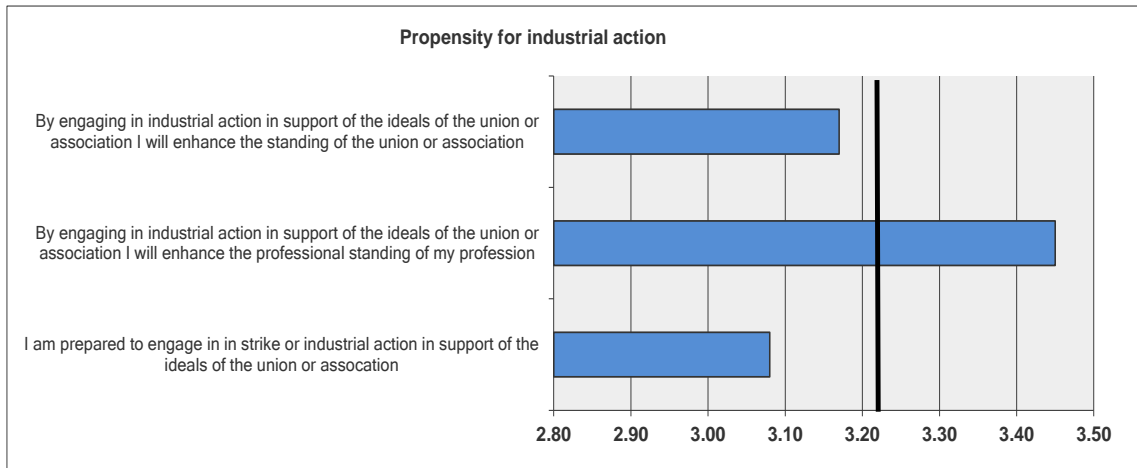
From a research methodology perspective, the validity and reliability of the four-factor model of organisational justice in the Colquitt (2001) scales were proven to be both reliable and valid, with specific reference to professional workers.

#### **6.4 Professional workers' propensity to embark on industrial action**

Kelloway et al. (2007) observed that the propensity to embark on protest or industrial action was a strong predictor of actual participation in industrial action. Strike propensity was defined by Martin and Sinclair (2001) as reflective of trade union members' readiness to embark on industrial action in support of the collective goals of a trade union. Strike propensities were increased when employees believed that a group with whom they identified was treated unjustly and that collective action in protest would be effective in addressing the said injustice (Klandermans, 2002). Klandermans (2002) identified three factors that influenced an employee's strike propensity – perceived injustice, identification with the collective and perceived utility of participation, or instrumentality in trade union parlance.

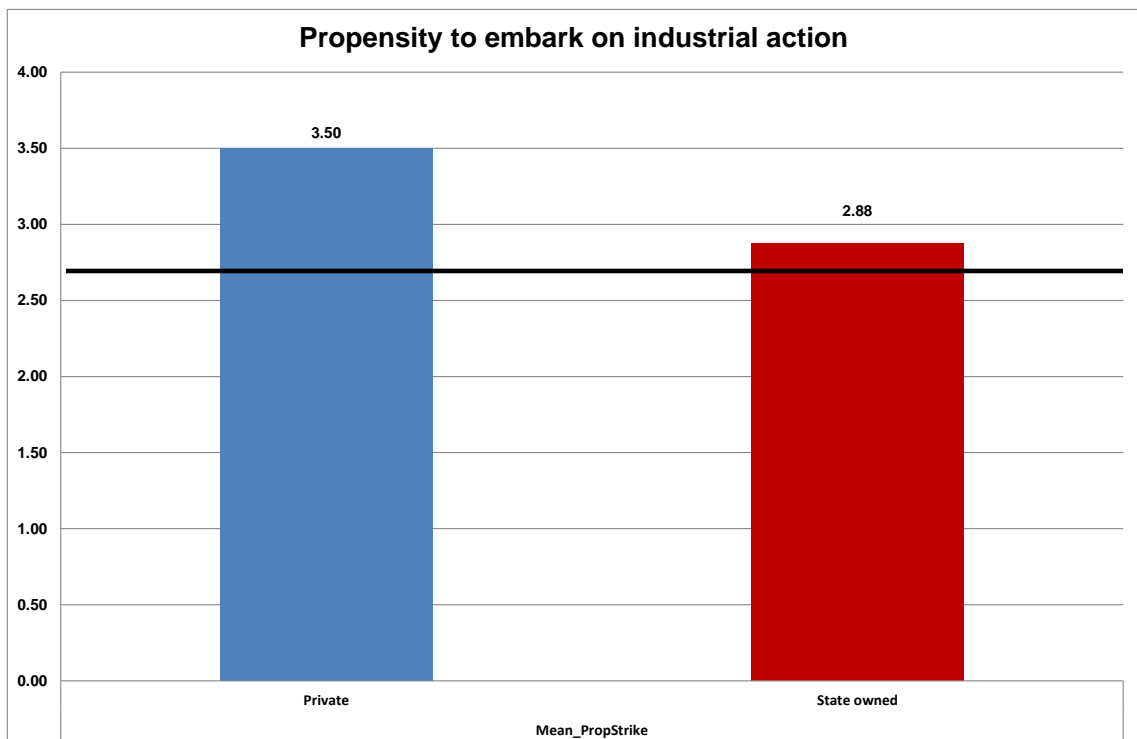
The mean responses indicated in Figure 5 below elicited the highest mean score, and therefore disagreement, within the set of questions in the survey questionnaire. The respondents, on average, disagreed with the concept of industrial action, but not strongly. The highest disagreement was recorded for the statement that industrial action would enhance the professional standing of the respondents' profession. This observation accorded with that of Harvey and Turnbull (2012), who in their study on airline pilots in the United Kingdom found that most respondents came from middle or upper-class households and may be expected to have less militant views on industrial action. The authors continued that such ambivalence could be explained by the respondents' collective desire to be viewed as a professional body.

**Figure 5: Propensity to embark on industrial action – mean response**



There was however a statistically significant difference in the mean response between respondents employed by private companies and state owned companies, as indicated by Figure 6, with respondents employed by state owned companies indicating a much higher propensity to embark on industrial action than their peers employed by the private companies.

**Figure 6: Propensity to embark on industrial action – private and state owned companies**



## 6.5 Discussion by hypothesis

### 6.5.1 Hypothesis I

Cloutier et al. (2012) noted that researchers in industrial action have focused on the agency of relative bargaining power between trade unions and employers, with a focus on variables such as economic conditions, labour market conditions, product market demand and unemployment, amongst others, on employees' propensity to embark on industrial action. Limited research has focused on the individual agency of employees' propensity to initiate industrial action. Buttigieg et al. (2008) encouraged a better understanding of injustice as an organising principle underlying the agency of employees to embark on industrial action. Kelly (1998), quoted by Buttigieg et al. (2008), argued that employees with a perceived sense of injustice were more likely to identify with the collective interests of a group. The authors concluded that the perception of organisational injustice, the allocation of culpability to an employer by a trade union, solidarity with fellow employees and a perception of trade union effectiveness, or instrumentality, were critical to the effective mobilisation of labour in exercising its collective bargaining power.

Accordingly, research hypothesis I hypothesised that the perception of organisational justice is negatively related to the professional workers' propensity to embark on industrial action. Following on from the observations in section 5.6.1, research hypothesis I was confirmed; organisational justice explained 19.7% of the variance in the propensity to embark on industrial action in a statistically significant manner. The relationship between organisational justice and professional workers' propensity to embark on industrial action was negatively related as hypothesised, but the effect size of organisational justice on the variance of professional worker's propensity to embark on industrial action was considered in the borderline medium range. On an individual construct basis, distributive justice and informational justice made a statistically significant unique contribution to the variance in professional workers' propensity to embark on industrial action. Procedural justice and interpersonal justice did not make a statistical significant unique contribution to the variance in the dependent variable, although the correlation coefficients for both independent variables were found to be statistically significant.

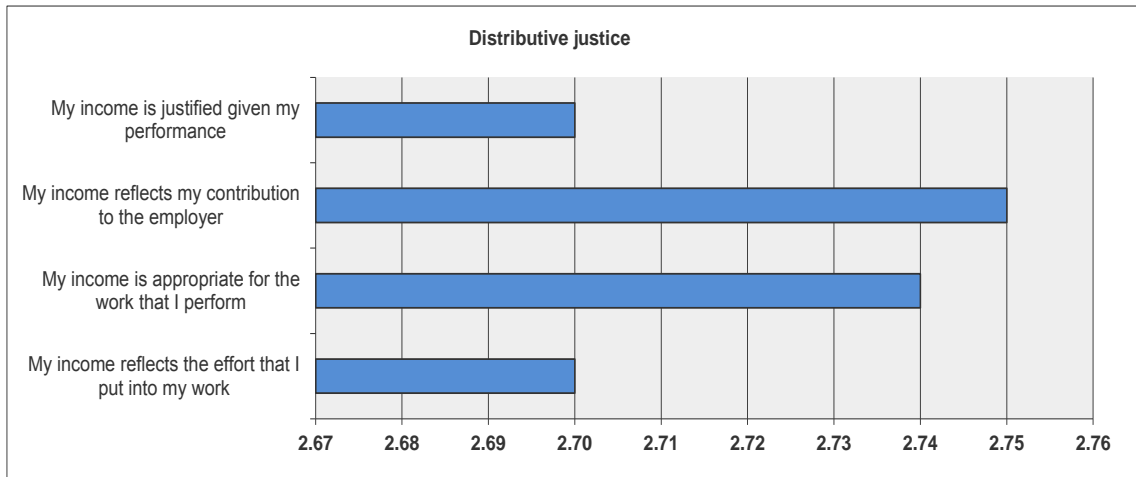
The findings of research hypothesis I were surprising and not supportive of the observations by Kelly (1998) and Kelloway et al. (2007), as it was expected that organisational justice would have a more significant effect on professional workers' propensity to embark on industrial action on an individual level. The expanded scope

of organisational justice as proposed by Colquitt (2001) was considered more appropriate for this research study, as highly skilled workers identify more with the goals of their employers as opposed to routine-task workers (Pernicka & Reichel, 2014). This rendered interpersonal and informational justice relevant for the purposes of organisational justice in the context of professional workers. Knowledge workers had a higher attitudinal commitment to their organisations and were accordingly expected to develop concurrence as opposed to conflict with their employers, as proposed in section 2.3.1 (Benson & Brown, 2007). Klandermans (2002) noted that employees' propensity to embark on industrial action was increased in the presence of perceived injustice. It was therefore expected that the effect of organisational justice would have a greater effect on professional workers' propensity to embark on industrial action than the results found in the multiple regression model. The finding did however concur with that of Cloutier et al. (2012) during a study of perceived justice on university faculty at a North American university using the four-factor model of organisational justice, that perceived injustice is not as important as expected in the decision making process to embark on industrial action.

Further analysis into the four constructs that represented organisational justice revealed that informational justice and distributive justice made the biggest relative contributions to the variance in professional workers' propensity to embark on industrial action on a statistical significant basis. The observation concurred with that of Buttigieg et al. (2008) and Kelloway et al. (2007) insofar as the relevance of distributive justice, but did not support the findings of Buttigieg et al. (2008) on the importance of procedural justice. Yet the most interesting observation in regards to perceived organisational justice is the importance of informational justice, which had the highest standardised beta coefficient of the four organisational constructs, which can be attributed to the observations recorded in section 5.7 relating to the observed lack of communication means and agency between the employers and respondents during the data collection process.

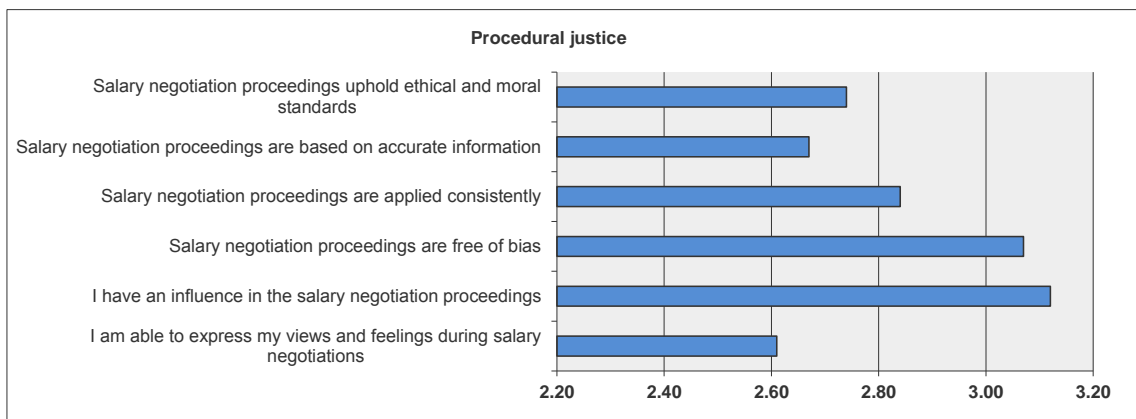
Based on Figure 7 the respondents were moderately dissatisfied with their distributive outcomes, with the biggest dissatisfaction, albeit marginally so, recorded for questions 2.1.2 and 2.1.3, which dealt with the respondents' relative contribution and the nature of the work that they performed. Judgments of this nature could however be subject to bias as reported by Tyler and Blader (2003), who found that employees often believed that they were deserving of higher distributive outcomes than was actually the case.

**Figure 7: Distributive justice – mean response**



In terms of procedural justice, Figure 8 indicates that the respondents were on average moderately dissatisfied with procedural justice, but more so with questions 2.2.4 (Salary negotiation proceedings are free of bias) and 2.2.5 (I have an influence in the salary negotiation proceedings). In the context of distributive justice, this result confirmed that when employees perceive that the rules and procedures are fair, the resulting outcomes will be fair as a consequence. Prior studies have proven that procedural justice had a material influence on the perception of distributive justice (Colquitt, 2001). It therefore followed that perceptions of procedural justice have a material influence on the perception of distributive justice, which was the case in this study. The mean response to question 2.2.5 did however raise the question of procedural justice from a trade union perspective, i.e. to what extent does the salary negotiation process follow a democratic process within the trade union? The perception of procedural justice had no statistical significance on professional workers' propensity to embark on industrial action.

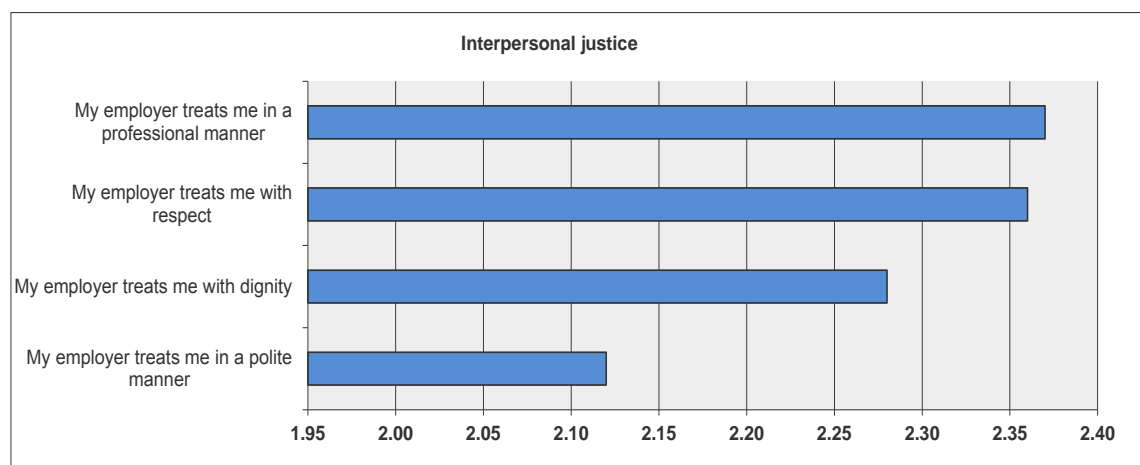
**Figure 8: Procedural justice – mean response**





Judging from Figure 9, the respondents moderately agreed that their respective employers treat them with dignity, respect and esteem. The relational perspective of organisational justice posited that employees did not only strive for distributive outcomes from their employers, but also social outcomes such as respect and dignity, which was captured in the concept of interpersonal justice (Colquitt, 2001). The relationship between the employers and employees appeared to be in good standing, but the perception of interpersonal justice had no statistical significance on professional workers' propensity to embark on industrial action.

**Figure 9: Interpersonal justice – mean response**

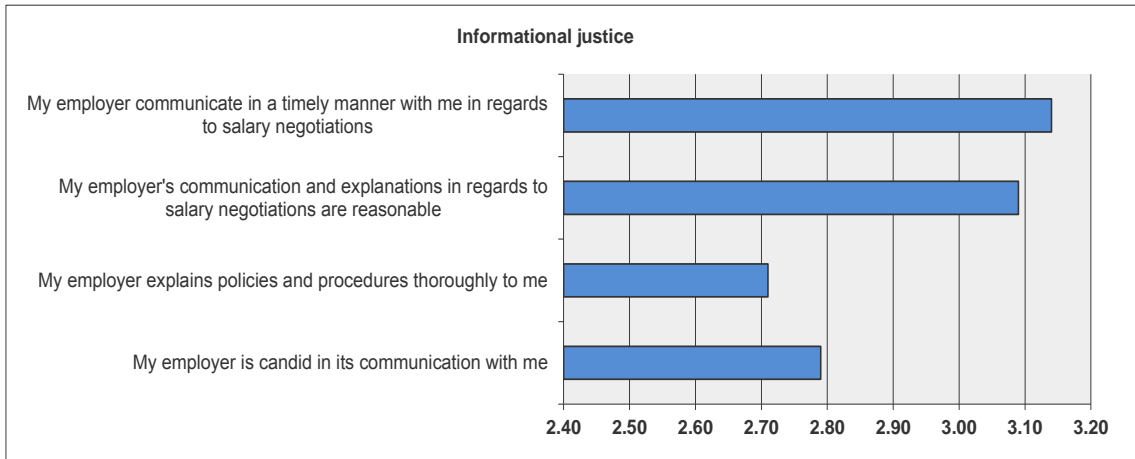


Informational justice had the highest standardised beta coefficient of the four organisational constructs and therefore had the biggest effect on professional workers' propensity to embark on industrial action on a statistically significant basis. Questions 2.4.3 and 2.4.4 recorded the highest means, which indicated that the respondents did not believe that their respective employers communicate with them in a timely, reasonable, and concise manner in regards to salary negotiations.

Cloutier et al. (2012) noted that justifications for decisions must be clear, concise, logical and adequate in the event that such decisions have an influence over workers' conditions of employment; employees believe that they are entitled to know when and what decisions affect them. Perceived informational justice depends on the credibility of information provided by employers and it therefore follows that information provided to employees must be understandable, truthful, sufficient in content and make rational sense. Employees are more likely to be circumspect in regards to the motives of the employers (Colquitt, 2001) when the information provided by them does not meet the standards as explained above. This finding supports the observations noted in section

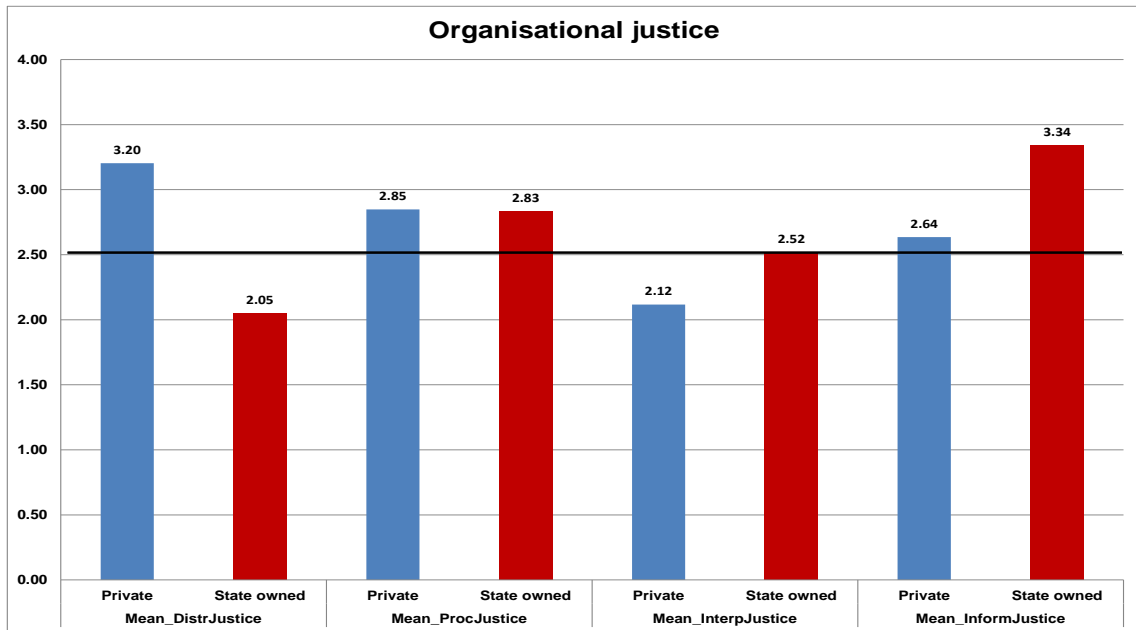
5.7 with reference to the absence of electronic mail addresses for the respondents and the fact that it appears that the trade unions have, in some cases, more agency over the respondents than the employers, which was certainly the case for the employees of state owned companies.

**Figure 10: Informational justice – mean response**



Pursuant to the observations made in section 5.7, it was apparent that there was a distinct and statistically significant difference in the responses received from respondents employed by private companies as opposed to state owned companies with reference to organisational justice, save for procedural justice. This observation is illustrated in Figure 11 below, from which it could be inferred that respondents employed by state owned companies have a significantly higher perception of distributive justice and a significantly lower sense of interpersonal and informational justice than their counterparts employed in the private sector. These observations were unintentionally confirmed on an anecdotal basis during the data collection process.

**Figure 11: Organisational justice – private and state owned companies**



### 6.5.2 Hypothesis II

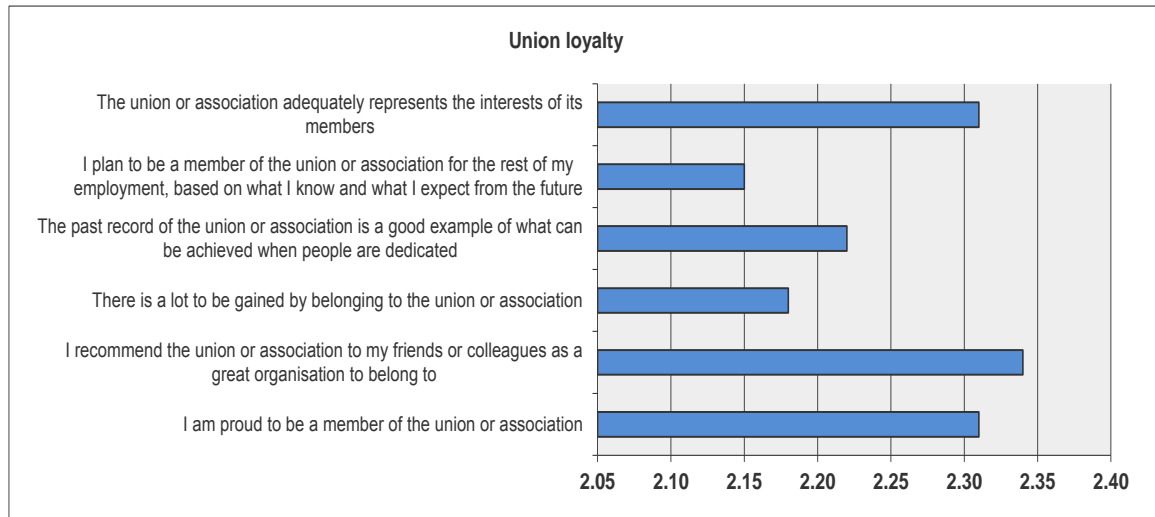
The researcher noted that a striking 82.89% of the respondents belonged to a trade union, of which 83.23% indicated that their trade union was engaged in negotiations with their respective employers at the time. The union density rate of the sample was considered high, given that 99.74% of the respondents perceived themselves to be professional workers. This observation strongly contradicted the observations of D’Art and Turner (2008), Ebbinghaus et al. (2011), Bennet (2006) and Pernicka and Lücking (2012) that professional workers draw on their individual primary and structural power as opposed to collective power and are therefore less likely to join a trade union. This finding however confirmed the conclusion of Campbell and Haiven (2008), cited in Campbell (2013), that professional workers have become more affiliated to trade unions than was historically the case.

Kelloway et al. (2007) referred to three predictors of industrial action from a union commitment perspective; union loyalty, union instrumentality and union militancy. Accordingly, research hypothesis II hypothesised that the union commitment, as defined by Kelloway et al. (2007), was positively related to the professional workers’ propensity to embark on industrial action, therefore the higher the respondents’ union commitment, the more likely they were to embark on industrial action.

Following on from section 5.6.2, union commitment, considered to be a single independent variable comprising of the three constructs described above, was positively correlated to professional workers' propensity to embark on industrial action on a statistically significant basis. Union commitment had a standardised beta coefficient of 0.797, which indicated that the independent variable had a large effect on the dependent variable. Research hypothesis II was therefore confirmed. Upon further analysis of the three unique elements of union commitment, it was found that union instrumentality and union militancy had the largest, albeit medium, effect on professional workers' propensity to embark on industrial action on a statistically significant basis.

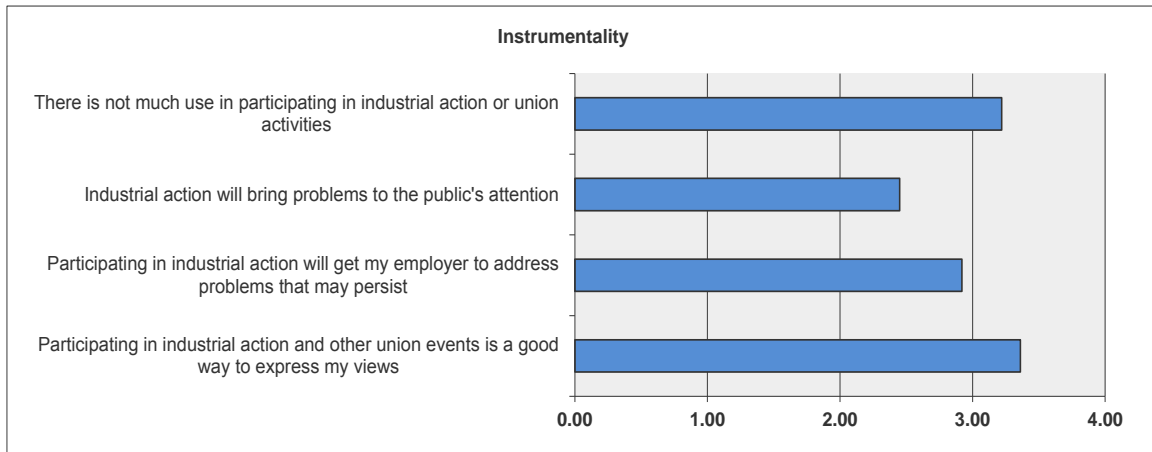
It was observed that union loyalty was positively correlated with the propensity to embark on industrial action, but had no statistical significance in the variance of the latter. Group identification and loyalty were considered to be the most important consideration for an individual in his decision making as to whether to engage in protest on behalf of a group or not (Klandermans, 2002); a concept referred to as affective commitment by organisational psychologists (Kelloway et al., 2007). Regardless of the aforementioned, the findings of this research study confirmed the findings of Kelloway et al. (2007) that union loyalty is not a statistically significant predictor of industrial action. Figure 12 indicated that the respondents, on average, were marginally loyal to their respective trade unions. The respondents were mostly in agreement with question 3.1.5 (I plan to remain a member of the union or association for the rest of my employment, based on what I know and what I expect from the future), followed by question 3.1.3 (There is a lot to be gained by belonging to the union or association). The latter confirmed the findings of Olsen (1965), quoted by Ebbinghaus et al. (2011), that employers are utility maximisers and that their decision to retain trade union membership depends on whether the expected benefits of membership exceeds the opportunity cost of membership.

**Figure 12: Union loyalty – mean response**



Kelloway and Barling (1993) observed that beliefs around trade union instrumentality could also be used to predict trade union participation; therefore employees are more likely to join a trade union if they believe that their participation in the trade union activities may lead to change. Kelloway et al. (2007) found that trade union instrumentality and distributive justice significantly predict individuals' intentions to participate in protests. The convergence of the concepts of trade union instrumentality and professional workers became interesting when the researcher considered the observations by academics that professional workers are in a contradictory class location in terms of traditional class theories, due to the fact that professional workers own their individual intellectual capital and as a result work autonomously (Wright, 1978). Benson and Brown (2007) observed three dimensions to knowledge work: its dynamic nature; its interdependence with other functions in an organisation; and the degree of autonomy that knowledge workers enjoy. The response means on the questions of union instrumentality illustrated in Figure 13 indicated that, on average, the respondents moderately disagreed with the concept of union instrumentality, which confirmed the observations of Wright (1978) and Benson and Brown (2007).

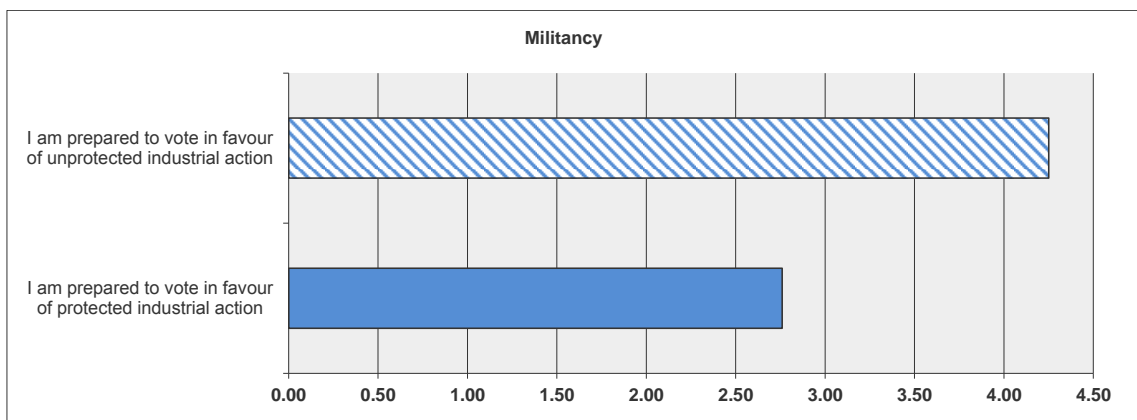
**Figure 13: Union instrumentality – mean response**



Question 3.3.2 (I am prepared to vote in favour of unprotected industrial action) was excluded from the data analysis as a result of its outlier status, as explained in section 5.4.2. It was evident that the respondents, on average, strongly disagreed with the consideration of unprotected industrial action, which correlated with their disagreement that industrial action will enhance the professional standing of their profession. The mean response to voting in favour of protected industrial action was distinctly neutral.

The findings supported the annotation of Monnot et al. (2011), who observed that white collar workers, which included professional workers, evidenced a stronger relationship between commitment and non-militant action than militant action. White collar workers were found to serve the trade union through non-militant action as opposed to militant action.

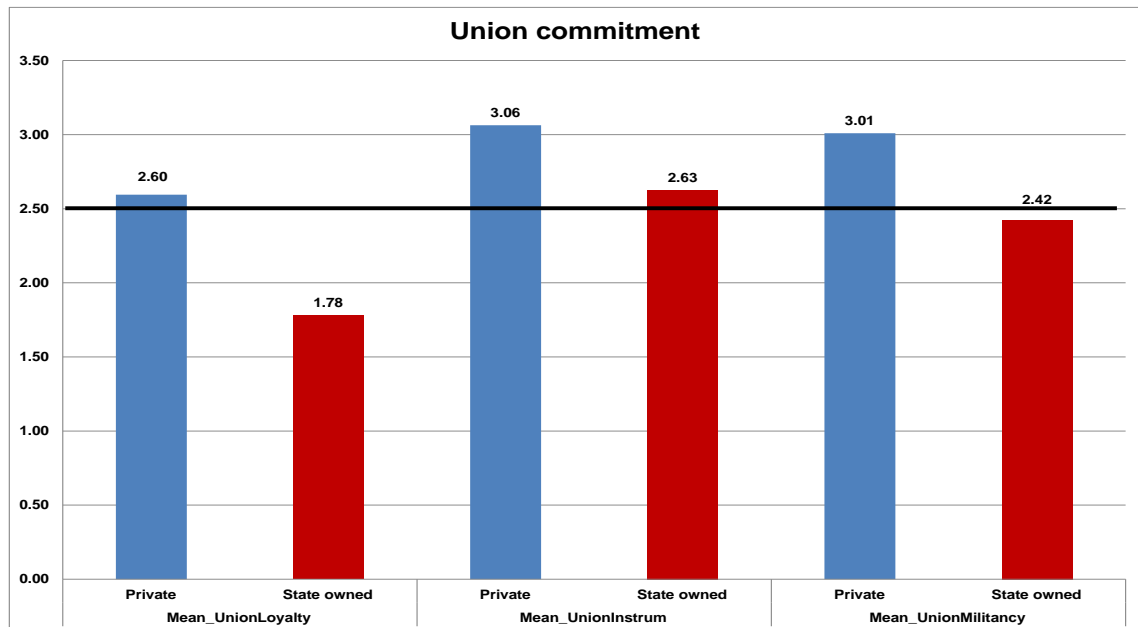
**Figure 14: Union militancy – mean response**



As with all the other measurements in the research study, a statistical significant difference was observed between the mean responses of respondents employed by

private companies as opposed to those from state owned companies. On the subject of the constructs of union commitment, respondents employed by state owned companies were on average more committed to their trade union than their peers employed in the private sector, as indicated in Figure 15 below.

**Figure 15: Union commitment – private and state owned companies**



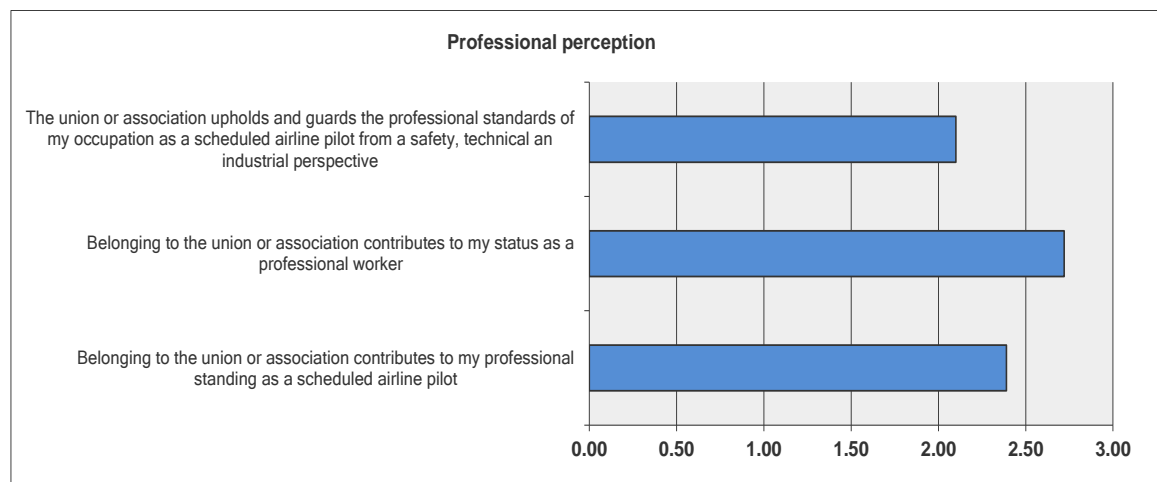
### 6.5.3 Hypothesis III

Professional perception indicated no statistically significant relationship with professional workers' propensity to embark industrial action whatsoever, save for the observation that both regression models discussed in section 5.6.2 indicated a negative relationship between professional perception and the dependent variable as expected. Both observations were not statistically significant however, and research hypothesis III that the perception of professionalism is negatively related to professional workers' propensity to embark on industrial action could therefore not be confirmed, although on each occasion the independent variable indicated an acceptable correlation coefficient with the dependent variable on a statistically significant basis.

This may be attributed to the difficulty in the construction of the concept of professionalism in the context of the research study as explained in section 2.3 of the literature review, leading to the research questions having to be self-designed for this research study as opposed to using research questions relied upon in earlier studies.

The respondents' mean responses were interesting nonetheless, in that they, on average, moderately agreed that the trade union upholds and guards the professional standards of their profession from a safety, technical and industrial perspective, and contributes to their professional standing. On average however, the respondents appeared to be neutral on whether the trade union contributes to their status as a professional worker, as can be deduced from Figure 16.

**Figure 16: Professional perception – mean response**



## 6.6 Summary

Research hypothesis I was confirmed; organisational justice is negatively related to professional workers' propensity to embark on industrial action. Research hypothesis II was confirmed; union commitment is positively related to professional workers' propensity to embark on industrial action. Research hypothesis III, professional perception is negatively related to professional workers' propensity to embark on industrial action, could however not be confirmed. Based on this research study, collective conditions represented by union commitment were statistically more significant than individual factors, captured by organisational justice constructs, on professional workers' propensity to embark on industrial action; an observation opposite to the expectation that professional workers drew on their individual primary and structural power as opposed to collective power to extract concessions from employers (Pernicka & Lücking, 2012).

Moreover, the findings, when explored on a more granular level, included interesting observations when analysed in the context of existing research, considering their implications for the relevant stakeholders. The research study will conclude with



chapter 7, which, amongst other issues, will discuss the implications and recommendations for management and trade unions with reference to the multiple variables explored in this research study.

## **7. Conclusion**

Chapter 7 will provide a brief summary of the research study, highlight the findings of relevance with specific reference to their implications, and make recommendations to management and trade unions in their respective relationships with professional workers. The chapter concludes with a discussion of the limitations of the research study and suggestions for future research.

### **7.1 Summary of the research study**

There has been an undeniable increase in trade union membership amongst highly skilled workers (Pernicka & Reichel, 2014; Campbell & Haiven, 2008), notwithstanding a protracted general decline in trade union membership globally (Buttigieg et al., 2008; Darlington, 2012; Ebbinghaus et al., 2011). Ebbinghaus and Visser (1999) attributed the decline in trade union membership to the speed of change in many developed economies, whereby manufacturing employment has moved to knowledge work, thereby shifting an increasing level of employment to an employee demographic that was theoretically less inclined to join a trade union (Ebbinghaus et al., 2011). Pernicka and Reichel's (2014) observation that there has been an increase in the trade union membership of highly skilled workers could be attributed to the de-professionalisation, formalisation, bureaucracy and division of professional work by employers. This change in attitude of professional workers was interesting as professional workers traditionally drew on their individual primary and structural power, as opposed to collective power, to extract concessions from employers (Ebbinghaus et al., 2011; Pernicka & Lücking, 2012).

This research study was specifically interested in this phenomenon, particularly from an organisational justice perspective, given that highly skilled workers on an individual level were expected to develop concurrence as opposed to conflict with their employers, and were expected to have a higher attitudinal commitment to their employers (Benson & Brown, 2007). Existing research has failed to develop hypotheses linking strike propensities with motivational mechanisms (Martin & Sinclair, 2001), particularly for professional workers, which is highly relevant due to the material financial consequences of professional workers embarking on industrial action (Kaufman, 2004). Knowledge workers' levels of attitudinal and behavioural commitment were therefore more likely to be influenced by organisational factors than their routine-task co-workers, which was of specific interest from an organisational justice perspective on an individual level. From a collective perspective however, the

research study was also interested in the moderating and aggravating influences of professional perception and union commitment on professional workers' propensity to embark on industrial action.

The research question was considered through three hypotheses: organisational justice is negatively related to professional workers' propensity to embark on industrial action; union commitment is positively related to professional workers' propensity to embark on industrial action; and professional perception is negatively related to professional workers' propensity to embark on industrial action. Upon establishing the explicit relationships as hypothesised above, the study set out to consider and comment on the tensions created by the professional trade union's duality, ostensibly caused by its desire to be perceived as professional, and contradicted by its mandate as a union to extract concessions from employers through collective and industrial action.

Scheduled airline pilots employed in South Africa were used as the universe for the research study, and a quantitative approach was adopted in terms of which survey questionnaires were distributed to the sample units through a snowball sampling technique which elicited 199 responses. On the closure of the data collection period, the data was coded and analysed using a variety of descriptive and inferential statistical analysis techniques.

## **7.2 Findings and discussion**

The study revealed interesting insights into both the individual and collective motivational constructs of professional workers' propensity to embark on industrial action, especially with regard to the material contradictions that exist in the current academic literature on professional workers. From a research methodology perspective, the validity and reliability of the four-factor model of organisational justice as proposed by the Colquitt (2001) scales were proven, specifically insofar as it related to professional workers.

82.89% of the respondents belonged to a trade union, which was interesting when one considers that South Africa's average total union density rate was calculated at 29.7% of the total working population in 2010. The mining industry led the sectorial union density rates at 73.7%, followed by public administration at 40.4% (International Labour Organization, 2014). Although not completely unexpected, the finding was interesting

and confirmed the observation of Pernicka and Reichel (2014) and Campbell and Haiven (2008), that there has been an unmistakable increase in trade union membership amongst professional workers.

Organisational justice explained 19.7% of the variance in the propensity to embark on industrial action in a statistically significant manner. The relationship between organisational justice and professional workers' propensity to embark on industrial action was negatively related as expected, but the effect size of organisational justice on the variance of professional worker's propensity to embark on industrial action was considered in the borderline medium range. This finding was surprising as it was expected that organisational justice would have a bigger effect on professional workers' propensity to embark on industrial action, as highly skilled workers were expected to develop concurrence as opposed to conflict with their employers, to have a higher attitudinal commitment to their employers (Benson & Brown, 2007), and to identify more with the goals of their employers as opposed to routine-task workers (Pernicka & Reichel, 2014).

On an individual construct basis, distributive justice and informational justice made a statistically significant unique contribution to the variance in professional workers' propensity to embark on industrial action. The findings on distributive justice were expected in the presence of a response bias, as most employees believe that their distributive outcomes do not match their inputs (Tyler & Blader, 2003). The surprising result was the relevance of informational justice; although on reflection the respondents were considered to be an absent workforce with limited presence in a normal office environment, which may have led to poor communication and a low perception of informational justice. Procedural justice and interpersonal justice did not make a statistically significant unique contribution to the variance in the dependent variable, regardless of the fact that the correlation coefficients for both independent variables were found to be statistically significant.

Considered as a single independent variable, union commitment was positively correlated to professional workers' propensity to embark on industrial action on a statistically significant basis. Upon further analysis of the three unique elements of union commitment, it was found that union instrumentality and union militancy had the largest, albeit medium, effect on professional workers' propensity to embark on industrial action on a statistically significant basis, which was interesting considering that the respondents perceived themselves to be professional workers. Union loyalty

was positively correlated with propensity to embark on industrial action, but had no statistical significance in the variance of the latter, which confirmed the findings of Kelloway et al. (2007) that union loyalty is not a statistically significant predictor of industrial action.

It was evident that the respondents, on average, strongly disagreed with the idea of unprotected industrial action, which correlated with their disagreement that industrial action would enhance the standing of their profession. The mean response to voting in favour of protected industrial action was distinctly neutral, which may suggest that the respondents, on average, may be swayed in favour for or against industrial action, depending on the circumstances. With regard to the distinctive response against unprotected industrial action, the findings supported Monnot et al. (2011), who observed that white collar workers, which would include professional workers, evidenced a stronger relationship between commitment and non-militant action as opposed to militant action, i.e. white collar workers were found to serve the trade union through non-militant action as opposed to militant action.

Professional perception indicated no statistically significant relationship with professional workers' propensity to embark on industrial action, although it indicated an acceptable correlation coefficient with the latter on a statistically significant basis. This may be attributed to difficulty in the construction of the concept of professionalism in the context of the research study, as explained in the literature review. Notwithstanding the above, the respondents' mean responses were still interesting in that they, on average, moderately agreed that the trade union upholds and guards the standards of their profession from a safety, technical and industrial perspective, and contributes to their professional standing as a scheduled airline pilot. On average, the respondents were neutral on whether the trade union contributed to their status as professional workers.

With regard to all of the above, it was important to consider the professional workers' propensity to embark on industrial action. Strike propensity increased when employees believe that a group with whom they identify was treated unreasonably, and that collective action in protest will be effective in addressing the said injustice. Klandermans (2002) and Kelloway et al. (2007) observed that the propensity to embark on protest or industrial action was a strong predictor of actual participation. On average, the respondents disagreed with the concept of industrial action, but not strongly. The greatest disagreement was recorded for the statement that industrial

action will enhance the professional standing of the respondents' profession. This observation supported those of Harvey and Turnbull (2012) from their study on airline pilots in the United Kingdom, which found that most respondents reside in middle or upper-class households and may be expected to have less militant views on industrial action. The authors added that such ambivalence could be explained by the respondents' collective desire to be viewed as a professional body.

It became apparent during the data collection period that the respective trade unions enjoyed material agency over the respondents as well as the employers, particularly in the state owned companies. In the spirit of post-positivism, this observation led to an analysis of the different variables to ascertain the perception thereof of the respondents employed by private companies as opposed to state owned companies. It was found that respondents employed by state owned companies, on average, had a higher perception of distributive justice compared to their counterparts. State owned company employees however, had a lower sense of interpersonal and informational justice than their peers. Respondents employed by state owned companies had a distinctly higher sense of trade union commitment, professional perception and propensity to embark on industrial action than their counterparts. For all the variables described above, the differences in perception between the two independent groups were statistically significant, which was considered interesting and relevant for future research purposes.

In the final analysis it was found that organisational justice can be used as a reliable predictor of professional workers' propensity, on an individual level, to embark on industrial action in a statistically significant manner, albeit with a medium effect. Yet union commitment, specifically union militancy and union instrumentality, was found to be a more reliable predictor of professional workers' propensity to embark on industrial action. Notwithstanding the findings on union commitment, the respondents, on average, disagreed with the prospects of industrial action, albeit marginally so. Based on this research study, collective conditions were statistically more significant than individual factors, captured by the organisational justice constructs, on professional workers' propensity to embark on industrial action which contradicts the expectation that professional workers traditionally drew on individual and structural power, as opposed to collective power, to extract concessions from employers (Pernicka & Lücking, 2012).

Judging from the research questions specifically, there was a strong impression that professional workers joined trade unions to assert their personal interests, obtain

reputation or status, seek solidarity, or to form or partake in a specific identity that they relate to. This concept of social capital projects the principle of trust and provides a structural dimension of involvement in networks and associations (Ebbinghaus et al., 2011).

### **7.3 Implications for stakeholders**

The definitive increase in trade union membership of professional workers presents unique challenges to businesses from an organisational justice perspective, especially considering that highly skilled workers are expected to develop concurrence as opposed to conflict with their employers, are expected to have a higher attitudinal commitment to their employers (Benson & Brown, 2007), and identify more with the goals of their employers as opposed to routine-task workers (Pernicka & Reichel, 2014). This study has proven that organisational justice was a reliable predictor of professional workers' propensity to embark on industrial action, specifically from a distributive and informational justice perspective. From a distributive justice perspective, the private company employers in South Africa faced the biggest challenge as a result of the apparent difference in perception of distributive justice between the respondents employed by private companies as opposed to state owned companies.

The significance of informational justice was very interesting and affirmed the observations of communication distance between the employer and the respondents during the data collection phase; a void ostensibly occupied by the professional trade union. It is thus recommended that the employers communicate more regularly and effectively with the professional workers in their employ, especially considering that professional workers are expected to have a higher attitudinal commitment to their employers. Justifications for decisions or procedures must be clear, concise, logical and adequate in the event that such decisions have an influence over workers' conditions of employment (Cloutier et al., 2012). More effective communication is expected to strengthen the psychological contract between the employer and professional worker, mitigating the risk of industrial action accordingly. The concept of informational justice appeared to be of importance to professional workers employed by state owned companies, which will have to pay specific attention to restore that justice concept in the workplace. Industrial action by professional workers can lead to material financial losses by employers (Kaufman, 2004), but judging from the results of this research study, employers can take solace from the fact that it appeared unlikely

that professional workers will embark on unprotected industrial action and, on average, appeared ambivalent towards industrial action. The study confirmed that professional workers displayed an ambivalent attitude to militant means to restore justice, and it is accordingly suggested that non-militant means of protest may be more appropriate for professional workers (Monnot et al., 2011).

From a trade union perspective, it was apparent that the professional trade unions enjoyed substantial support amongst professional workers, with density rates materially higher than the South African national average. Aside from the support and the high reliability of union militancy and union instrumentality, it appeared unlikely that professional workers will make use of militant means such as industrial action to restore justice in the workplace. Although statistically insignificant as a predictor of propensity to embark on industrial action, union loyalty presented itself most significantly in the fact that the respondents were utility maximisers and believed that there were financial gains to be had from belonging to the trade union (Ebbinghaus et al., 2011). It transpired that the respondents did, on average, not believe that they have a meaningful influence in the salary negotiation proceedings which may imply that the trade unions will have to review the balloting and survey techniques within the unions to ensure that members increase their perception of procedural justice within the trade union.

Although professional perception was not statistically significant in predicting industrial action, the responses, on average, to the research questions were instructive, and it was fair to conclude that professional workers join trade unions to assert their personal interests, obtain reputation or status, seek solidarity or to form or partake in a specific identity that they relate to. This concept of social capital projected the principle of trust and provided a structural dimension of involvement in networks and associations (Ebbinghaus et al., 2011). It is therefore important that the trade unions uphold the perception of professionalism and status that their members seek, which presents the professional trade unions with a predicament as their extractive mandate can be challenged by their bargaining power relationship with employers and the respondents' ambivalence towards industrial action.

#### **7.4 Research limitations**

This research study was limited inasmuch as it focused on scheduled airline pilots, as a subset of professional workers, who may or may not have their own set of peculiarities



or customs not evident amongst other professional workers. The study was geographically limited to scheduled airline pilots residing in South Africa, who may or may not be influenced by certain national or cultural issues with regard to industrial action which is not evident with their international peers.

The snowball sampling method discussed in section 4.5 may have presented a research limitation as it could not guarantee a representative sample of all demographic constituents of professional workers intended to be sampled and measured. The fact that South African Airways SOC Limited and South African Express Airways SOC Limited declined to participate in the research study amplified the sampling bias and it is fair to suggest that the sample may not be representative of the population. The interdependent factors, individually or collectively as the case may be, that will cause professional workers to embark on industrial action may have been limiting in itself given that there may be other more complex matters that may influence their decision making, for example a complex combination of cultural, institutional or nationalistic factors that can be further explored in future research studies. During the descriptive studies of the data analysis, it was found that 83.23% of the respondents who belonged to a trade union indicated that their trade union was in negotiations with their respective employers, which may have increased the respondents' response and subject bias.

## **7.5 Recommendations for future research**

The literature review produced substantial contradictions amongst academics regarding the constructs of a professional worker; professional workers' propensity to belong to trade unions; their propensity to embark on industrial action; and the constructs of organisational justice, which would suggest that future research can be recommended in all the fields referred to above and touched upon in this research study. This research study built on previous research conducted with specific reference to professional workers, a field that should be studied in further detail as a result of the increase in trade union membership of professional workers.

More specifically, this research study touched on the differences in perceptions of the variables between scheduled airline pilots employed by private companies and public companies. It became apparent that the differences in perception between the two independent groups were statistically significant, to the extent that further research is warranted in the fields of both organisational justice and union commitment. This

should aim to establish the factors that have led to such distinct differences in a group of professional workers who are for all intents and purposes homogenous, save for their respective employers. The scope of this research study did not allow for the examination of stakeholders beyond the respondents, thus it is recommended that the scope of a similar study be extended to the employers and trade union representatives to triangulate the data for a more balanced perspective on the research question.

Further to the above, it is recommended that future research be performed to compare the difference in perceptions of the variables, organisational justice and union commitment, between professional workers and routine-task workers to gain a better understanding of how the two independent groups perceive the concepts, the reasons why such a difference exists, and how the differences can be managed within the same workplace. It is recommended that the perception of the four constructs of organisational justice be analysed between the employer and the union to assess where employees, professionals or otherwise, perceive the highest sense of justice.

This specific field of academic research is rich with potential for future academic research given the continuous evolution of variables such as employee profiles and management practices, which are being refined to address the new employment relationship paradigm.

## **7.6 Conclusion**

Aside from the fact that no significance could be attributed to professionalism as a moderator on professional workers' propensity to embark on industrial action, the responses, on average, to the research questions on the research construct remained instructive. Collective conditions represented by union commitment were statistically more significant than individual factors, captured by organisational justice constructs, on professional workers' propensity to embark on industrial action; an observation opposite to the expectation that professional workers drew on their individual primary and structural power as opposed to collective power to extract concessions from employers (Pernicka & Lüking, 2012).

The duality of professional trade unions presents them with a dichotomy in that on the one hand they have a mandate to extract concessions from employers, but on the other hand they are expected to remain professional and uphold the status and standards of the industry that they represent. This unique duality, insofar as trade

unions are concerned, can be problematic for professional trade unions in the bargaining power relationship with employers given the perceived ambivalence of professional workers to embark on industrial action as observed in this research study. This problem can however be addressed through the threat of industrial action given the material financial implications of professional workers embarking on industrial action; as well as non-militant means such as work to rule or go-slow behaviour by professional workers to achieve the collective goals of the professional trade union to extract concessions from employers.

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## **Appendix A: Letter of consent survey questionnaires**

Dear Sir / Madam

### **RESEARCH STUDY: THE CONTEXT AND CONDITIONS OF PROFESSIONAL WORKERS' STRIKE PROPENSITY**

I am conducting a research study to gain a better understanding of the contradiction that manifests in professional trade unions or associations, which on the one hand acts as the custodian of standards, status and professionalism of its members, and on the other hand contradicts this position through its mandate to extract concessions from employers through collective or industrial action.

The scope of this research study is to develop the body of knowledge on professional workers' propensity to strike by testing the thresholds of perceived injustices that may lead professional workers to consider embarking on a strike or industrial action; as well as the moderating effects of the perception of professionalism as opposed to the aggravating effects of trade union commitment. Research of this nature is not uncommon. Harvey and Turnbull (2012) conducted a study on trade union commitment in Britain, sampling scheduled airline pilots that belonged to the British Airline Pilots' Association ('BALPA').

The research study is purely academic in nature and should take no more than 15 minutes of your time. Your participation is voluntary and you can withdraw at any time. All data will be kept confidential. By completing the survey, you indicate that you voluntarily participate in this research.

If you have any concerns, please contact me or my supervisor. Our details are as follows -

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## **Appendix B: Survey questionnaire**

### **Part 1 – Demographic information**

- 1.1 What is your age?
- 1.2 What is your gender?
- 1.3 To which demographic group do you belong?
- 1.4 What is your length in service at current employer (in years)?
- 1.5 What is your position in the flight line?
- 1.6 Are you employed at a private company or state owned company?
- 1.7 Do you belong to a professional trade union or association?
- 1.8 Do you consider yourself to be a professional worker?
- 1.9 Do you have a tertiary qualification?
- 1.10 Is your professional trade union or association in negotiations with your employer at the time of completing this questionnaire?

### **Part 2 – Perceived organisational justice (on a five point Likert scale) (Colquitt, 2001)**

#### **2.1 Distributive justice**

- 2.1.1 My income reflects the effort that I put into my work
- 2.1.2 My income is appropriate for the work that I perform
- 2.1.3 My income reflects my contribution to my employer
- 2.1.4. My income is justified given my performance

#### **2.2 Procedural justice**

- 2.2.1 I am able to express my views and feelings during salary negotiations
- 2.2.2 I have an influence in the salary negotiation proceedings
- 2.2.3 Salary negotiations proceedings are free of bias
- 2.2.4 Salary negotiations proceedings are applied consistently
- 2.2.5 Salary negotiations proceedings are based on accurate information
- 2.2.6 Salary negotiation proceedings uphold ethical and moral standards

#### **2.3 Interpersonal justice**

- 2.3.1 My employer treats me in a polite manner

- 2.3.2 My employer treats me with dignity
- 2.3.3 My employer treats me with respect
- 2.3.4 My employer treats me in a professional manner

## **2.4 Interpersonal justice**

- 2.4.1 My employer is candid in its communication with me
- 2.4.2 My employer explains policies and procedures thoroughly to me
- 2.4.3 My employer's communication and explanations in regards to salary negotiations are reasonable
- 2.4.4 My employer communicates in a timely manner with me in regards to salary negotiations

## **Part 3 – Trade union commitment and professional standing (on a five point Likert scale)**

### **3.1 Union loyalty (Kelloway, Catano, & Southwell, 1992)**

- 3.1.1 I am proud to be a member of the trade union or association
- 3.1.2 I recommend the trade union or association to my friends or colleagues as a great organisation to belong to
- 3.1.3 There is a lot to be gained by belonging to the union or association
- 3.1.4 The past record of the trade union or association is a good example of what can be done when people are dedicated
- 3.1.5 I plan to be a member of the trade union or association for the rest of my employment, based on what I know and what I expect from the future
- 3.1.6 The trade union or association adequately represents the interests of all its members

### **3.2 Trade union instrumentality (Kelloway & Barling, 1993)**

- 3.2.1 Participating in industrial action and other trade union events is a good way to express my views
- 3.2.2 Participating in industrial action will get my employer to address problems
- 3.2.3 Industrial action will bring problems that may persist to the public's attention
- 3.2.4 There is not much use in participating in industrial action or union activities

### **3.3 Trade union militancy (Martin, 1986)**

- 3.3.1 I am prepared to vote in favour of protected industrial action
- 3.3.2 I am prepared to vote in favour of unprotected industrial action

### **3.4 Professional perception**

- 3.4.1 Belonging to the trade union or association contributes to my professional standing as a scheduled airline pilot
- 3.4.2 Belonging to the trade union or association contributes to my status as a professional worker
- 3.4.3 The trade union or association upholds and guards the professional standards of my occupation as a scheduled airline pilot from a safety, technical and industrial perspective

### **Part 4 – Propensity to strike (on a five point Likert scale) (Kelloway, Francis, Catano, & Teed, 2007)**

- 4.1 I am prepared to engage in strike or industrial action in support of the ideals of the trade union or association
- 4.2 By engaging in industrial action in support of the ideals of the trade union or association I will enhance the professional standing of my profession
- 4.3 By engaging in industrial action in support of the ideals of the trade union or association I will enhance the standing of the union or association

### Appendix C: Consistency matrix

<b>Research problem</b>	<b>Literature review</b>	<b>Data collection tool</b>	<b>Analysis</b>
Organisational justice – distributive, procedural, interpersonal and informational - is negatively related to professional workers' propensity to embark on industrial action	Buttigieg, D. M., Deery, S. J., & Iverson, R. D. (2008); Cloutier, J., Colquitt, J. A. (2001) Darlington, R. (2012); Moorman, R. H. (1991); and Kelloway, Francis, Catano & Teed (2007)	Descriptive research – survey questionnaire (part 1 and 2)	Descriptive statistics Exploratory factor analysis Inferential statistics
Union commitment is positively related to professional workers' propensity to embark on industrial action	Kelloway, Francis, Catano & Teed (2007)	Descriptive research – survey questionnaire (part 3)	Descriptive statistics Exploratory factor analysis Inferential statistics

## Appendix D: Descriptive statistics - Organisational justice

**Table 24: Organisational justice**

Part 2 - Perceived Organisational Injustice		Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Total
Q2.1.1 My income reflects the effort that I put into my work	Count	29	72	25	48	13	187
	Row N %	15.5%	38.5%	13.4%	25.7%	7.0%	100.0%
Q2.1.2 My income is appropriate for the work that I perform	Count	28	69	28	48	14	187
	Row N %	15.0%	36.9%	15.0%	25.7%	7.5%	100.0%
Q2.1.3 My income reflects my contribution to my employer	Count	31	63	29	49	15	187
	Row N %	16.6%	33.7%	15.5%	26.2%	8.0%	100.0%
Q2.1.4 My income is justified given my performance	Count	38	61	26	44	18	187
	Row N %	20.3%	32.6%	13.9%	23.5%	9.6%	100.0%
Q2.2.1 I am able to express my views and feelings during salary negotiations	Count	16	91	40	29	11	187
	Row N %	8.6%	48.7%	21.4%	15.5%	5.9%	100.0%
Q2.2.2 I have an influence in the salary negotiation proceedings	Count	7	57	49	55	19	187
	Row N %	3.7%	30.5%	26.2%	29.4%	10.2%	100.0%
Q2.2.3 Salary negotiation proceedings are free of bias	Count	11	48	57	58	13	187
	Row N %	5.9%	25.7%	30.5%	31.0%	7.0%	100.0%
Q2.2.4 Salary negotiation proceedings are applied consistently	Count	10	82	40	38	17	187
	Row N %	5.3%	43.9%	21.4%	20.3%	9.1%	100.0%
Q2.2.5 Salary negotiation proceedings are based on accurate information	Count	18	85	37	35	12	187
	Row N %	9.6%	45.5%	19.8%	18.7%	6.4%	100.0%
Q2.2.6 Salary negotiation proceedings uphold ethical and moral standards	Count	13	92	30	35	17	187
	Row N %	7.0%	49.2%	16.0%	18.7%	9.1%	100.0%
Q2.3.1 My employer treats me in a polite manner	Count	40	107	22	14	4	187
	Row N %	21.4%	57.2%	11.8%	7.5%	2.1%	100.0%
Q2.3.2 My employer treats me with dignity	Count	37	96	25	22	7	187
	Row N %	19.8%	51.3%	13.4%	11.8%	3.7%	100.0%
Q2.3.3 My employer treats me with respect	Count	37	86	32	24	8	187
	Row N %	19.8%	46.0%	17.1%	12.8%	4.3%	100.0%
Q2.3.4 My employer treats me in a professional manner	Count	37	87	27	28	8	187
	Row N %	19.8%	46.5%	14.4%	15.0%	4.3%	100.0%
Q2.4.1 My employer is candid in its communication with me	Count	13	78	44	40	12	187
	Row N %	7.0%	41.7%	23.5%	21.4%	6.4%	100.0%
Q2.4.2 My employer explains policies and procedures thoroughly to me	Count	19	78	39	41	10	187
	Row N %	10.2%	41.7%	20.9%	21.9%	5.3%	100.0%
Q2.4.3 My employer's communication explanations in regards to salary negotiations are reasonable	Count	9	61	43	53	21	187
	Row N %	4.8%	32.6%	23.0%	28.3%	11.2%	100.0%
Q2.4.4 My employer communicate in a timely manner with me in regards to salary negotiations	Count	11	56	42	51	27	187
	Row N %	5.9%	29.9%	22.5%	27.3%	14.4%	100.0%

**Table 25: Statistics – organisational justice**

Statistics									
	N		Mean	Median	Mode	Std. Deviation	Minimum	Maximum	
	Valid	Missing							
Q2.1.1	187	0	2.70	2.00	2	1.208	1	5	
Q2.1.2	187	0	2.74	2.00	2	1.210	1	5	
Q2.1.3	187	0	2.75	2.00	2	1.237	1	5	
Q2.1.4	187	0	2.70	2.00	2	1.294	1	5	
Q2.2.1	187	0	2.61	2.00	2	1.038	1	5	
Q2.2.2	187	0	3.12	3.00	2	1.071	1	5	
Q2.2.3	187	0	3.07	3.00	4	1.039	1	5	
Q2.2.4	187	0	2.84	3.00	2	1.095	1	5	
Q2.2.5	187	0	2.67	2.00	2	1.086	1	5	
Q2.2.6	187	0	2.74	2.00	2	1.122	1	5	
Q2.3.1	187	0	2.12	2.00	2	.902	1	5	
Q2.3.2	187	0	2.28	2.00	2	1.032	1	5	
Q2.3.3	187	0	2.36	2.00	2	1.070	1	5	
Q2.3.4	187	0	2.37	2.00	2	1.092	1	5	
Q2.4.1	187	0	2.79	3.00	2	1.061	1	5	
Q2.4.2	187	0	2.71	2.00	2	1.085	1	5	
Q2.4.3	187	0	3.09	3.00	2	1.118	1	5	
Q2.4.4	187	0	3.14	3.00	2	1.171	1	5	



**Table 26: Component matrix – organisational justice**

<b>Component Matrix</b>				
	Component			
	1	2	3	4
Q2.1.1	.553	.730	-.254	.063
Q2.1.2	.533	.714	-.297	-.016
Q2.1.3	.507	.771	-.210	.041
Q2.1.4	.470	.781	-.231	.047
Q2.2.1	.648	.032	.355	-.337
Q2.2.2	.456	.030	.469	-.359
Q2.2.3	.639	.001	.514	.077
Q2.2.4	.648	.123	.487	.088
Q2.2.5	.587	.272	.432	-.012
Q2.2.6	.628	.127	.439	.124
Q2.3.1	.703	-.335	-.288	-.356
Q2.3.2	.780	-.330	-.315	-.277
Q2.3.3	.791	-.369	-.250	-.259
Q2.3.4	.804	-.265	-.263	-.139
Q2.4.1	.647	-.387	-.212	.228
Q2.4.2	.692	-.275	-.175	.384
Q2.4.3	.762	-.275	-.016	.310
Q2.4.4	.630	-.393	.040	.428

**Table 27: Correlation matrix - organisational justice**

Correlation Matrix																			
	Q2.1.1	Q2.1.2	Q2.1.3	Q2.1.4	Q2.2.1	Q2.2.2	Q2.2.3	Q2.2.4	Q2.2.5	Q2.2.6	Q2.3.1	Q2.3.2	Q2.3.3	Q2.3.4	Q2.4.1	Q2.4.2	Q2.4.3	Q2.4.4	
Correlation	Q2.1.1	1.000	.877	.882	.842	.276	.148	.245	.321	.383	.331	.181	.263	.221	.297	.139	.240	.242	.095
	Q2.1.2	.877	1.000	.837	.838	.288	.177	.174	.272	.355	.274	.191	.275	.235	.307	.128	.211	.243	.061
	Q2.1.3	.882	.837	1.000	.873	.282	.168	.244	.324	.367	.290	.151	.181	.152	.244	.091	.182	.210	.039
	Q2.1.4	.842	.838	.873	1.000	.240	.142	.173	.288	.375	.285	.132	.158	.118	.218	.066	.181	.163	.015
	Q2.2.1	.276	.288	.282	.240	1.000	.583	.545	.466	.435	.421	.387	.424	.435	.422	.311	.281	.441	.325
	Q2.2.2	.148	.177	.168	.142	.583	1.000	.398	.433	.292	.326	.242	.242	.263	.220	.126	.192	.324	.239
	Q2.2.3	.245	.174	.244	.173	.545	.398	1.000	.634	.555	.519	.243	.351	.372	.411	.327	.358	.466	.389
	Q2.2.4	.321	.272	.324	.288	.466	.433	.634	1.000	.547	.604	.264	.297	.357	.397	.276	.349	.450	.337
	Q2.2.5	.383	.355	.367	.375	.435	.292	.555	.547	1.000	.661	.276	.276	.288	.309	.176	.232	.262	.253
	Q2.2.6	.331	.274	.290	.285	.421	.326	.519	.604	.661	1.000	.307	.297	.356	.339	.300	.334	.391	.352
	Q2.3.1	.181	.191	.151	.132	.387	.242	.243	.264	.276	.307	1.000	.830	.814	.714	.526	.492	.523	.401
	Q2.3.2	.263	.275	.181	.158	.424	.242	.351	.297	.276	.297	.830	1.000	.896	.817	.576	.570	.580	.500
	Q2.3.3	.221	.235	.152	.118	.435	.263	.372	.357	.288	.356	.814	.896	1.000	.837	.631	.545	.594	.520
	Q2.3.4	.297	.307	.244	.218	.422	.220	.411	.397	.309	.339	.714	.817	.837	1.000	.622	.602	.599	.500
	Q2.4.1	.139	.128	.091	.066	.311	.126	.327	.276	.300	.526	.576	.631	.622	1.000	.646	.600	.655	.527
	Q2.4.2	.240	.211	.182	.181	.281	.192	.358	.349	.232	.334	.492	.570	.545	.602	1.000	.655	.618	.618
	Q2.4.3	.242	.243	.210	.163	.441	.324	.466	.450	.262	.391	.523	.580	.594	.599	.600	.655	1.000	.762
	Q2.4.4	.095	.061	.039	.015	.325	.239	.389	.337	.253	.352	.401	.500	.520	.500	.527	.618	.762	1.000

**Table 28: KMO and Bartlett's test - organisational justice**

KMO and Bartlett's Test	
Kaiser-Meyer-Olkin Measure of	.891
Bartlett's Test of Sphericity	Approx. Chi-df
	2807.262
	153
	Sig.
	0.000

**Table 29: Anti-image matrix - organisational justice**

Anti-image Matrices																		
Anti-image Correlation																		
	Q2.1.1	Q2.1.2	Q2.1.3	Q2.1.4	Q2.2.1	Q2.2.2	Q2.2.3	Q2.2.4	Q2.2.5	Q2.2.6	Q2.3.1	Q2.3.2	Q2.3.3	Q2.3.4	Q2.4.1	Q2.4.2	Q2.4.3	Q2.4.4
Q2.1.1	.873 <sup>a</sup>	-.443	-.441	-.131	.030	.080	-.048	-.010	.021	-.110	.084	-.110	.002	.030	.007	-.049	.053	-.048
Q2.1.2	-.443	.872 <sup>a</sup>	-.124	-.294	-.050	-.083	.177	.060	-.098	.041	.158	-.095	-.065	-.044	.018	.033	-.157	.138
Q2.1.3	-.441	-.124	.868 <sup>a</sup>	-.431	-.034	.001	-.119	-.048	.036	.064	-.111	.109	.019	-.019	.002	.046	-.048	.039
Q2.1.4	-.131	-.294	-.431	.892 <sup>a</sup>	-.002	.003	.088	-.035	-.098	-.018	-.066	.038	.087	-.043	.017	-.085	.055	.006
Q2.2.1	.030	-.050	-.034	-.002	.905 <sup>a</sup>	-.431	-.228	.019	-.082	-.027	-.047	-.049	-.001	-.033	-.073	.123	-.074	.014
Q2.2.2	.080	-.083	.001	.003	-.431	.837 <sup>a</sup>	-.047	-.187	.060	-.023	-.058	.018	-.042	.107	.129	-.040	-.040	-.022
Q2.2.3	-.048	.177	-.119	.088	-.228	-.047	.879 <sup>a</sup>	-.284	-.288	-.030	.243	-.114	.002	-.074	-.036	-.026	-.133	.036
Q2.2.4	-.010	.060	-.048	-.035	.019	-.187	-.284	.913 <sup>a</sup>	-.114	-.256	.048	.111	-.079	-.113	.063	-.051	-.139	.077
Q2.2.5	.021	-.098	.036	-.098	-.082	.060	-.288	-.114	.860 <sup>a</sup>	-.424	-.147	-.001	.061	-.007	.061	.043	.192	-.135
Q2.2.6	-.110	.041	.064	-.018	-.027	-.023	-.030	-.256	-.424	.894 <sup>a</sup>	-.065	.114	-.102	.076	-.067	-.037	-.024	-.054
Q2.3.1	.084	.158	-.111	-.066	-.047	-.058	.243	.048	-.147	-.065	.889 <sup>a</sup>	-.399	-.250	-.012	-.012	-.041	-.167	.186
Q2.3.2	-.110	-.095	.109	.038	-.049	.018	-.114	.111	-.001	.114	-.399	.886 <sup>a</sup>	-.486	-.195	.099	-.133	.020	-.064
Q2.3.3	.002	-.065	.019	.087	-.001	-.042	.002	-.079	.061	-.102	-.250	-.486	.892 <sup>a</sup>	-.339	-.209	.163	.039	-.105
Q2.3.4	.030	-.044	-.019	-.043	-.033	.107	-.074	-.113	-.007	.076	-.012	-.195	-.339	.949 <sup>a</sup>	-.107	-.146	-.029	.023
Q2.4.1	.007	.018	.002	.017	-.073	.129	-.036	.063	.061	-.067	-.012	.099	-.209	-.107	.925 <sup>a</sup>	-.335	-.146	.006
Q2.4.2	-.049	.033	.046	-.085	.123	-.040	-.026	-.051	.043	-.037	-.041	-.133	.163	-.146	-.335	.918 <sup>a</sup>	-.138	-.218
Q2.4.3	.053	-.157	-.048	.055	-.074	-.040	-.133	-.139	.192	-.024	-.167	.020	.039	-.029	-.146	-.138	.881 <sup>a</sup>	-.574
Q2.4.4	-.048	.138	.039	.006	.014	-.022	.036	.077	-.135	-.054	.186	-.064	-.105	.023	.006	-.218	-.574	.854 <sup>a</sup>

**Table 30: Communalities - organisational justice**

<b>Communalities</b>		
	Initial	Extraction
Q2.1.1	.856	.887
Q2.1.2	.827	.844
Q2.1.3	.848	.872
Q2.1.4	.816	.847
Q2.2.1	.530	.498
Q2.2.2	.405	.310
Q2.2.3	.589	.612
Q2.2.4	.569	.616
Q2.2.5	.574	.545
Q2.2.6	.559	.532
Q2.3.1	.754	.743
Q2.3.2	.861	.901
Q2.3.3	.865	.906
Q2.3.4	.766	.766
Q2.4.1	.568	.566
Q2.4.2	.600	.643
Q2.4.3	.727	.765
Q2.4.4	.654	.673

**Table 31: Second order factor analysis - organisational justice**

**Correlation Matrix**

		F1	F2	F3	F4
Correlation	Mean_Part2	1.000	.237	.373	.177
	Mean_Part2	.237	1.000	.459	.694
	Mean_Part2	.373	.459	1.000	.482
	Mean_Part2	.177	.694	.482	1.000

**KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of		.666
Bartlett's Test of Sphericity	Approx. Chi-df	206.158
	Sig.	.000

**Anti-image Matrices**

Anti-image Correlation

	F1	F2	F3	F4
Mean_Part2_F1	.668 <sup>a</sup>	-.104	-.312	.066
Mean_Part2_F2	-.104	.648 <sup>a</sup>	-.154	-.609
Mean_Part2_F3	-.312	-.154	.754 <sup>a</sup>	-.263
Mean_Part2_F4	.066	-.609	-.263	.626 <sup>a</sup>

a. Measures of Sampling Adequacy(MSA)

**Communalities**

	Initial	Extraction
Mean_Part2_F1	.148	.114
Mean_Part2_F2	.507	.648
Mean_Part2_F3	.334	.398
Mean_Part2_F4	.517	.632

Extraction Method: Principal Axis Factoring.

**Total Variance Explained**

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	Variance	%	Total	Variance	%
1	2.256	56.408	56.408	1.792	44.789	44.789
2	.921	23.027	79.434			
3	.523	13.067	92.502			
4	.300	7.498	100.000			

Extraction Method: Principal Axis Factoring.

**Factor Matrix<sup>a</sup>**

	Factor
	1
Mean_Part2_F2	.805
Mean_Part2_F4	.795
Mean_Part2_F3	.631
Mean_Part2_F1	.338

Extraction Method: Principal Axis Factoring.

a. 1 factors extracted. 8 iterations required.

**Rotated Factor**

**Matrix<sup>a</sup>**

--

a. Only one factor was extracted. The solution cannot be rotated.

## Appendix E: Descriptive statistics - Union commitment and professional perception

**Table 32: Union commitment and professional perception**

Part 3 - Union Commitment and Professional Standing							
		Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Total
Q3.1.1 I am proud to be a member of the union or association	Count	48	62	53	13	9	185
	Row N %	25.9%	33.5%	28.6%	7.0%	4.9%	100.0%
Q3.1.2 I recommend the union or association to my friends or colleagues as a great organisation to belong to	Count	45	73	39	16	12	185
	Row N %	24.3%	39.5%	21.1%	8.6%	6.5%	100.0%
Q3.1.3 There is a lot to be gained by belonging to the union or association	Count	52	82	26	16	9	185
	Row N %	28.1%	44.3%	14.1%	8.6%	4.9%	100.0%
Q3.1.4 The past record of the union or association is a good example of what can get done when people are dedicated	Count	55	65	41	17	7	185
	Row N %	29.7%	35.1%	22.2%	9.2%	3.8%	100.0%
Q3.1.5 I plan to be a member of the union or association for the rest of my employment, based on what I know and what I expect from the future	Count	62	71	24	19	9	185
	Row N %	33.5%	38.4%	13.0%	10.3%	4.9%	100.0%
Q3.1.6 The union or association adequately represents the interests of all its members	Count	45	81	29	16	14	185
	Row N %	24.3%	43.8%	15.7%	8.6%	7.6%	100.0%
Q3.2.1 Participating in industrial action and other union events is a good way to express my views	Count	5	49	45	46	40	185
	Row N %	2.7%	26.5%	24.3%	24.9%	21.6%	100.0%
Q3.2.2 Participating in industrial action and industrial action will get my employer to address problems	Count	9	81	37	32	26	185
	Row N %	4.9%	43.8%	20.0%	17.3%	14.1%	100.0%
Q3.2.3 Industrial action will bring problems that may persist to the public's attention	Count	27	91	33	25	9	185
	Row N %	14.6%	49.2%	17.8%	13.5%	4.9%	100.0%
Q3.2.4 There is not much use in participating in industrial action or union activities	Count	19	26	47	82	11	185
	Row N %	10.3%	14.1%	25.4%	44.3%	5.9%	100.0%
Q3.3.1 I am prepared to vote in favour of protected industrial action	Count	17	87	31	23	27	185
	Row N %	9.2%	47.0%	16.8%	12.4%	14.6%	100.0%
Q3.3.2 I am prepared to vote in favour of unprotected industrial action	Count	1	7	26	62	89	185
	Row N %	.5%	3.8%	14.1%	33.5%	48.1%	100.0%
Q3.4.1 Belonging to the union or association contributes to my professional standing as a scheduled airline pilot	Count	40	74	36	28	7	185
	Row N %	21.6%	40.0%	19.5%	15.1%	3.8%	100.0%
Q3.4.2 Belonging to the union or association contributes to my status as a professional worker	Count	26	66	43	34	16	185
	Row N %	14.1%	35.7%	23.2%	18.4%	8.6%	100.0%
Q3.4.3 The union or association upholds and guards the professional standards of my occupation as a scheduled airline pilot from a safety, technical and industrial perspective	Count	57	80	27	15	6	185
	Row N %	30.8%	43.2%	14.6%	8.1%	3.2%	100.0%

**Table 33: Statistics – union commitment and professional perception**

Statistics									
	N		Mean	Median	Mode	Std. Deviation	Minimum	Maximum	
	Valid	Missing							
Q3.1.1	185	2	2.31	2.00	2	1.083	1	5	
Q3.1.2	185	2	2.34	2.00	2	1.131	1	5	
Q3.1.3	185	2	2.18	2.00	2	1.086	1	5	
Q3.1.4	185	2	2.22	2.00	2	1.088	1	5	
Q3.1.5	185	2	2.15	2.00	2	1.140	1	5	
Q3.1.6	185	2	2.31	2.00	2	1.156	1	5	
Q3.2.1	185	2	3.36	3.00	2	1.167	1	5	
Q3.2.2	185	2	2.92	3.00	2	1.170	1	5	
Q3.2.3	185	2	2.45	2.00	2	1.052	1	5	
Q3.2.4	185	2	3.22	4.00	4	1.092	1	5	
Q3.3.1	185	2	2.76	2.00	2	1.224	1	5	
Q3.3.2	185	2	4.25	4.00	5	.874	1	5	
Q3.4.1	185	2	2.39	2.00	2	1.099	1	5	
Q3.4.2	185	2	2.72	3.00	2	1.173	1	5	
Q3.4.3	185	2	2.10	2.00	2	1.033	1	5	

**Table 34: Component matrix –union commitment and professional perception**

<b>Component Matrix</b>		
	Component	
	1	2
Q3.1.1	.890	-.214
Q3.1.2	.887	-.219
Q3.1.3	.874	-.194
Q3.1.4	.834	-.326
Q3.1.5	.885	-.171
Q3.1.6	.822	-.237
Q3.2.1	.440	.710
Q3.2.2	.493	.697
Q3.2.3	.288	.461
Q3.2.4	-.545	-.448
Q3.3.1	.502	.616
Q3.3.2	.046	.546
Q3.4.1	.791	-.075
Q3.4.2	.761	-.023
Q3.4.3	.809	-.146



**Table 35: Correlation matrix - union commitment and professional perception**

Correlation Matrix																
		Q3.1.1	Q3.1.2	Q3.1.3	Q3.1.4	Q3.1.5	Q3.1.6	Q3.2.1	Q3.2.2	Q3.2.3	rQ3.2.4	Q3.3.1	Q3.3.2	Q3.4.1	Q3.4.2	Q3.4.3
Correlation	Q3.1.1	1.000	.890	.784	.794	.786	.742	.262	.260	.162	.384	.315	-.054	.681	.681	.701
	Q3.1.2	.890	1.000	.818	.770	.805	.768	.245	.288	.161	.358	.329	-.079	.654	.645	.679
	Q3.1.3	.784	.818	1.000	.826	.852	.765	.245	.315	.153	.358	.331	-.018	.633	.581	.634
	Q3.1.4	.794	.770	.826	1.000	.824	.783	.159	.181	.098	.315	.244	-.115	.567	.530	.677
	Q3.1.5	.786	.805	.852	.824	1.000	.790	.246	.306	.144	.401	.368	.034	.622	.579	.680
	Q3.1.6	.742	.768	.765	.783	.790	1.000	.177	.260	.161	.355	.241	-.018	.540	.490	.689
	Q3.2.1	.262	.245	.245	.159	.246	.177	1.000	.607	.318	.480	.620	.380	.290	.344	.237
	Q3.2.2	.260	.288	.315	.181	.306	.260	.607	1.000	.520	.573	.624	.206	.308	.300	.303
	Q3.2.3	.162	.161	.153	.098	.144	.161	.318	.520	1.000	.250	.252	.079	.161	.191	.190
	rQ3.2.4	.384	.358	.358	.315	.401	.355	.480	.573	.250	1.000	.453	.148	.321	.334	.390
	Q3.3.1	.315	.329	.331	.244	.368	.241	.620	.624	.252	.453	1.000	.305	.321	.298	.302
	Q3.3.2	-.054	-.079	-.018	-.115	.034	-.018	.380	.206	.079	.148	.305	1.000	.016	.058	-.087
	Q3.4.1	.681	.654	.633	.567	.622	.540	.290	.308	.161	.321	.321	.016	1.000	.849	.699
	Q3.4.2	.681	.645	.581	.530	.579	.490	.344	.300	.191	.334	.298	.058	.849	1.000	.606
	Q3.4.3	.701	.679	.634	.677	.680	.689	.237	.303	.190	.390	.302	-.087	.699	.606	1.000

**Table 36: KMO and Bartlett's test - union commitment and professional perception**

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of		.900
Bartlett's Test of	Approx. Chi-	2249.505
Sphericity	df	105
	Sig.	0.000

**Table 37: Anti-image matrix - union commitment and professional perception**

Anti-image Matrices															
Anti-image Correlation															
	Q3.1.1	Q3.1.2	Q3.1.3	Q3.1.4	Q3.1.5	Q3.1.6	Q3.2.1	Q3.2.2	Q3.2.3	rQ3.2.4	Q3.3.1	Q3.3.2	Q3.4.1	Q3.4.2	Q3.4.3
Q3.1.1	.920 <sup>a</sup>	-.563	.019	-.248	-.016	-.015	-.046	.107	-.047	-.104	-.008	-.012	-.030	-.158	-.076
Q3.1.2	-.563	.911 <sup>a</sup>	-.239	.113	-.126	-.197	.003	-.024	.018	.064	-.077	.158	.034	-.093	-.003
Q3.1.3	.019	-.239	.931 <sup>a</sup>	-.333	-.330	-.088	-.009	-.131	.022	.041	.030	-.015	-.160	.054	.152
Q3.1.4	-.248	.113	-.333	.924 <sup>a</sup>	-.253	-.213	-.032	.134	.012	.009	-.019	.171	.081	-.004	-.143
Q3.1.5	-.016	-.126	-.330	-.253	.945 <sup>a</sup>	-.185	.094	.007	.026	-.088	-.130	-.159	-.021	-.015	-.077
Q3.1.6	-.015	-.197	-.088	-.213	-.185	.946 <sup>a</sup>	.047	-.060	-.040	-.041	.136	-.133	.043	.090	-.250
Q3.2.1	-.046	.003	-.009	-.032	.094	.047	.860 <sup>a</sup>	-.230	-.048	-.151	-.318	-.267	.059	-.154	-.003
Q3.2.2	.107	-.024	-.131	.134	.007	-.060	-.230	.800 <sup>a</sup>	-.430	-.338	-.345	.067	-.054	.024	-.018
Q3.2.3	-.047	.018	.022	.012	.026	-.040	-.048	-.430	.768 <sup>a</sup>	.087	.102	.011	.067	-.064	-.052
rQ3.2.4	-.104	.064	.041	.009	-.088	-.041	-.151	-.338	.087	.914 <sup>a</sup>	-.017	-.001	.077	-.037	-.105
Q3.3.1	-.008	-.077	.030	-.019	-.130	.136	-.318	-.345	.102	-.017	.864 <sup>a</sup>	-.153	-.061	.106	-.038
Q3.3.2	-.012	.158	-.015	.171	-.159	-.133	-.267	.067	.011	-.001	-.153	.609 <sup>a</sup>	.004	-.066	.140
Q3.4.1	-.030	.034	-.160	.081	-.021	.043	.059	-.054	.067	.077	-.061	.004	.858 <sup>a</sup>	-.685	-.350
Q3.4.2	-.158	-.093	.054	-.004	-.015	.090	-.154	.024	-.064	-.037	.106	-.066	-.685	.865 <sup>a</sup>	.055
Q3.4.3	-.076	-.003	.152	-.143	-.077	-.250	-.003	-.018	-.052	-.105	-.038	.140	-.350	.055	.936 <sup>a</sup>

**Table 38: Communalities - union commitment and professional perception**

<b>Communalities</b>		
	Initial	Extraction
Q3.1.1	.843	.830
Q3.1.2	.847	.827
Q3.1.3	.814	.785
Q3.1.4	.800	.782
Q3.1.5	.817	.799
Q3.1.6	.736	.697
Q3.2.1	.542	.634
Q3.2.2	.643	.703
Q3.2.3	.296	.194
rQ3.2.4	.431	.416
Q3.3.1	.538	.555
Q3.3.2	.262	.162
Q3.4.1	.788	.581
Q3.4.2	.760	.529
Q3.4.3	.668	.628

**Table 39: Rotated Factor matrix - union commitment and professional perception**

Factor Matrix		
	Factor	
	1	2
Q3.1.1	.889	
Q3.1.2	.886	
Q3.1.5	.880	
Q3.1.3	.868	
Q3.1.4	.829	-.308
Q3.1.6	.807	
Q3.4.3	.784	
Q3.4.1	.761	
Q3.4.2	.727	
rQ3.2.4	.510	.394
Q3.2.2	.478	.689
Q3.2.1	.422	.676
Q3.3.1	.478	.571
Q3.3.2		.400
Q3.2.3	.260	.356

**Table 40: Second order factor analysis - union commitment and professional perception**

**Correlation Matrix**

		F1	F2
Correlation	Mean_Part3	1.000	.377
	Mean_Part3	.377	1.000

**KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of		.500
Bartlett's Test of Sphericity	Approx. Chi-df	28.044
	Sig.	.000

**Anti-image Matrices**

Anti-image Correlation

	F1	F2
Mean_Part3_F1	.500 <sup>a</sup>	-.377
Mean_Part3_F2	-.377	.500 <sup>a</sup>

a. Measures of Sampling Adequacy(MSA)

**Communalities**

	Initial	Extraction
Mean_Part3_F1	.142	.376
Mean_Part3_F2	.142	.376

Extraction Method: Principal Axis Factoring.

**Total Variance Explained**

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	Variance	%	Total	Variance	%
1	1.377	68.871	68.871	.753	37.649	37.649
2	.623	31.129	100.000			

Extraction Method: Principal Axis Factoring.

**Factor Matrix<sup>a</sup>**

	Factor
	1
Mean_Part3_F2	.614
Mean_Part3_F1	.614

Extraction Method: Principal Axis Factoring.

a. 1 factors extracted. 8 iterations required.

**Rotated Factor Matrix<sup>a</sup>**

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a. Only one factor was extracted. The solution cannot be rotated.

## Appendix F: Descriptive statistics - Propensity to strike

Table 41: Propensity to strike

Part 4 - Propensity to strike							
		Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Total
Q4.1 I am prepared to engage in strike or industrial action in support of the ideals of the union or association	Count	7	72	32	35	33	179
	Row N %	3.9%	40.2%	17.9%	19.6%	18.4%	100.0%
Q4.2 By engaging in industrial action in support of the ideals of the union or association I will enhance the professional standing of my profession	Count	3	41	48	46	41	179
	Row N %	1.7%	22.9%	26.8%	25.7%	22.9%	100.0%
Q4.3 By engaging in industrial action in support of the ideals of the union or association I will enhance the standing of the union or association	Count	4	62	44	37	32	179
	Row N %	2.2%	34.6%	24.6%	20.7%	17.9%	100.0%

Statistics								
	N		Mean	Median	Mode	Std. Deviation	Minimum	Maximum
	Valid	Missing						
Q4.1	179	8	3.08	3.00	2	1.222	1	5
Q4.2	179	8	3.45	3.00	3	1.128	1	5
Q4.3	179	8	3.17	3.00	2	1.155	1	5