Gordon Institute of Business Science
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Salary negotiation perceptions by gender and their role on the gender pay gap.

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Abstract

The choice to abstain from salary negotiations can have a profound compounding effect on the earnings of an employee over the timespan of their career. If gender is a distinguishing characteristic separating those employees who choose to negotiate from those who choose not to, then salary negotiation becomes a contributing factor to the gender wage gap. This study investigated perceived gender differences across three constructs, namely (i) negotiation empowerment (ii) pay secrecy, and (iii) the social cost of negotiation within the financial services industry in South Africa.

The study made use of a seven-point Likert scale instrument to document perceptions of the respondents. The survey was distributed electronically, making use of a snowball sampling methodology. Contrary to the majority of existing cross-industry literature, the findings show no gendered results across the three constructs. However, the research did find that females do not negotiate salary as often as males, and that both males and females prefer negotiating with male managers. A negotiation gender bias was also found amongst the respondents.

The study furthers existing research by demonstrating industry specific studies may not conform to the findings of cross-industry studies. It also provides relevant findings for organisations looking to eliminate gendered structures around pay determination.

Keywords

Salary negotiation; Perceptions; Gender wage gap; Social cost; Pay secrecy.

Declaration

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

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Chapter 1

Introduction to the Research Problem

1.1. Introduction

The aim of the research is to investigate perceived differences in salary negotiation by gender as a potential cause of the gender wage gap that persists after adjusting for productivity. Furthermore, the study seeks to interrogate these differences on three levels:

(i) Perceptions on policy at the macro level;
(ii) Perceptions at organisational level;
(iii) Individual perceptions.

1.2. Background to the Research Problem

The gender pay gap has been extensively researched globally from a number of angles and for many years. The research investigated specific gender differences in perceptions around the salary negotiation process. Salary negotiation is a confidential bi-lateral process conducted between the employer and the employee. The confidential nature of the discussion translates to a lack of clarity, making perceptions employees hold on the process relevant. This is especially true as organisations typically define an applicable salary for any level of employment in a range as opposed to a set number. Any perceived difference in salary negotiations by gender could further explain disparities in actual pay between the genders.

The financial services industry of South Africa was chosen for this study as previous research in this regard had been broad in nature and not narrowed the context to the industry level. It is important to advance the literature in this regard to control for industry culture. Additionally, the industry is interesting from the perspective of negotiation study in that most employees within the industry will encounter scenarios where negotiation skills are required on a day to day basis. Further motivation for the study being confined to the borders of South Africa was due to gender equality legislation being set at national level and the need to control for the legal framework within which the sample is employed.

For the purposes of this study the financial services industry included all legal entities regulated by the Johannesburg Stock Exchange, The Reserve Bank of South Africa and the Financial Services Board.

In 1951, at the General Conference of the International Labour Organisation, Article 2 of the Equal Remuneration Convention was adopted by member states. This article states that "1. Each member shall, by means appropriate to the methods in operation for determining rates of remuneration, promote and in so far as is consistent with such methods, ensure the application to all workers of the principle of equal remuneration for male and female workers for work of equal value. 2. This principle may be applied by means of; (a) national laws or regulations; (b) legally established or recognised machinery for wage determination; (c) collective agreements between employers and workers; or (d) a combination of these various means." (International Labour Organisation, 1951).

South Africa, as a member state of the ILO, is bound by this convention and yet, 65 years after its adoption, the average South African female earns 24.5% less taxable income than her male counterparts (Republic of South Africa, 2015a).

The financial services sector code of good practice on broad-based black economic empowerment recognises the need to improve female workforce participation rates through the allocation of scorecard points for female employment. Whilst these laws encourage employers to hire females into the sector, and begin to close the gender wage gap, it appears that they are ineffective at completely closing this gender wage gap (World Economic Forum, 2015).

There has been some recognition of potential discrepancies in salary negotiation skills in the market. O'Connor (2015) suggested that Reddit CEO Ellen Pao is feeding the very gender stereotypes that disadvantage women by banning salary negotiations due to her belief that women are weaker negotiators. An interrogation of the literature will show that 'doing nothing' is not an option to this dilemma either. Whilst gender wage discrepancies have been the focus of a great deal of study, until true parity in pay is achieved for equal work and the underlying contributing factors are identified, the need for such study prevails.

1.3. Research Problem

1.3.1. Negative consequences of the gender wage gap

Gender wage gap studies can be segregated on the basis of those seeking to describe differences in overall pay between males and females, and those seeking to describe differences in equal work differences between males and females. This research investigated salary negotiation differences and therefore falls into those reporting differences in equal work for equal pay.

Salary negotiating opportunities most often occur when starting a new job and at year end, when bonus pay and increases are typically offered by firms within the financial services sector in South Africa. Should males be able to negotiate better terms at each and every salary negotiation opportunity, the resulting effect would be that the gap is compounded, with every increase leading to significant differences in pay for the same work. Over the years, this would result in females saving less for retirement than males, condemning them on long-term and short-term gains; poorer retirement packages and the immediate effects of receiving lower pay.

1.3.2. The research problem within the context of Human Resources

The issue of remuneration and gender wage differentials sits within the field of human resource management. However, the topic extends its roots beyond this context and into the fields of social economics and psychology. This is especially true when investigating salary negotiation behaviour.

1.4. Research Objectives

That females are weaker than males in negotiations is well documented (Babcock, 2002; Babcock, Gelfand, Small, & Stayn, 2006; Bowles, Babcock, & McGinn, 2005; Ors, Palomino, & Peyrache, 2013; Small, Gelfand, Babcock, & Gettman, 2007; Tellhed and Björklund, 2011). The research focuses primarily on the salary negotiation process due to the effect it can have on the adjusted gender wage gap. The research seeks to better understand the drivers of the documented weakness and in particular, any difference in perceptions around the salary negotiation process with a gender bias.

The research also seeks to further existing studies on negotiation behaviour by gender (Babcock et al., 2006; Curhan, Elfenbein, & Xu, 2006). These studies are cross sectional in nature opening up the possibility of ecological fallacy (Firebaugh, 1978). By controlling for industry and country the study interrogates the question whilst considering that local cultures may result in altered findings from the existing studies.

1.5. The Need for the Research

There is now, more than ever, a need to understand the drivers of the gender wage gap in South Africa due to the publishing of the code of good practice on equal pay/remuneration for work of equal value. This legal framework puts the onus on the employer to "…eliminate unfair discrimination, take steps to eliminate differences in terms and conditions of employment, including pay/remuneration of employees who perform the same or substantially the same work or work of equal value that are directly or indirectly based on one or more listed or on any other arbitrary ground." (Republic of South Africa, 2015b, p. 10). The listed grounds follow prescriptions by the ILO and are as follows;

(i) Stereotypes with regard to women's work;
(ii) Traditional job evaluation methods that were designed on the basis of male dominated jobs; and
(iii) Weaker bargaining power on behalf of female workers.

The research centres on point three of the above listed grounds as a lack of bargaining power could be a potential cause of a lesser outcome in a salary negotiation. Indeed it is suggested on the basis of the results that it may indeed be a lack of bargaining power that affected the results.

1.5.1. The business imperative

In addition to the above-mentioned legal need to comply with the equal value equal pay legislation, Bosch (2015) stated that the more HR practitioners are able to understand the structural inequalities between males and females in the workplace, the greater the chance of finding resolutions to these inequalities through good human resource management practices.

This research aims to take a deeper look into female salary perceptions compared to male salary perceptions and how these change over time. Therefore, the insights will be useful in assisting business and, in particular, human resource practitioners in addressing the structural causes of the wage gap. Recommendations are provided to HR practitioners and senior management in Chapter 7.

1.5.2. The theoretical imperative

There is still a huge amount of work that needs to be done to fully understand the persisting gender wage gap. A study conducted by Blau and Kahn (2007) revealed that 41.1% of the gender gap cannot be explained. Therefore, more academic work needs to be conducted into the drivers of the gender pay gap.

Table 1: Factors explaining the gender wage gap

Factor	% Pay Gap Explained
Labour force experience	10,5
Race	2,4
Occupational category	27,4
Industry Experience	21,9
Union status	3,5
Unexplained	41,1
Educational attainment	-6,7

Source: Blau and Kahn (2007)

The theoretical contribution this research intends to make is to interrogate the gender pay gap from the perspective of the employee during the salary negotiation process, and provide commentary on gender bias that may or may not occur as part of the employee perception.

As it is not in the company's interest to pay salaries over and above those asked for by the employee, any differences in the perceptions around asking for pay increases will contribute to gender pay disparities. Hensvik (2014) found that gender pay gaps narrowed in teams under female management; however, once the data is adjusted for gender productivity differences, the association between gender wage gaps and female managers disappears.

This research project has also contributed to generational theory by comparing the perceptions by age group in order to identify any differences between these groups and therefore inferred whether there is any experiential effect or learning aspect to salary negotiation. This was deemed an important aspect to study as the literature review revealed academic work showing the effect age has on the gender wage gap.

Through investigating differences in gender perceptions in the financial services industry in South Africa the research answered the call for further research around situational and contextual moderators in gender differences in negotiation made by academic authors within the field (Bowles et al., 2005; Kray & Thompson, 2004).

1.6. Conclusion

The negative societal and organisational consequences of a persistent gender wage gap motivate the need for the research. Furthermore, the research topic was introduced and theoretical and business motivations explained.

The motivation for the contextual environment of the financial services industry in South Africa has been provided. Due to the nature of the work performed the industry provides an interesting study subject. The legal framework has been controlled and is set by the laws of South Africa.

The business imperative is motivated by a need to understand this complex inequality to ensure compliance with regulation and ensure equal opportunity workspaces. The theoretical imperative draws inspiration from the unresolved and persistent nature of the gender wage gap as highlighted in the literature. Additionally, there is a need to add to contextual literature by controlling for industry.

It now becomes necessary to conduct a non-exhaustive study of available literature and theory that forms the basis of the research hypotheses. Chapter 2 will look at existing literature broken down into three hierarchical levels introduced in 1.1.

Chapter 2

Literature Review

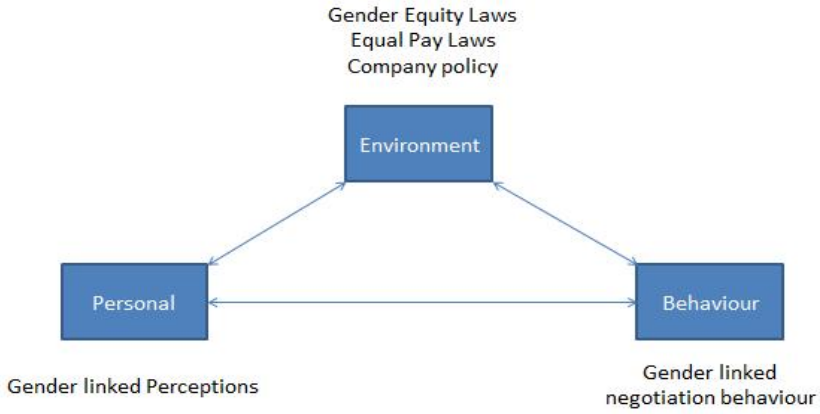
2.1. Introduction

The previous chapter introduced the need for an in-depth understanding of the structural drivers of the gender wage gap in order for governments, organisations and employees to develop tools and strategies for them to be addressed. This chapter will look at available literature around the gender wage gap broadly and focus specifically on theory around gender differences in negotiation and salary negotiation behaviours. An analysis of existing theory and literature reveals studies into gender wage differentials can be separated into three categories, based on the level of the studied effect; namely, macro-economic (government intervention), organisational (human resource management interventions), and psychosocial effects (individual and societal interventions).

The research problem pertains mainly to the organisational and psychosocial effects; however, it is pertinent to review the macroeconomic effects as legislative actions act on company HR policy. The discussion will be extended to include constructs that are pertinent to the financial services sector in South Africa.

A better understanding of any gender differences that exist within perceptions of the salary negotiation process will allow policy makers, organisations and individuals to hone their approach to the salary negotiation process in order to ensure females are not disadvantaged in a way that would negatively impact on the gender wage gap. Bandura's (1977) triadic reciprocal determinism model proposed in his social learning theory provides a useful approach to document the constructs influencing the gender wage gap.

Figure 1: Social learning theory for salary negotiations



Source: Adapted from Bandura (1977)

The model theorises that behaviour both influences and is influenced by personal and environmental factors. When transposed on salary negotiation behaviour and for the purposes of this literature review, it can by hypothesised that negotiation behaviour is influenced by and influences perceptions, and both country and company level policy.

On the basis of this model, the research focuses primarily on the bidirectional links between behaviour and personal factors, and behaviour and environment with the objective of providing further information to reverse or negate the influence, where it is found to have a negative effect on the gender wage gap.

2.2. Macro-Level Analysis (policy and legal - macroeconomic)

Policy has long been used by governments and public institutions in an attempt to effect changes in human behaviour. The effectiveness of the legislation as a tool to change either through inhibiting or promoting certain human behaviours is often debatable. Issues arising from the perceived effectiveness of how the law targets the behavioural change through to the ability to implement and enforce such laws add complexity to the debates. Equal pay law is no different. Literature on this argument is expanded below.

2.2.1. Effect of gender equity and equal pay legislation on gender wage gap

When investigating legal frameworks, it is important to distinguish, which wage gap the law is attempting to effect. Legislation that affects minimum wage will have a positive effect on the wage gap on the lower half of the wage distribution (Ugarte, Grimshaw & Rubery, 2015). Whilst this will affect both the adjusted and unadjusted gender wage gaps, it will be ineffective as a tool to eliminate wage gaps in the top half of the wage distribution. Equal pay legislation targets the adjusted wage gap specifically and is

impractical as a tool to address the unadjusted wage gap, should more females be enticed to lower paying jobs.

Policy-makers have also looked at legislation targeting the top half of wage distribution. Legislating board representation quotas is one such example of this. By enforcing greater female representation within the executive suite of companies, policy-makers not only improve gender equity ratios, but also tackle the unadjusted gender wage gap. This is due to the fact that the compensation for board representation is traditionally higher than compensation at other levels in the economy. Wang and Kelan (2013) found that not only did the 40% female representation quota imposed on Norwegian companies' increase female board representation, but also that companies hired more female senior managers as a result. This finding is in line with other literature around the positive effects female managers can have, an argument that is expanded later in the literature review.

As soon as the Equal Remuneration Convention of the International Labour Organisation was adopted by member states, they set about legislating in an attempt to eliminate the gender wage gap. The latest and most pertinent piece of legislation to this study is the code of good practice on equal pay / remuneration for equal work (Republic of South Africa, 2015b). Yet, it appears that despite the presence of equal pay legislation in most developed countries the wage gap still exists, even when adjusting for worker's qualifications and experience (Kaas, 2009).

In South Africa, it seems the affirmative action legislation implemented to redress injustices of the past may have played some role in the country improving its global gender gap index from 71% in 2006 to 76% in 2015 as reported by the World Economic Forum (2015).

Further evidence for the effectiveness of legislation was cited by Perfect (2011), who used historical data to emphasise a reduction in the wage gap from 36.2% in 1970 to 19.8% in 1997. Whilst such reductions are impressive, the gap has not been entirely eliminated by such measures (Tufarolo, 2015; O'Reilly, Smith, Deakin, & Burchell, 2015). This demonstrates the ineffectiveness of legislation when it is being relied on as the only tool to close the gender pay gap.

When looking at the employment of minorities, Kaas (2009) found that where tastes for discrimination were low and competition high, equal pay legislation can be effective in closing the wage gap. However, where there is a lack of competition and high tastes for discrimination, legislation is ineffective in closing the wage gap. Most of the industries within the financial services sector are of an oligopolistic nature, each with a few large competitors.

Deakin, Butlin, McLaughlin and Polanska (2015) argued that governments that intervene in a legislative manner breach the principle that pay negotiations are bilateral agreements between employer and employee. This view may not be helpful, as Stevens, Bavetta and Gist (1993) found that even though the gap between the genders closed after training programmes designed to hone salary negotiation skills, males still outperformed females in negotiation outcomes. It seems unregulated bilateral salary agreements favour males and will do little to close the gender wage gap.

Another argument against the effectiveness of gender wage legislation focuses on its complexity. Evidence supports the fact that the complex nature of the gender wage issue and the legal issues can create issues in implementation of equal pay legislation. Peruzzi (2015) highlighted inconsistencies in European Union policies around the gender pay gap that frustrate the closing of the gender pay gap.

2.2.2. Legal disputes

Further legislative frustrations occur at dispute resolution level. Any breaches of gender wage legislation are difficult to prove and require employees to institute legal processes against their employer. This is a daunting prospect for any employee and represents a "David vs. Goliath" battle, where employees' limited resources are pitted against the firms' seemingly unlimited resources. Turning to trade unions, where possible, could assist with the anxiety litigation presents. Guillaume (2015) argued that trade unions, however, are often "…caught between the necessity to hold on, while employers appealed and appealed, sometimes successfully, and the fear that the union could lose" (p. 377).

Conley (2014) argued that the one area trade unions have traditionally sought to target for litigation in the United Kingdom has been equal pay; she did, however, recognise tensions between their collective bargaining function and equality rights-based litigation.

2.2.3. Pay secrecy

Belogolovsky and Bamberger (2014) found that pay secrecy could also impede company performance. They further proposed that pay secrecy undermines the perception that an improvement in productivity will be accompanied by an improvement in pay; and accordingly, push top performers in the organisation to seek employment at alternative organisations. This provides further evidence of the benefits of transparency around pay issues. Other authors argued that pay transparency acts as a constant reminder of perceived unfairness, and that this will cause reduced motivation and associated decreased productivity (Obloj & Zenger, 2015).

The use of bonus pay as a sorting tool in the financial services industry unfortunately, does not allow for great levels of pay transparency. In recent years, there has been public backlash to the levels of bonus payments in banks (Hakenes & Schnabel, 2014). This public perception has led to calls for greater transparency and regulatory caps on bonus pay.

Whilst complex legislation and litigation expense can confuse and inhibit complete closure of the wage gap, there is evidence that legislation that directly targets barriers to closing the wage gap can be effective. Kim (2015) found that in those US states, where pay secrecy is outlawed, females were paid more in relation to males. Transparency of unfair practice incites lobby for change.

Kim's (2015) suggestion was that the secret nature of pay discussions allows an environment for discrimination to take place. This forms the theoretical background to the first research proposition, which looks at gender differences around preference for opting out of salary negotiations and preference for pay secrecy. This would typically be driven by targeted legislation.

Whilst regulation, legislation and policy have had a large effect on the gender pay gap, the literature has shown them as ineffective standalone tools to fully address closing the gender wage gap. Therefore, it is clear that the behaviours of organisations and individuals have roles to play in further reduction of the gap. It is also important to look into current research around organisational behaviour and HR practice within the field of equal pay for equal work.

2.2.4. Historical mindsets

Historical patriarchal mindsets may also impact gender pay parity. Tinsley, Howell and Amanatullah (2015) found that whilst the concept of the male breadwinner has been eroded, people's mindsets were slow in reacting to this change. Therefore, a preference for "traditional" wage distributions between spouses existed (where male partners are considered the family breadwinner). This view can be detrimental to household income in families where females exhibit higher earning potential than their male spouse.

2.3. Meso-Level Analysis (human resource - organisation)

To frame the role of the organisation within the context of the research, it is important to investigate the role human resources play from a policy setting and mediating point of view. Many policies that are promulgated by human resources can affect the gender wage gap either directly or indirectly, as the literature below will demonstrate. In the

specific context of the salary negotiation, human resources set the rules for the salary negotiation as well as the compensation band applicable. Specific attention is paid by the study to the role of the manager in the context of salary negotiation.

Organisations typically allocate applicable pay in a range to any particular job level with both an upper and lower limit. Payscale, a company that purports to have the largest pay database in the world, described how pay range is determined by companies as follows: The pay range for any particular level of work is determined by considering the going market rate, the rate competitors are willing to pay, for that particular role (Singh, 2015). This implies, on the basis of experience, performance and education, employees performing the same job can be paid different amounts. If companies allow salary negotiation, good negotiators can make a case for higher pay. Any gender discrepancy in self efficacy of negotiation skills will contribute to the gender wage gap.

Grund (2015) conducted a study on the German chemical sector and looking at data from 2008 – 2012 found the following;

(i) Significant gender wage gaps across homogenous, highly educated group of employees;
(ii) Pay gaps were relevant for more experienced employees, those with children, and more senior employees;
(iii) Much higher gaps existed for contingent pay than for fixed salaries.

Of particular interest are the results from the fixed vs. contingent pay study as contingent pay is often discretionary with significant input from the line manager and often falls outside pay ranges set for each particular role. Contingent pay is prevalent within the financial services sector in South Africa. Grund's (2015) data was dominated by male managers, which again is interesting as we will expand the literature on the role of the manager below, which suggests female managers play a larger role in reducing the gender wage gap. It is also the basis for the third hypothesis.

2.3.1. Human resource practices

Literature reveals that certain human resource practices can have unintended consequences on the gender wage gap. By understanding the dynamics on implementing policy on gender equity, organisations can, through their human resource departments, develop these practices in a way that is gender neutral. Datta, Gupta and Eriksson (2012) found that new age human resource management, which involves greater levels of employee involvement, increases female wages in relation to male wages for hourly-paid workers. This gives evidence that human resource practices can

influence the gender pay gap; however, mixed results were found with salaried workers, depending on the type of human resource intervention that was adopted.

Davies, McNabb, and Whitfield (2015) explored another new age human resource practice, namely, high performance work practices, and found that whilst earnings of both men and women were significantly higher under high performance practices, the gender pay gap increased under these conditions. This is no doubt an unintended consequence of implementing this policy, but never-the-less, human resource practitioners need to investigate and correct unintended consequences of policy creation.

A case study within the pharmaceutical industry provided positive evidence of the effect companies can have on the gender wage gap, when interventions address gendered causes. Through decreasing the cost of work flexibility, the pharmaceutical industry reduced the productivity-adjusted gender wage gap (Goldin & Katz, 2016).

2.3.1. Human resource gender wage gap interventions

As well as the indirect effects mentioned above, organisations − through the compensation setting functions of human resources − can play a large and direct role in determining the size of the gender wage gap. Interventions from flexible work through to maternity leave have compensation implications that directly influence the gender wage gap. More importantly, each of these interventions present a new opportunity for the organisation and employee to engage in a salary negotiation and potentially pose additional situations, where females would be disadvantaged. Females returning from maternity leave may choose to seek out a flexible work arrangement, where salary needs to be adjusted for productivity. Bosch (2015) argued that gaps in resumes should not be seen in a negative context, but rather the skills that are acquired during this timeframe could be of use to the company, implying the skills should be paid for in salary remuneration.

Human resource departments of organisations also need to be wary of subconscious bias and ensure there are adequate controls to prevent such behaviour. Attention also needs to be paid to the manner in which such interventions are implemented. Shnabel, Bar-Anan, Kende, Bareket and Lazar (2016) found that dependency based assistance fuels the persistence of traditional gender roles. Assistance in itself can be seen as subconscious gender bias. Johnston and Lee (2012) found that men were more frequently promoted than females. Conscious or sub-conscious this bias affects the unadjusted gender wage gap.

Boninelli (2015) recommended that HR audits should start by reviewing all policies to ensure there are no discrepancies on the basis of gender, amongst others. Further recommendations were that the approach to the below be specified in transparent, available remuneration policies of companies;

(i) Basic pay (monthly or annual salary);
(ii) Benefits (medical, retirement, life cover, leave, and any other guaranteed benefits);
(iii) Any incentives.

Bosch (2015) went on to further list five themes that provide reasons for gender wage differentials, which every human resource practitioner should be aware of. The below table outlines these themes and provides comments on how human resource practitioners should address these themes.

Table 2: Suggested human resource interventions

Theme	Explanation	Suggested Remedies
Skills development and careers	Skills such as caring, nurturing and organising do not carry a high monetary premium	Consider personal views about value that skills bring to the workplace and society
	Non-work related gaps in CV's limit prospects of earning high salaries on return	Gaps in CV's should not be seen as an impediment to organisation benefitting skills development
Modes of work, job changes, and pay	When females change jobs, they are often only offered a slightly higher salary	Job evaluations should be conducted and pay offered in relation to the job not according to historical pay of employees
Wage determination and collective bargaining	Collective bargaining performed by male negotiators who may not be informed of principals underpinning structural gender inequality	HR can work with unions to eradicate structural causes of gender wage disparities caused during collective bargaining
School subject choices of girls	School girls often do not identify themselves as being proficient in subjects that nurture skills that are scarce	Businesses should work with schools to encourage and mentor girls who excel at these subjects
Motherhood penalty - fatherhood advantage	Mothers earn less than childless women with the same characteristics, while fathers earn more than childless males with the same characteristics	HR practitioners should be wary of discrimination against women looking to start a family, perceptions within the organisation should be managed

Source: Adapted from Bosch (2015)

Whilst it may not be in the company's interest to pay salaries over and above what is asked for by an employee, ensuring the gender wage gap within a company is closed is certainly in the best interests of an organisation. Bussin and Nienaber (2015) proposed that in cases where the company could be exposed for having conducted gender pay discrimination, the damage done to the company brand could run into millions and adversely affect the company's ability to attract staff. This damage is obviously over and

above any litigation or group action that the company might face for not complying with the laws of the country.

Hogue, DuBois, and Fox-Cardamone, (2010) suggested that HR structures in companies need to be aware that females' expectations around pay are generally lower than males. These lower expectations will almost certainly contribute to the productivity adjusted gender wage gap should HR policy fail to address them.

2.3.2. The role of the manager

Recent studies have confirmed that manager gender does indeed play a role in reducing the gender pay gap. In a study using a longitudinal dataset spanning 13 years, Cardoso and Winter-Ebmer (2010) demonstrated that female managers and female-led firms increased market related female pay, whilst decreasing market related male pay. The study was conducted on the Portuguese manufacturing and service industries.

Supporting this finding, Hensvik (2014) used data pertaining to Swedish private sector wages and found that greater female representation in management led to lower gender wage gaps.

Further arguments stated that higher female management representation leads to higher proportions of females hired, which therefore implies a positive feedback loop to closing the gender wage gap (Cohen & Broschak, 2013). In his taste for discrimination theory, Becker (1957) fell short of explaining the gender wage gap beyond discrimination; however, he offered a useful tool for explaining the positive feedback loop. The group with the least taste for discrimination, female employers, will employ more female workers. Cardoso and Winter-Ebmer (2010) built on the taste for discrimination model; however, they showed that female managers work to close the gender wage gap. Interestingly, in addition to this finding, they also found through mentorship and protection female managers increase the promotion prospects of female employees. In another study spanning 13 years, Cohen, and Broschak (2013) found US advertising firms with a greater proportion of female managers employed more females into new management jobs.

Research on executive structures have shown similar trends. When investigating CEO pay versus that of other executives in listed companies within the United Kingdom, Geiler and Renneboog (2015) found no difference in female CEO pay when compared with male CEO pay. A gender pay gap of 23%, however, was found at top management level; this gap reduced when female non-executive directors sat on the board. They also found that female managers working in "male" industries experienced lower pay gaps.

If female management create more conducive environments for female employment, it becomes pertinent to investigate the female representation at top and upper levels within the financial services sector in South Africa. Data retrieved from the Statistics South Africa (2016) shows that the South African economy is dominated by male managers. The financial services industry defined as "finance/business services" shows 74.2% male representation at top management level and 62% male representation in the upper management profile.

Table 3: Gender representation at top management level in South Africa

Sectors	Male	Female
Agriculture	82,9%	17,1%
Mining and quarrying	85,8%	14,2%
Manufacturing	84,0%	16,0%
Electricity, gas and water	76,8%	23,2%
Construction	85,8%	14,2%
Retail and Motor trade / repair service	81,1%	18,9%
Wholesale trade / Commercial agents / allied services	79,6%	20,4%
Catering / Accommodation / Other trade	70,0%	30,0%
Transport / storage / communications	78,9%	21,1%
Finance / business services	74,2%	25,8%
Community / social / personal services	68,7%	31,3%

Source: Adapted from Statistics South Africa (2016)

Table 4: Gender representation at upper management level in South Africa

Sectors	Male	Female
Agriculture	76,6%	23,4%
Mining and quarrying	83,9%	16,1%
Manufacturing	75,3%	24,7%
Electricity, gas and water	67,7%	32,3%
Construction	81,1%	18,9%
Retail and Motor trade / repair service	68,4%	31,6%
Wholesale trade / Commercial agents / allied services	67,3%	32,7%
Catering / Accommodation / Other trade	55,6%	44,4%
Transport / storage / communications	69,5%	30,5%
Finance / business services	62,0%	38,0%
Community / social / personal services	58,1%	41,9%

Source: Adapted from Statistics South Africa (2016)

The highly skewed male representation at senior and top management levels in South Africa would be unhelpful in reducing or eliminating the gender wage gap according to the research conducted by Hensvik (2014). The effect manager gender plays on perceptions of empowerment thus creates the third research proposition as the study investigated whether female employees with a manager of the same sex felt more empowered during wage negotiations. This builds on the findings of Hensvik (2014) with the focus being around perceptions of negotiating with a manager of the opposite sex. Bowles, Babcock, and Lai (2007) found that females were less inclined to negotiate when the evaluator was male. The research extended this finding and tested whether the role of the male as manager in any way changed the perceptions of the negotiator.

In support of the "queen bee syndrome" theory of Staines, Tavris, and Jayaratne, (1974), Srivastava and Sherman (2015) found that female earnings decreased in the first year under female management, when compared to males in their first year under female management.

Ellemers, Heuvel, Gilder, Maass, and Bonvini (2004) found that faculty members found female doctoral students to be less committed, with female faculty members holding the strongest views, this despite no difference in commitment being found between males and females. The findings further described in Chapter 6 hint at a possible awareness amongst female respondents of the value threat posed to the queen bee, through revealing their preference for negotiating salary with male managers as opposed to female managers.

2.3.3. The impact of age on the gender wage gap and human resource implications

Organisations need also to be cognisant of the effect the gender wage gap can have on retirement salary. De Pater, Judge and Scott (2014) found that the gender wage gap amongst movie stars increased with age. Male movie stars' earnings plateaued in later life, whilst female movie stars' earnings decreased with age. If this finding extends to other industries, it could seriously disadvantage females going into retirement, where pension contribution or pay-out is related to a percentage of annual salary. The movie industry has somewhat different characteristics to the financial services industry in that payment for work occurs predominantly on a fixed contract basis, whereas the financial services industry employs labour predominantly through permanent employment.

Bertrand, Goldin, and Katz (2010) investigated the earnings of MBA graduates in a longitudinal study between 1990 and 2006. They found that whilst differences in pay following graduation were small they grew to 82% by the end of the study. The results

were explained through labour supply factors. Noonan, Corcoran, and Courant (2005) investigated the earnings of lawyers at graduation and 15 years later and found an expanding gender wage gap. Their findings suggest financial penalty for the flexibility asked for by female cohorts. The high financial penalty for flexibility that affects the knowledge worker was supported by research by Goldin (2014).

Therefore, this study further probes salary negotiation perceptions and age, and forms the basis of the third hypothesis to investigate if any aspect of the salary negotiation empowerment can be learned with experience.

2.4. Micro-level Analysis (psychosocial – individual and group)

The research focuses primarily on individual effects of the gender pay gap and specifically around the individual's dealings with their organisation during the salary negotiation process. Extensive research work has been done in this area, and this work seeks to build and add to the work already done. The author most widely credited with investigations into the field of gender differences around negotiation is Linda Babcock, who is the James M. Walton Professor of Economics and the former Acting Dean at Carnegie Mellon University's H. John Heinz III School of Public Policy and Management.

2.4.1. Gender discrimination argument

Gender stereotypes exist within the work environment. In an experiment testing altruistic citizenship behaviours Heilman and Chen (2005) found that males received greater reward for non-mandated work assistance when compared to females, and females were more harshly penalised in relation to males when such work was not performed.

Literature proposes a gender bias as the cause of the gender wage gap. Sayers (2012) proposed marital asymmetry as the reason for the persistent pay gap, which is representative of society's surreptitious sexism. de Linde, Leonard, and Stanley (2015) found evidence of a "marriage wage premium", whereby married men were paid more than single men. This further lends evidence to unconscious gender bias in society that can cause pay discrepancies and that current legal frameworks are ill equipped to moderate this behaviour.

Johnston and Lee (2012), however, found no evidence that the gender pay gap was caused by differences in human capital, family status or personality. This leaves the door open for investigations beyond these three constructs.

Whilst important to take cognisance of and as a base to the review, this argument is broad in nature. It is of greater help to the research propositions to narrow the stereotype literature argument to the task of negotiation.

The personality stereotypes linked to gender, being that men act in a way that is assertive, independent and rational and women are emotional and show empathy, can lead to the stereotype that men are better negotiators than women (Kray & Thompson, 2004). They further indicated that it is this stereotype effect that partly explains the gender difference in the outcomes of negotiations.

2.4.2. Negotiation and gender

Tellhed and Björklund (2011) found that stereotype threat in salary negotiations is mediated by reservation salary, the lowest acceptable salary a negotiator will set as acceptable. Grund (2015) suggested, but did not test, that gender differences in risk-taking, competition or in employees' behaviour during wage negotiations could explain part of the reason for the gender wage gaps he found as part of his study. Ors et al., (2013) suggested that different genders may perform differently in the competitive nature of contest that may end up favouring the male gender.

In a large scale field experiment, Flory, Leibbrandt, and List (2015) found that both males and females avoided competition in the workplace; however, females were more averse to working in a competitive environment than males. During a comprehensive review of gender experiments, Croson and Gneezy (2009) found that "Most lab and field studies indicate that women are more risk averse than men…" (p. 467).

Salary negotiations, by their very nature are competitive situations as employees compete for the limited resources (salary) of the firm. A study by Babcock et al., (2006) investigated gender differences in the propensity to initiate negotiations. Their data collection instrument was adapted for this study to investigate the construct of salary negotiation perceptions, keeping the sub-constructs of recognition of opportunities, entitlement and apprehension.

Babcock et al. (2006) intimated that locus of control and access to organisational resource information can influence recognition of opportunities. Indeed, sex differences in locus of control have been well documented (Parkes, 1985; Strickland & Haley, 1980; Smith, Dugan, & Trompenaars, 1997). Access to organisational networks can also exhibit gendered differences (Durbin, 2011).

Previous research on entitlement has shown females feel less entitled than males (Barron, 2003). Zenger (1994) investigated two large Silicon Valley firms and found

approximately 40% of all engineers felt they were in the top five percent of performers, with 92% feeling they were in the top 25% of performers. Whilst this research did not look at gender differences it clearly shows high levels of entitlement across the workforce.

The competitive nature of contest described earlier eludes to gendered differences around apprehension. Therefore, the research on these sub constructs predicts that gendered differences were found with regard to the salary negotiation perception construct they comprise. However, it is important to note the study adapted the questions to be specific to salary negotiations and investigated them, whilst controlling for culture through limiting country and industry.

In an experiment done on the starting salaries of MBA graduates, Babcock (2002) found that women do not negotiate as often as men do and the price for not doing so can be a difference in starting salary of as much as seven percent. The difference in gender-linked outcome of negotiation is greater when structural ambiguity exists (Bowles et al., 2005). Therefore, in scenarios, where companies do not implicitly state that the salary is negotiable, it appears males have more of an advantage. Thus, it follows from the previous section that it is important for companies to take cognisance of this through their HR departments, so as to avoid gender discrimination. Further research by Small et al. (2007) found that whilst cueing women to negotiate increased the numbers of females who initiated negotiation, a gender gap still remained. This implies that even though females know they will benefit by negotiating, some still choose not to negotiate.

Through a field study method, Leibbrandt and List (2014) looked at whether females avoided negotiation. They found that when salary negotiation was not explicitly stated as a possibility, males are more likely to negotiate salary in comparison to females. They also found that males prefer ambiguity around negotiation as opposed to it being expressly stated that the company is willing to negotiate on salary; however, females prefer negotiation terms to be transparent.

Divergent to these findings, a recent unpublished paper that made use of matched employer-employee data from the Australian Workplace Relations Survey that contained questions on negotiation, found that women ask for pay rises as often as men (Artz, Goodall, & Oswald, 2016).

The research looks to test the findings made by Babcock et al. (2006) into gender differences in negotiation around recognition of opportunity, entitlement and apprehension. However, this research tested the constructs specifically in relation to the salary negotiation as opposed to negotiation in general and in specifically within the

financial services sector in South Africa. In addition, the research adds the additional variable of manager gender, looking to build on the research of both Hensvik (2014) and Babcock et al. (2006).

2.4.3. Social cost of negotiation

From the above analysis of the literature, it is clear that males are advantaged when it comes to negotiation. The reasons for this have been proposed as an apparent social cost for females, when it comes to being seen as a strong negotiator. The literature of Bowles et al. (2007) also forms the basis for testing the social cost of negotiation, specific to financial services industry in South Africa. Negotiation evaluators within this industry should be used to negotiating on a regular occurrence with both male and female partners. This is due to the fact that negotiation is widely seen as a necessary skillset within the industry.

Bowles et al. (2007) found that males and females were treated differently when initiating salary negotiations. They made use of four experiments that tested evaluators responses to both male and female employee interviews and found the following;

(i) Females were less likely to initiate a negotiation if the evaluator was male;
(ii) Evaluators penalised females to a greater extent than males for initiating negotiations;
(iii) Evaluator gender had no bearing on the degree of penalty for female negotiators;
(iv) Females who negotiated were seen as “not nice” and “overly demanding”;
(v) Evaluators were less willing to work with females who negotiated.

Do females therefore perceive this social cost of negotiating, especially when negotiating with male evaluators, to inhibit them from negotiating during wage discussions? “If the expected economic gains were large enough to outweigh the social costs, then the rational course of action would be to initiate negotiations, in spite of the social costs.” (Bowles et al., 2007, pp. 99).

Hypothesis four tested the reactions of both male and female evaluators to a script of an aggressive salary negotiation. The gender of the negotiator was revealed only through a gender-specific name to investigate if this social cost could be replicated in the financial services industry in South Africa.

The above findings are interesting in so far as they show significant differences in behaviour around salary negotiation on the basis of gender. Most companies do not openly advertise that salaries are negotiable, giving an advantage to males. Therefore,

it flows that this difference in behaviour around salary negotiation is a possible cause of the gender pay gap.

The research further investigated the reasons behind these differences in behaviour through investigating the role of the manager gender and employee age on salary negotiation perceptions. Findings are documented in greater detail later within the report.

2.5. Conclusion

The above analysis of the existing literature demonstrates a field that has been thoroughly studied and yet, as previously argued, the gender wage gap persists in most developed countries. What is clear from literary evidence is that a single approach, whether it be on the macro-, meso- or micro-level is ineffective in completely eliminating the gender wage gap. There is no doubt that further knowledge around why the females receive poorer outcomes than males in salary negotiations is of use to organisations that are looking to avoid the costs of a persistent gender wage gap.

As evidenced above, macro-level interventions have acted to reduce the level of the wage gap over the past 60 years without completely eliminating it. The findings on policy by Kaas (2009) are of particular interest as they provided environmental cues where policy would be effective, namely where competition was high and tastes for discrimination low. Kim (2015) noted the effect that removing pay secrecy had on gender wage differentials. Perceptions of pay secrecy formed the basis of the macro-level investigations of this research.

At the meso-level, Cuhan et al. (2006) suggested that social as well as economic goals need to be considered by companies when entering into negotiations. In addition to the HR remedies outlined by Bosch (2015), organisations can look to remove pay secrecy ahead of any legislation in accordance with the findings of Kim (2015). A better understanding of the perceptions females have around pay negotiation and the role of the manager, organisations can create gender-neutral salary negotiation environments that level the playing field between males and females.

A better understanding of the apparent social cost to females of being a strong negotiator can enable organisations to enact changes that will affect organisational culture changes. Gender-neutral negotiations could involve new joiners or existing employees negotiating their salary with a person of their gender as opposed to this function being fulfilled by the manager. Although findings detailed later suggest this may not necessarily

be the correct intervention in certain contexts, contrary to the literature it is, however a way to remove any homogenous bias that may lead to favouritism.

At the micro-level, the findings of Babcock et al. (2006), if universal, can assist females in recognising gendered negotiation behaviour and endeavour to enact behavioural change so as to limit pay disadvantage.

Further academic input specific to industry would be particularly useful, as the majority of the literature in the field of gendered negotiation has researched across industry or within student populations. The study adds to this literature by controlling for industry differences and legal frameworks through isolating the study participants in the financial services industry in South Africa. It also seeks to further the literary understanding of the role that manager gender plays in negotiation within the context of the industry.

The forthcoming chapters will outline, test and report the study objectives in the form of research propositions and hypotheses set at the macro-, meso- and micro-levels. This is done through investigating the role that perceptions play on employees as salary negotiators within each context.

Chapter 3

Research Propositions and Hypotheses

3.1. Introduction

The previous chapter outlined existing literature on the gender wage gap and gender differences in negotiation. This chapter seeks to describe the research goals tied to the existing literature in the form of research propositions that will be tested by means of the hypotheses below and state them in a mathematical form.

3.2. Proposition 1

South African financial sector employee's perceptions on pay secrecy are significantly different between males and females.

3.2.1. Hypothesis 1

H_0: Gender has no effect on perceptions of pay secrecy policy;

H_1: Gender plays a significant role on the perceptions of pay secrecy policy.

3.3. Proposition 2:

South African financial sector employees' perceived willingness to negotiate salary is dependent on differences in demographics.

3.3.1. Hypothesis 2

H0: Gender has no effect on perceptions of wage negotiation empowerment;

H1: Gender plays a significant role on the perceptions of wage negotiation empowerment.

3.3.2. Hypothesis 3

H_0: Age has no impact on perceptions of wage negotiation empowerment;

H_1: Age impacts the perceptions of wage negotiation empowerment.

3.4. Proposition 3:

Manager gender plays a role in employees' perceived willingness to negotiate one's salary.

3.4.1. Hypothesis 4

H_0: Manager gender has no impact on the perceptions of wage negotiation empowerment;

H_1: Manager gender impacts the perceptions of wage negotiation empowerment.

3.5. Proposition 4:

The social cost of salary negotiation is unequally carried depending on gender.

3.5.1. Hypothesis 5

H0: There is a no social cost for females who are perceived as strong negotiators;

H1: There is a social cost for females who are perceived as strong negotiators.

3.6. Conclusion

These hypotheses stated in mathematical formulae above can now be tested by way of statistical analysis to support the constructs the research seeks to study. The approach to this analysis is outlined in the next chapter.

Chapter 4

Research methodology

4.1. Introduction

It is appropriate now to dissect the methodology that was used to investigate the hypotheses outlined in the previous chapter and having placed the study in the context of existing literature outlined in Chapter 2. This chapter interrogates the research method, process, data collection and data analysis.

4.2. Rationale for Method

Saunders and Lewis (2012) outlined three research methods as follows;

(i) Exploratory studies: seeks out general concepts for areas not yet clearly understood
(ii) Descriptive studies: describes in an accurate manner people, events and situations
(iii) Explanatory studies: look for the explanation or causes of phenomenon

An exploratory study was not appropriate for this research as the concepts within the research were well understood. The research described potential relationships between well-known concepts. Likewise, the explanatory approach was not appropriate as the research was not purporting to prove causality between employee perceptions and the gender wage gap.

A descriptive, quantitative research approach was appropriate for this study as Saunders and Lewis (2012) defined a descriptive study as "…research designed to produce an accurate representation of persons, events, or situations" (p. 111). Zikmund, Babin, Carr and Griffin (2013) reinforced this view by describing quantitative research as research used to describe people. The research described the perceptions employees feel when engaging in salary negotiations and determined whether differences exist in those perceptions on the basis of gender. This was done in order to describe gender nuances in the approach to salary negotiation and potential reasons for the gender pay gap.

Nenty (2009) described quantitative research as a theory validation process. The research in part looked to validate or reject theories outlined in the literature review. A descriptive approach has also been applied practically in the field to investigate gender differences in negotiation (Bowles et al., 2005; Babcock et al., 2006; Small et al., 2007;

Leibrand & List, 2014). Most notably, a descriptive approach was also adopted by Bowles et al. (2007), whose methodology was partly adopted to investigate the hypotheses within the research report. This practical evidence further strengthens the argument that a quantitative approach is appropriate.

4.3. Research Process

4.3.1. Survey questionnaire and pilot process

In line with the quantitative approach that was taken and is defended above, a survey was used to probe all the research hypotheses. The survey questions and hypothesis constructs can be found in Appendix 1. Saunders and Lewis (2012) defined a survey as, "A research strategy, which involves the structured collection of data from a sizeable population. Data collection may take the form of questionnaires, structured observation and structured interviews" (p. 115).

The survey consisted of 23 questions that were divided into six demographic questions and 17 questions designed and grouped to answer the hypotheses. Prior to the pilot survey, the majority of questions were stated in the positive structure with occasional questions structured in the negative structure to counter acquiescence bias. Acquiescence bias was defined by DeVellis (2016) as, "…a tendency to agree with terms irrespective of their content" (p. 117). He went on to warn of the dangers of interchanging negatively and positively framed questions in that they can confuse the respondent.

4.3.1.1. Pilot

A pilot of the survey was conducted amongst 15 people with the same characteristics as the targeted study sample, namely, people working in the financial services within South Africa. Indeed, the respondents to the pilot survey found the negatively framed questions confusing and for this reason, they were removed. The pilot questionnaire was also used to control for what Bryman and Bell (2007) termed data collection error, specifically poorly worded questions. The comments received back from the pilot survey are listed below:

"I think the fourth question was poorly expressed. Keep it simple. Something like: Pay rises are only given to those who ask."

"Question 6 is worded in a confusing manner and requires rereading a number of times."

Instead of negatively-framed questions, question 17 was added as a quality control question to check for acquiescence bias and to strengthen the quality of data used to

test hypothesis five. The question asked respondents the perceived gender of the job seeker introduced in questions nine through 11, where gender-specific names were used. The question was also added to test any unconscious gender bias of those respondents who did not correctly identify the gender of the job seeker.

4.3.1.2. Distribution

Proprietary survey software was used to generate and distribute the survey as well as record the data which was provided in raw format downloadable to Excel. The sample and final questionnaire were distributed as a link by email. The link was tested to ensure consistency, proper display and usability on phone, tablet and pc. As all employees within the financial services have access to both a computer and the internet or a smartphone, the method of survey presentation should not skew the results due to accessibility; however other bias observed in the sampling method are described below.

A response rate was defined by Zikmund et al. (2013) as the number of surveys received, divided by the number of eligible people the survey was distributed to. Due to the nature of the sampling method, the survey response rate is difficult to anticipate or estimate. A high figure based on the initial distribution lists was estimated as 62%. However, this figure is inaccurate as the researcher was not copied on all emails that were forwarded.

Figure 2: Response rate calculation

$$Response\ Rate = \frac{Nunbers\ of\ useable\ questionaires}{total\ sample - uncontactable\ members\ of\ the\ sample}\ x\ 100$$

Source: adapted from Bryman and Bell (2007)

Questions of a sensitive nature can result in a greater number of missing data (Hair, Black, Babin, & Anderson, 2010). Sensitive demographic questions were kept to only those questions necessary for the study. This resulted in a high survey completion rate and low levels of missing data. The survey completion rate was provided by the proprietary software. In total across the two surveys, 202 surveys were started and 164 completed, resulting in a completion rate of 81%.

4.3.1.3. Question structure and data types

The six demographic questions and answer options are presented below in the below table. Age and work experience were free format fields and respondents were asked to

answer in years. Therefore, this makes the data quantitative, ratio, discrete-scaled, any exact data was rounded to ensure it met the discrete parameter (Wegner, 2012).

Table 5: Demographic questions

Please state your gender			
Male	Female		
What is the gender of your manager at work?			
Male	Female		
What is your age in years?			
Please enter your work experience (years)?			
Please state your employment level			
Employee	Manager	Middle Manager	Senior Manager
Please state your race			
African	Coloured	Indian / Asian	White

Two further questions related to the respondent's gender and the gender of the respondent's manager were added. Question 23 and 24 asked the respondents' employment level and race respectively. These demographic data are nominal-scaled in nature. Wegner (2012) defined nominal-scaled data as qualitative data where the categories are of equal importance.

The remaining 18 questions were set up to answer the hypotheses. See Table 7 for the data plan. The questions testing Proposition 4, namely questions nine through eleven, were adapted from a pre-existing survey authors Curhan, et al., 2006 made use of, reporting a Cronbach alpha of 0.91. Question four and five of the original survey were removed as the context of the evaluation did not suit proposition four. Cuhan et al. (2006) used the evaluation after one on one interviews whereas the test criteria this paper investigated was an interview script. Half of all respondents were sent the interview with the female gender-specific name of Amanda as the salary negotiator and the other half were sent the interview with the male gender-specific name of John as the salary negotiator.

The questions testing proposition two, three and four, namely questions one through eight were adapted from a questionnaire used by Babcock et al., (2006) who, as outlined in Chapter 2, investigated gender differences in three constructs:

(i) Recognition of opportunities (alpha coefficient: 0.73)
(ii) Entitlement and (alpha coefficient: 0.55)
(iii) Apprehension (alpha coefficient: 0.92)

Again, these questions were adapted to better fit the context of the study. This involved ensuring the questions were relevant to the context of a salary negotiation and the reading of an interview script as opposed to witnessing a negotiation.

The remaining questions, questions twelve through seventeen, were newly constructed for the purposes of the study. As such there is no pre-existing Cronbach alpha scores for these constructs.

4.3.1.4. Likert Scale

A seven point Likert scale was used to remain consistent with the scale of the original questionnaires. For questions that were added over and above the adapted questions, the seven-point Likert scale was extended again for consistency purposes and to remove complexity and confusion of separate scales. Further evidence that the Likert scale is appropriate was provided by DeVellis (2016), who described the use of Likert scales in surveys to test, "…opinion's, belief's or attitudes" (p. 127).

According to Wegner (2012), Likert scale data are quantitative, numeric and interval in nature and possess rank order and distance properties. Rank order properties make it possible to rank feelings about a statement from weak to strong, and distance allows measurement of the quantum of agreement or disagreement to the statement.

4.3.2. Data Validity and Reliability

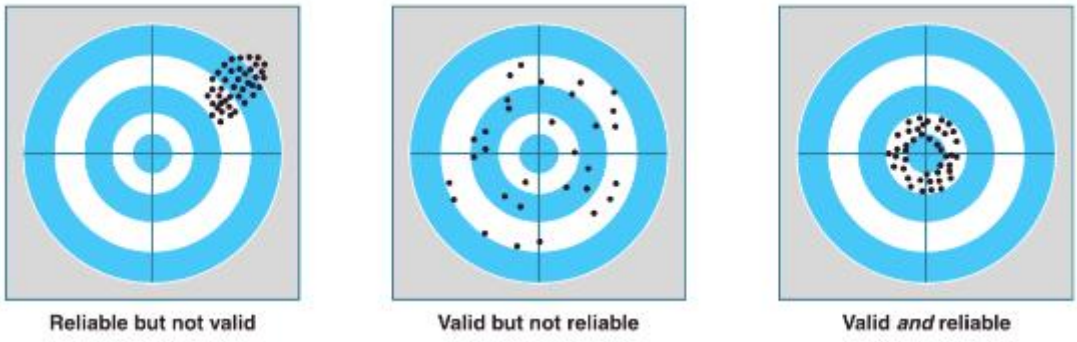
Babbie (2012) confirmed that researchers pay particular attention to two constructs of precision and accuracy, namely validity and reliability. Saunders and Lewis (2012) defined validity as, "…the extent to which (a) a data collection method or methods accurately measure what they were intended to measure and (b) the research findings are really about what they profess to be about" (p. 127).

Zikmund et al. (2013) proposed three categories of validity:

(i) Content validity – The instrument is effective in measuring the outcome;
(ii) Criterion validity – Does the measurement correlate with other instruments measuring the same construct?
(iii) Construct validity – Empirical evidence is consistent with theoretical logic.

Reliability was defined by Saunders and Lewis (2012) as, "…the extent to which data collection methods and analysis procedures will produce consistent findings" (p. 128).

Figure 3: Validity and reliability



Source: Babbie (2012)

Bonett and Wright (2015) reported the wide use of Cronbach's coefficient alpha as a measure of reliability in social and organisational sciences. The survey questionnaire was adapted from the two existing questionnaires mentioned in 4.3.1.3. These questionnaires had reported Cronbach alpha reliability scores described above and reported below. Due to adaptation and as the population and unit of analysis for the research differed from that of the original survey questionnaires, the Cronbach alpha score for the adapted survey questionnaire was tested on receipt of the survey questionnaires from the pilot study and a Cronbach alpha score was calculated. Please see the table below, showing how items were grouped and the relevant Cronbach alpha scores.

Table 6: Question construct with pilot reliability scores

Hypothesis that Question is Relevant to	Question	Test Area - Literature	Existing Cronbach alpha	Calculated Cronbach Alpha
Proposition 2 & 3 - Hypothesis 2, 3 and 4 dependent on demographic information	Question 1 - 4	Recognition of Opportunity	0,73	0,62
	Question 5	Entitlement	0,55	NA
	Question 6 - 8	Apprehension	0,92	0,73
Proposition 4 - Hypothesis 5	Question 9 - 11	Social Cost of Negotiation	0,91	0,63
Proposition 1 - Hypothesis 1	Question 12 - 14	Fairness of pay secrecy / regulation	New Questions Added	0,7
Proposition 3 - Hypothesis 4	Question 15	Gender Preference of negotiation counterpart		NA
Proposition 2 - Hypothesis 2	Question 16	Fairness of pay secrecy / regulation		NA
Proposition 4 - Hypothesis 5	Question 17	Social Cost of Negotiation		NA

4.4. Population and Unit of Analysis

The population or universe was defined by Wegner (2012) as, "…the collection of all possible data values that exist for a random variable under study" (p. 5). Therefore, the

population or universe for the study consisted of all male and female employees working in the financial services sector in the Republic of South Africa.

The most accurate assessment of the size of the universe comes from the quarterly labour force survey produced by Statistics South Africa (2016) and aggregates for finance and other business services, where the total number of people employed in this sector is 2 164 000 people.

Wegner (2014) defined a sampling unit or unit of analysis as, "…the object being measured, counted or observed with regard to the random variable under study" (p. 5). The unit of analysis will be the perceptions of the individuals within the sample who work in the financial services sector and who have answered the survey questionnaire as it is their perceptions that are of interest in the proposed research.

4.5. Size and Nature of the Sample

4.5.1. Nature of the sample

South Africa is a heterogeneous country and that heterogeneity is reflected in the demographic makeup of the financial services sector. The more heterogeneous a population, the greater the size of the sample will need to be (Bryman & Bell, 2007).

4.5.2. Sample size

Bryman and Bell (2007) specified the importance of absolute size of a sample and not relative size. Given the approximate size of the universe stated above at a 95% confidence level the sample size should be 384 respondents. Cost and time considerations affect decisions taken on sample size (Bryman & Bell, 2007). For these reasons, normality to the population parameters was assumed with a sample size of 164 respondents, 77 male and 87 female respondents.

4.5.3. Sampling methodology

In order to reach this sample size, non-probability snowball sampling was used due the benefits they provide from a cost and time perspective. Networks were leveraged to start the sampling including the researcher's own network (who currently works within the financial services).

The major disadvantage of using snowball sampling is the sample risks becoming homogenous in nature (Saunders & Lewis, 2012; Zikmund et al., 2013).

4.6. Data Collection, Data Analysis and Data Management

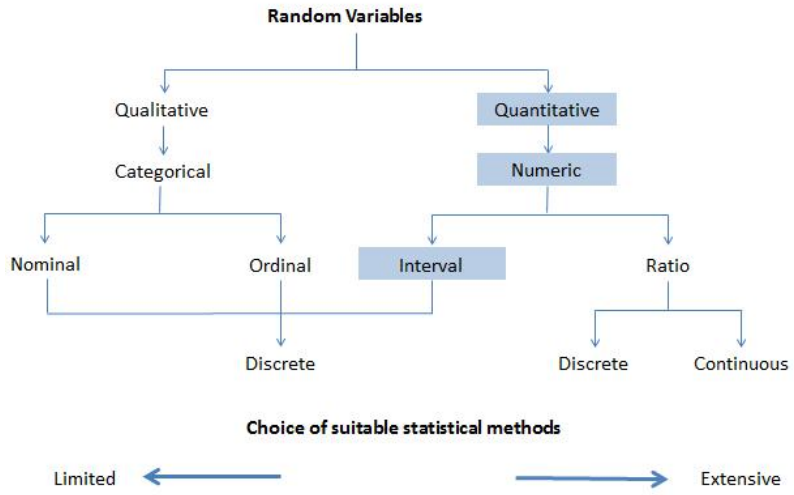
4.6.1. Data collection

Data collection occurred through the questionnaire attached in Appendix 1. Due to imposed time constraints, the research was cross sectional in nature. Saunders and Lewis (2012) defined cross-sectional research as, “the study of a particular topic at a particular time” (p. 123).

As motivated previously, a quantitative study is appropriate for the research. Through the use of the seven-point Likert scale to query employee perceptions, the data is interval in nature. Interval data is numeric and associated with scales (Wegner, 2012).

Interval data gives greater choice of statistical analysis when compared to qualitative data; however, when compared to discrete and continuous data, statistical methods are limited.

Figure 4: Classification of data (Wegner, 2012)



Source: Wegner (2012)

4.6.2. Data analysis

The data required cleaning and coding prior to analysis. Only completed questionnaires were analysed, and partially completed questionnaires were discarded. A total of 204 responses were received, 164 of which were fully complete. The proprietary survey tool allowed responses to be downloaded into Excel format to enable cleaning and coding. Mean substitution was used to replace all missing data, following conventions proposed by Hair et al. (2010). Cleaning and data substitution involved the following:

(i) Removing the word years from questions 20 and 21 (13 occasions);

(ii) Rounding fractional data (two occasions);

(iii) Inputting the mean sample age and mean sample work experience for one respondent who chose not to answer both these questions directly (one occasion);

(iv) Where work experience as was given, but age not the mean age of those participants with the same work experience was used (one occasion)

Due to the interval nature of the data, coding was performed to ensure it was manipulated into a form that could be analysed statistically in order to test the hypothesis (Fowler, 2013). All Likert scale data and demographic data were coded as per the mapping table provided in Appendix 2.

Descriptive and inferential statistics were then used to describe the sample. Descriptive analysis involves the transformation of raw data into a more meaningful form from which it is easier to identify patterns and trends, and inferential statistics allow inferences to be made about the population (Wegner, 2012; Zikmund et al., 2013).

According to Bryman and Bell (2007), the main goal of factor analysis is to “reduce the number of variables with which the researcher needs to deal” (pp. 170). Factor analysis was used to reduce multiple indicator measures in each construct containing multiple indicators, namely, the sub-constructs of recognition of opportunity, apprehension, social cost of negotiation and fairness of pay secrecy.

The data were then analysed using statistical tests for difference in the female and male responses. As most of the testing involved testing the difference of perception (measured on a nominal scale) on the Likert scale between gender, a Chi-Square test for independence was appropriate.

Table 7: Data plan

Hypothesis that question is relevant to	Question	Test area – Literature	Statistical tests
Proposition 2 & 3 – Hypothesis 2, 3 and 4 dependent on demographic information	Question 1 – 4	Recognition of Opportunity	Chi-Square Test for independence
	Question 5	Entitlement	
	Question 6 - 8	Apprehension	
Proposition 4 - Hypothesis 5	Question 9 - 11	Social Cost of Negotiation	Chi-Square Test for independence
Proposition 1 - Hypothesis 1	Question 12 - 14	Fairness of pay secrecy / regulation	Chi-Square Test for independence

Proposition 3 - Hypothesis 4	Question 15	Gender Preference of negotiation counterpart	Chi-Square Test for independence
Proposition 2 - Hypothesis 2	Question 16	Fairness of pay secrecy / regulation	Chi-Square Test for independence
Proposition 4 - Hypothesis 5	Question 17	Social Cost of Negotiation	Chi-Square Test for independence
Demographics	Please state your gender?	Demographics	Descriptive Statistics
	What is the gender of your manager at work?		
	What is your age in years?		
	Please enter your work experience (years)		
	Please state your employment level		
	Please state your race		

4.7. Research Limitations

In addition to the sampling choice disadvantages mentioned above, additional limitations exist and are listed below.

4.7.1. Industry mismatch

Whilst every effort was made to highlight that the parameter of the study was the financial services industry in South Africa, the landing page of the questionnaire and the originating emails were explicit in this regard, the nature of the sampling method chosen meant this was impossible to control for completely.

4.7.2. Sample location concentration

The financial services industry in South Africa is disproportionally located in Gauteng, there do, however, exist pockets of activity in this sector distributed across the country. Whilst it is impossible, due to the nature of the sampling method, to know the geographical spread of the sample, it is highly probable that the sample will be heavily concentrated in the Gauteng area in a manner inconsistent with the true geographical

spread of the financial services industry. Therefore, this excludes from the sample those geographical areas outside of Gauteng that are part of the universe and may have influenced the results.

4.7.3. Sample organisational concentration

Whilst large banks, accounting and insurance firms dominate the financial services sector in South Africa, they do not constitute the entire market. Due to the sampling method chosen, it is not possible to ascertain the exact organisational makeup of the sample. It is, however, highly probable that it is overly concentrated by respondents employed by these large firms and as such is not a true representation of the organisational make-up of the population. Given the role organisational human resources play in determination of pay policy, it is important to take cognisance of this limitation.

4.7.4. Legal and industry framework limitations

The context of the study was chosen precisely to control for differences in legal and remuneration frameworks. This, however, limits the ability to universally ascribe these results to different contexts. As mentioned previously, South Africa has affirmative action laws that make provision for improving the representation of females in the work force. Whilst such laws are not unique to South Africa, they may influence the results of the research study such that comparisons to other countries are rendered impotent.

4.7.5. Response bias

The nature of an online questionnaire opens up the possibility of response bias. Respondents may not have been truthful in answering the questions, despite the anonymous and confidential nature of the questionnaire. This could be due to them not wanting to admit, for example, that they feel they are underpaid. There could also have been a loss of interest in answering questions leading to acquiescence bias. Despite the questionnaire being short and the addition of question 17 to control for acquiescence bias in hypothesis 5, the respondents' goal could also have been to complete rather than truthfully complete the survey due to lack of time.

4.7.6. Non-exhaustive study

The study probes gender differences in perceptions of salary negotiations and in doing so excludes a number of other constructs that could affect perceptions and the results of the study in ignoring them. Among these are language and culture, both of which could have significant effects on the feelings of empowerment during wage negotiations.

4.8. Conclusion

This chapter described the reasons for the methodology choice and the limitations or opportunity costs in choosing such methodology. The methodology choice was tied to existing literature outlined in the literature review, ensuring relevance to the propositions and hypotheses outlined for the study. The study instrument has been described including the data types to be generated from the instrument. The chapter also sought to describe the nature in which the instrument was distributed and the limitations of the distribution choice.

In the following chapter it becomes pertinent to test both the instrument and the data collected from the instrument according to the data plan. Careful consideration will also be applied to the distribution of the data.

Chapter 5

Results

5.1. Introduction

Following the above description of the methodology undertaken, this chapter will describe the sample and the results of the statistical analysis. Further detail will be provided around data transformations and commentary around the validity and reliability of each test will be provided. Limitations to each test will also be outlined.

The statistical analysis of the coded data was conducted through the use of IBM SPSS version 24 (validity/reliability and factor analysis). Descriptive and inferential statistics were used to describe the sample and the Chi Squared test was used to test the hypotheses.

5.2. Descriptive Statistics: Sample Profile

An attempt was made to conceal the gender-specific nature of the study (and in so doing reduce response bias) by ensuring the direct questions and demographic questions were the last questions to be answered by the respondents. This was done in an attempt to minimise any effect that knowledge of the variables may have had on the answers of the respondents.

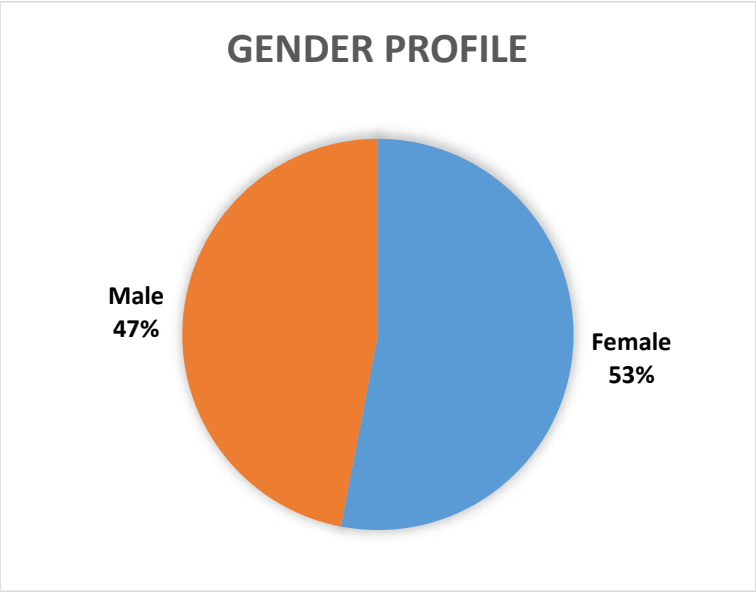
Table 8: Demographic profile of the sample

		Frequency	Percentage
Gender	Female	87	53,1
	Male	77	47,0
Age (years)	< 30 years	25	15,2
	30-39 years	89	54,3
	> 40 years	50	30,5
Race	African	52	31,7
	Coloured	4	2,4
	White	82	50,0
	Indian/Asian	26	15,9
Employment level	Employee	60	36,6
	Manager	43	26,2
	Middle manager	36	22,0
	Senior manager	25	15,2
Manager Gender	Male	100	61,0
	Female	64	39,0

5.2.1. Gender profile of the sample

Of the 164 respondents 53.1% were female and 47% were male.

Figure 5: Gender profile of the sample

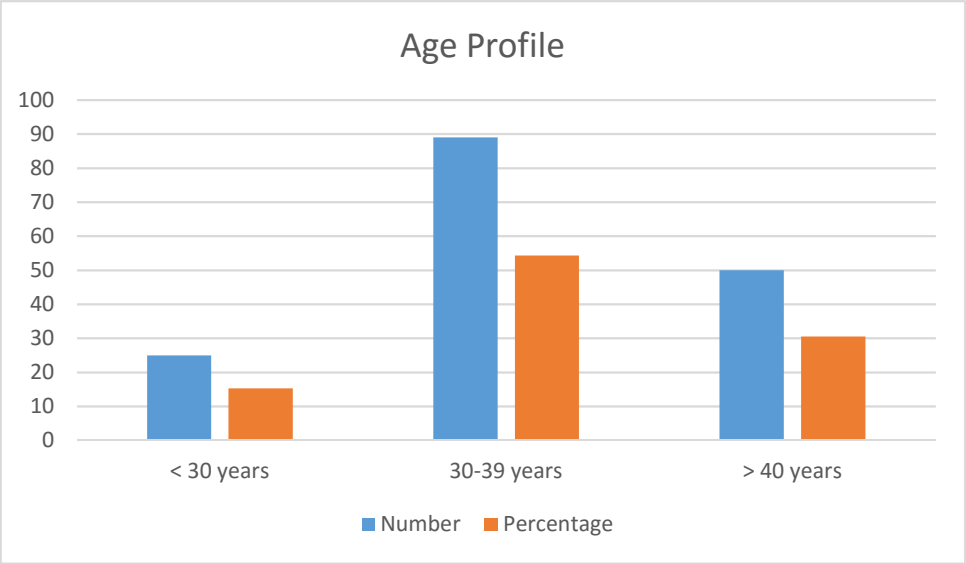


5.2.2. Age profile of the sample

The questionnaire asked for age data in completed years as opposed to offering age buckets to respondents. This provided flexibility in creating suitable age buckets after data collection. The average age of the sample was 35.95 years, with a standard deviation of 6.79 years, and a standard error of 0.53. The range of the sample age data was 40 years, with no respondents younger than 22 years or older than 62 years. For the purposes of sensibility of analysis and based on the distribution of the ages of respondents, the age data was reduced to three buckets:

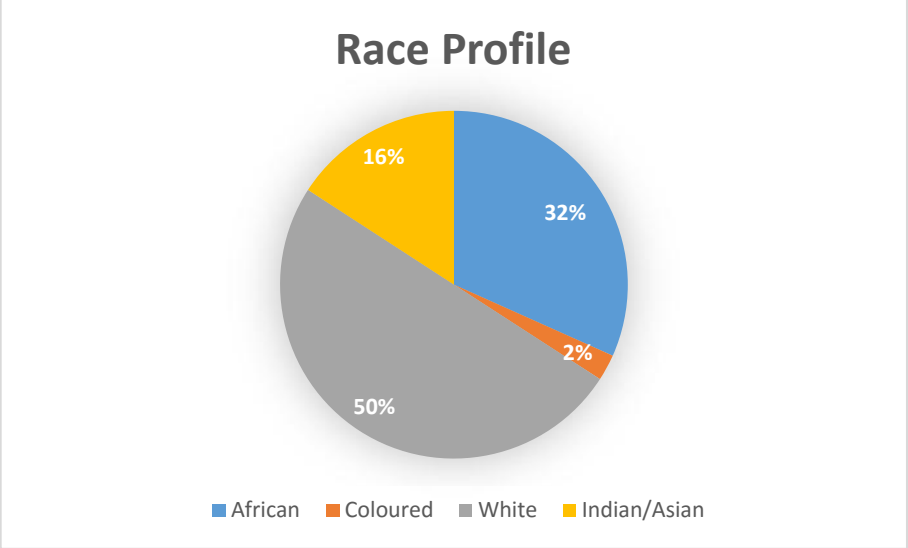
(i) Younger than 30 years
(ii) 30 to 39 years
(iii) Older than 40 years

Figure 6: Age profile of the sample



5.2.3. Racial profile of the sample

Figure 7: Race profile of the sample

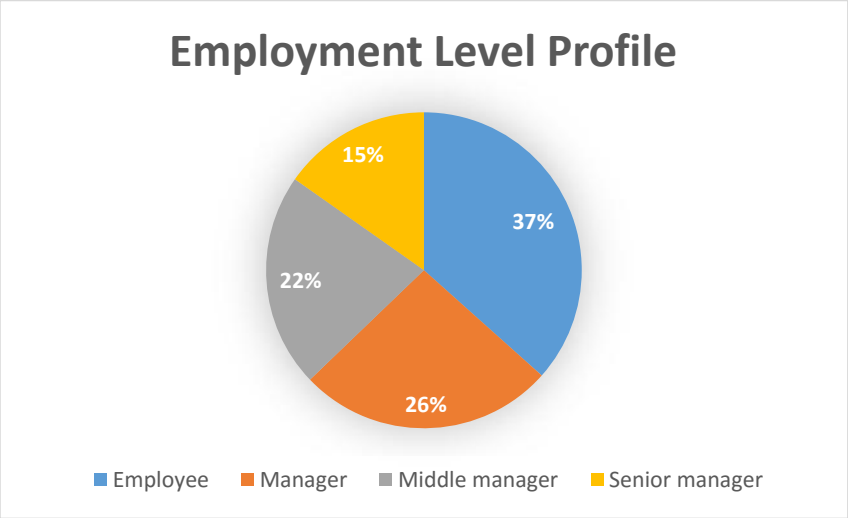


5.2.4. Manager level profile of the sample

The questionnaire defined employment level in four main categories: (i) employees, (ii) managers, (iii) middle managers and (iv) senior managers. Employees were defined as having no managerial responsibilities. Managers were defined as respondents who

managed employees. Middle managers were defined as managers of managers and senior managers were defined as those respondents who managed middle managers. The breakdown of the sample based on these categories can be seen below.

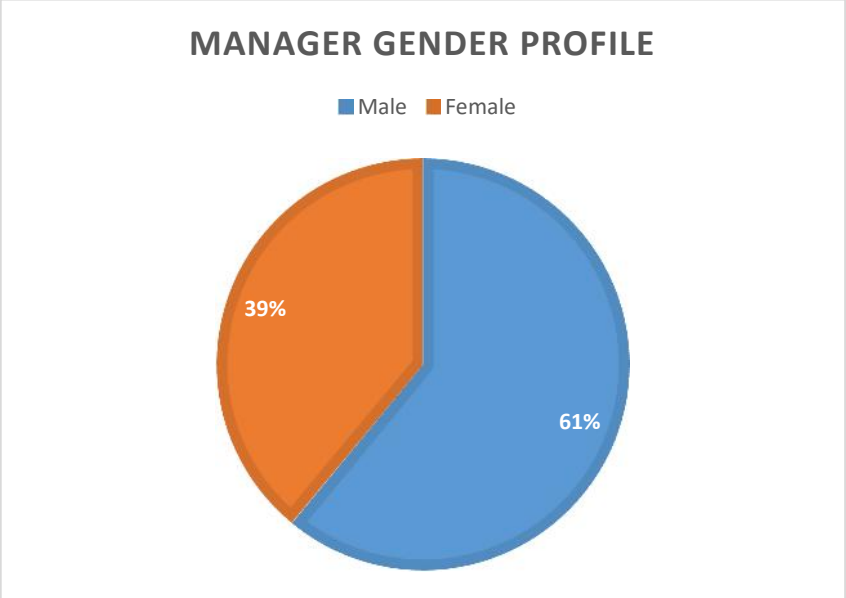
Figure 8: Manager level profile of the sample



5.2.5. Manager gender profile of the sample

Respondents with male managers accounted for 61% of the sample population, while respondents with female managers accounted for 39% of the population.

Figure 9: Manager gender profile of the sample



5.3. Factor Analysis and Reliability Testing

Factor analysis was conducted on the sample data in order to determine the latent structures within the questionnaire.

5.3.1. Appropriateness of the data for factor analysis

The sample data was initially evaluated for factor analysis on two dimensions: sample size and responses per item (or question) number in each construct. The sample size of 164 respondents is considered sufficient for factor analysis as it is greater than 150 (Tabachnick & Fidell, 2001). The sample also only just exceeds the lower limit of ten responses per item (or question) to be analysed as suggested by Nunnally (1978).

Bartlett's test of Sphericity (Bartlett, 1954) and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy (Kaiser, 1970) were tested to further determine the sample adequacy for factor analysis. Bartlett's test was favoured over the Levene test due to the assumption of normality across the sample. Results of these two tests are presented below.

Table 9: KMO and Bartlett's test of sphericity

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.643
Bartlett's Test of Sphericity	Approx. Chi-Square	508.225
	df	120
	Sig.	.000

Tabachnick and Fidell (2001) suggested that Kaiser-Meyer-Olkin measures should be greater than 0.6 and that Bartlett's test of sphericity needs to be significant.

The results depicted in the above table show that both these measures indicate the sample's appropriateness for factor analysis. The KMO = 0.643 > 0.6 and p=0.000 < 0.05 for Bartlett's test of Sphericity indicating statistical significance at the 5% level of significance, meaning rejection of the null hypothesis in favour of the alternate hypothesis. Therefore, variances for at least two groups are unequal.

5.3.2. Determining the number of factors

The principal axis factoring method was then performed on the 16 Likert scale questions in the questionnaire. Factors with eigenvalues greater than one were retained, following protocol set out by Kaiser (1974). Tabachnick and Fidell (2001) advised that items should have coefficients of greater than 0.3 for effective use of factor analysis and that if too few

have coefficients above this threshold, factor analysis may not be appropriate for the items. Using the Direct Oblimin with Kaiser normalisation rotation method six factors were identified that exhibited eigenvalues greater than 1 and coefficients greater than 0.3. These six factors accounted for 44.93% of the explained variance.

Table 10: Eigenvalues and explained variance

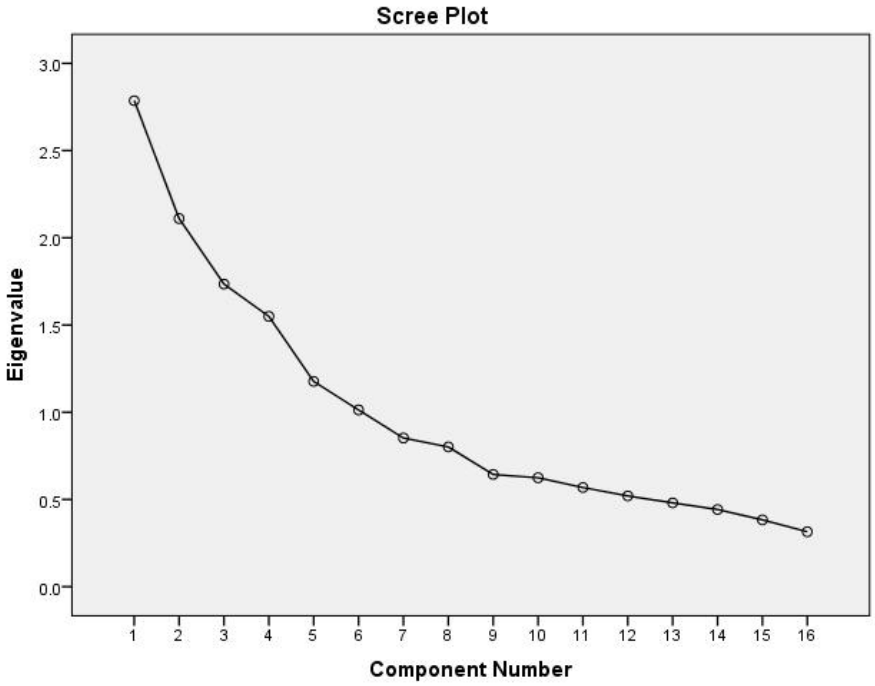
Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
Factor	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.786	17.412	17.412	2.263	14.145	14.145	1.538	9.614	9.614
2	2.110	13.189	30.601	1.632	10.200	24.344	1.499	9.369	18.983
3	1.735	10.841	41.442	1.190	7.437	31.781	1.384	8.648	27.631
4	1.549	9.683	51.126	1.010	6.310	38.090	1.190	7.438	35.069
5	1.176	7.353	58.479	.638	3.988	42.078	.977	6.104	41.173
6	1.013	6.331	64.810	.457	2.853	44.932	.601	3.759	44.932
7	.852	5.326	70.136						
8	.801	5.007	75.142						
9	.643	4.021	79.163						
10	.624	3.902	83.065						
11	.568	3.552	86.617						
12	.520	3.253	89.870						
13	.480	3.002	92.873						
14	.443	2.767	95.640						
15	.383	2.393	98.033						
16	.315	1.967	100.000						

Extraction Method: Principal Axis Factoring.

The scree plot (Cattell, 1966) was then interrogated to determine the point of inflection representing the last significant drop. As can be seen from the figure below, the scree plot of factors for this particular set of items, the inflection point is difficult to determine from visual inspection although it is suggestive that component five could represent the inflection point.

Figure 10: Scree plot (Cattell, 1966)



Kaiser's criterion and Cattell's scree plot tend to overestimate the number of components (Hubbard & Allen, 1987; Zwick & Velicer, 1986). Horn's parallel analysis (Horn, 1965) is a factor reduction technique used within social science literature (Choi, Fuqua, & Griffin, 2001; Stober, 1998). The method compares the items to an analysis of randomly generated variables, generated through a Monte-Carlo simulation (O'Connor, 2000). The generally accepted rule of parallel analysis is that only those factors with eigenvalues higher than those of the random generated sample are retained (Horn, 1965; Ledesma & Valero-Mora, 2007; O'Connor, 2000). The script used to generate the random generated sample can be found in Appendix 3.

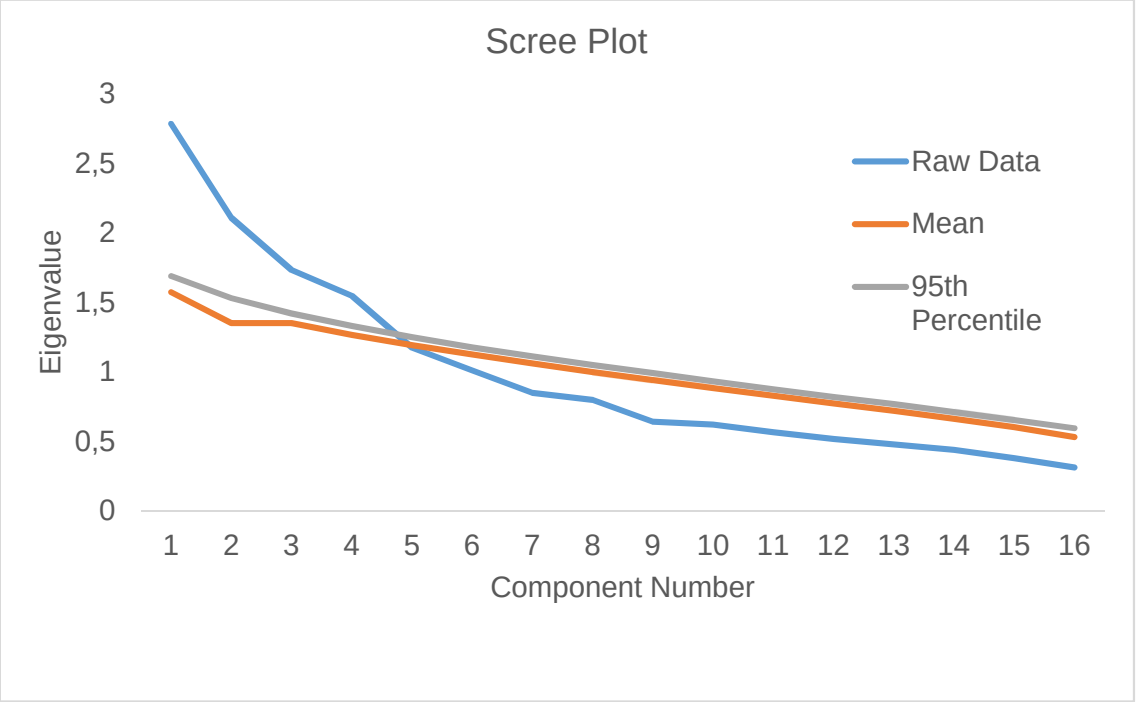
The results of Horn's parallel analysis comparing against random eigenvalues at five percent significance are presented below.

Table 11: Parallel analysis

Random Data Eigenvalues			Sample Data Eigenvalues			Decision Rule
Root	Means	95th Percentile	Total	% of Variance	Cumulative %	
1	1,159394	1,621	2,786	17,412	17,412	Accept
2	1,405599	1,486	2,110	13,189	30,601	Accept
3	1,318001	1,384	1,735	10,841	41,442	Accept
4	1,244174	1,299	1,549	9,683	51,125	Accept
5	1,178348	1,230	1,176	7,353	58,478	Reject
6	1,117555	1,163	1,013	6,331	64,809	Reject

It follows from these results that four is the appropriate number of factors for the statistical analysis. The results are depicted in a scree plot in Figure 11. The four factors account for 35.069% of the variance.

Figure 11: Scree plot including parallel analysis



5.3.3. Factor rotation

The oblique factor rotation method was applied as it can produce greater accuracy when measuring behaviour according to Williams, Brown, and Onsman (2010). The four factors were set as an extraction limit and low correlations of less than 0.3 were excluded. The below structure converged after twelve iterations.

Figure 12: Structure matrix

Structure Matrix

	Factor			
	1	2	3	4
q1				
q2			.631	
q3			.506	
q4			.586	
q5				
q6		-.690		
q7		-.693		
q8		-.596		
q9	.635			
q10	.378			
q11	.789			
q12				.722
rcq13				.505
q14				.666
q15				.424
q16				.354

Extraction Method: Principal Axis Factoring.

Rotation Method: Oblimin with Kaiser Normalisation.

The results suggested some minor changes be made to the initial constructs. After viewing the weak Cronbach alpha, inter-item correlation (see 5.3.3) as well as the factor analysis output, it was decided that question 1 should not be part of the “recognition of opportunity” sub-construct.

Following adaptation of the existing survey question five was reduced to a single question to measure “entitlement”. Therefore, it is analysed further as a single item construct. Fuchs and Diamantopoulos (2009) argued whilst determining the reliability of a single item measure is challenging “…the application of single item measures is appropriate under certain conditions and their general banishment is not justified” (p. 206).

Factor four grouped questions 15 and 16 together with questions 12, 13 and 14. Closer analysis did not reveal any clear latent variable that could be described using all five items. Questions 15 and 16 correlated weakly with the other three items upon further visual inspection it was decided that they would not contribute to the pay secrecy variable

in a meaningful way. They were therefore excluded from further statistical analysis of this construct.

5.3.4. Cronbach alpha and inter-item correlation

The Cronbach alpha scores of the original questionnaire that were sourced from Babcock et al. (2006) and Curhan et al. (2006), were listed in Table 6 together with the scores of the test done on a small sample of the study. Below are the Cronbach alpha test scores conducted on the constructs for the whole sample.

Table 12: Reliability scores of constructs

Title of Construct / Sub Construct	Question Range of Construct / Sub Construct	Hypothesis Tested	Average Inter-item correlation	Cronbach Alpha
Recognition of Opportunity (Factor 3)	Questions 2 - 4	2, 3 & 4	0.31	0.57
Apprehension (Factor 2)	Questions 6 - 8	2,3 & 4	0.45	0.71
Social Cost of Negotiation (Factor 1)	Questions 9 - 11	5	0.37	0.63
Pay Secrecy / Fairness (Factor 4)	Questions 12 - 14	1	0.46	0.71

The most notable change from the alpha analysis conducted on the sample is that the internal consistency for “recognition of opportunity” dropped from questionable to poor. The “social cost of negotiation” is questionable and the Cronbach alpha scores are acceptable for both “pay secrecy/fairness” and “apprehension”.

Scales that comprise of a low number of items can result in low Cronbach alpha scores and it may be more appropriate to use the mean inter-item correlation. The ideal range of inter-item correlation scores should be between 0.2 and 0.4 (Briggs & Cheek, 1986). All of the study’s scales are low item scales. The inter-item correlation is reported alongside the Cronbach alpha scores in Table 12.

Whilst “recognition of opportunity” has a poor Cronbach alpha, the average inter item correlation falls within the acceptable range. “Apprehension” and “pay secrecy” have average inter-item correlation scores that are slightly above the optimal upper limit. However, both have acceptable Cronbach alpha scores.

5.4. Normality of Data within Constructs

To determine the appropriateness of parametric statistical analysis it is important to test the constructs for normality. Normality was tested using the Kolmogorov-Smirnov test (Kolmogorov, 1933) and the Shapiro-Wilk test (Shapiro & Wilk, 1965). The results for the constructs are presented below.

Table 13: Normality results

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Recognition_of_Opportunity	.093	164	.001	.976	164	.005
Apprehension	.096	164	.001	.977	164	.007
Entitlement	.318	164	.000	.776	164	.000
Social_Cost	.122	164	.000	.973	164	.002
Pay_Secrecy	.163	164	.000	.948	164	.000

a. Lilliefors Significance Correction

The Shapiro-Wilk test is considered a more powerful test for normality (Razali & Wah, 2011) and therefore, these results were used due to the conflicting nature of the two tests. As the majority of test constructs exhibited distributions not considered normal, non-parametric statistical analysis through the Chi-square test of independence (Pearson, 1900) was chosen to test the hypotheses.

McHugh (2013) lists the following assumptions for the Chi-square test of independence: (i) Frequency data in cells, (ii) The variable categories are mutually exclusive, (iii) independent study groups, (iv) two categorical variables and (v) values in expected count cells should be greater than 5 in at least 80% of the cells.

5.5. Data Transformations

Due to uneven distribution and low representation across the combined Likert scale, the data within the constructs were transformed into categorical data, using the median and mode values as guides for category boundaries.

5.5.1. Recognition of opportunity

The sub-construct of empowerment was collapsed as follows; Scores of ten and below were labelled “low recognition of opportunity”, and scores of eleven and above were labelled “high recognition of opportunity”.

Table 14: Recognition of opportunity descriptive statistics

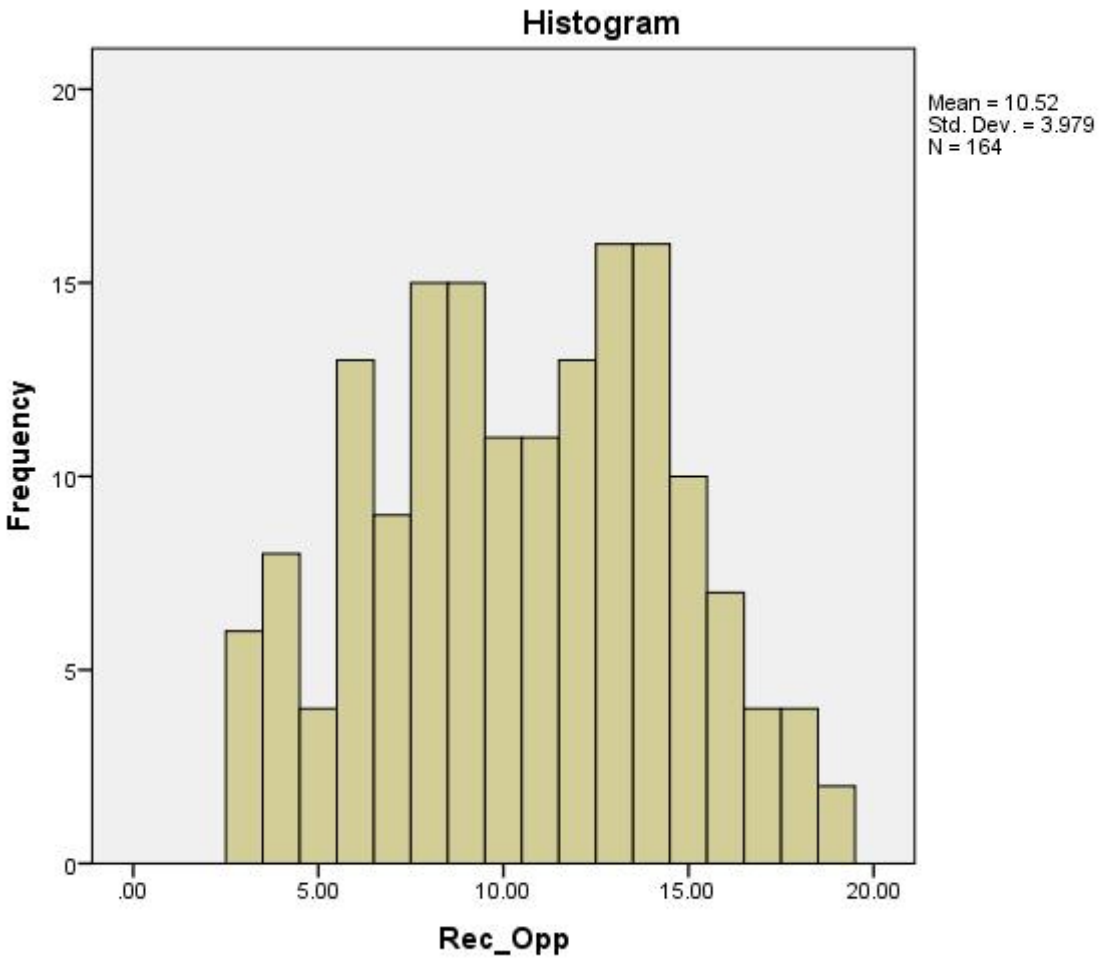
Statistics

Rec_Opp

N	Valid	164
	Missing	0
Median		11.0000
Mode		13.00[a]

a. Multiple modes exist. The smallest value is shown

Figure 13: Recognition of opportunity variable histogram



5.5.2. Entitlement

Due to the nature of this sub-construct of empowerment consisting of only one item, the item scores were multiplied by three to ensure consistency of scale with the other two sub-constructs of the empowerment construct.

"Entitlement" was then collapsed as follows; Scores of 17 and below were labelled "Agree Less", and scores of 18 and above were labelled "Agree".

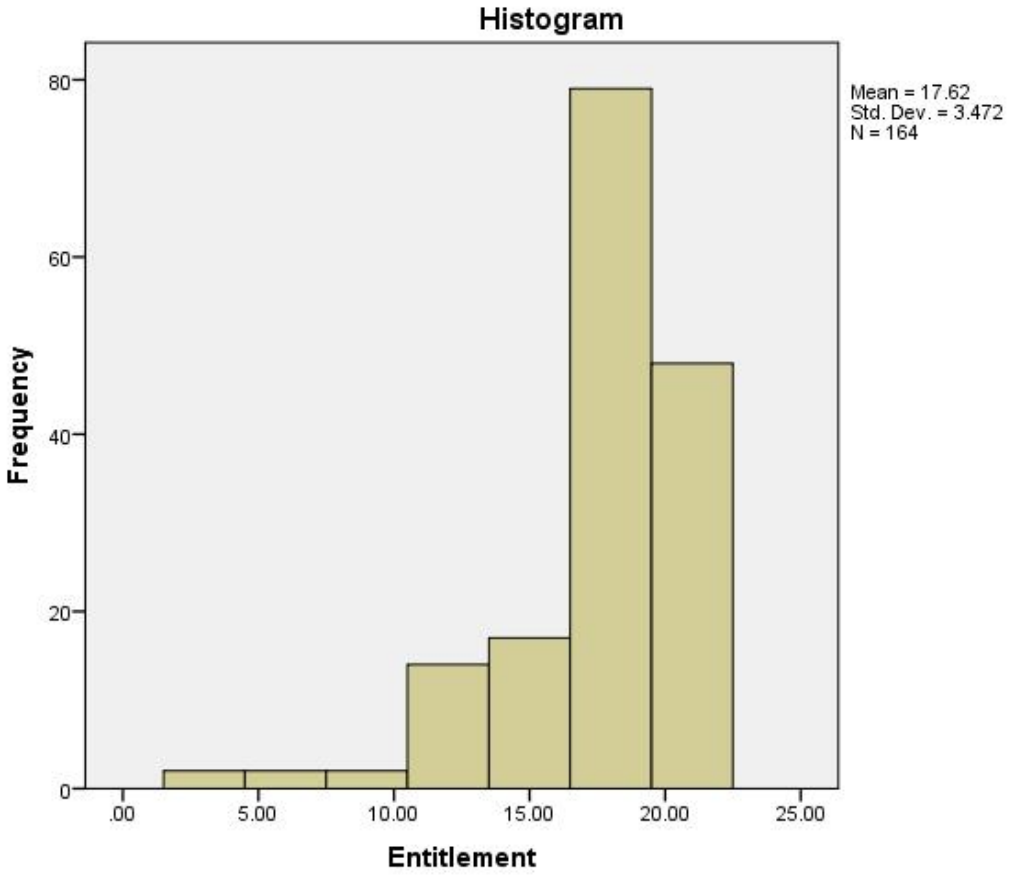
Table 15: Entitlement descriptive statistics

Statistics

Entitlement

N	Valid	164
	Missing	0
Median		18.0000
Mode		18.00

Figure 14: Entitlement histogram



5.5.3. Apprehension

The sub-construct of apprehension was collapsed as follows; Scores of 13 and below were labelled “low apprehension”, and scores of 14 and above were labelled “high apprehension”.

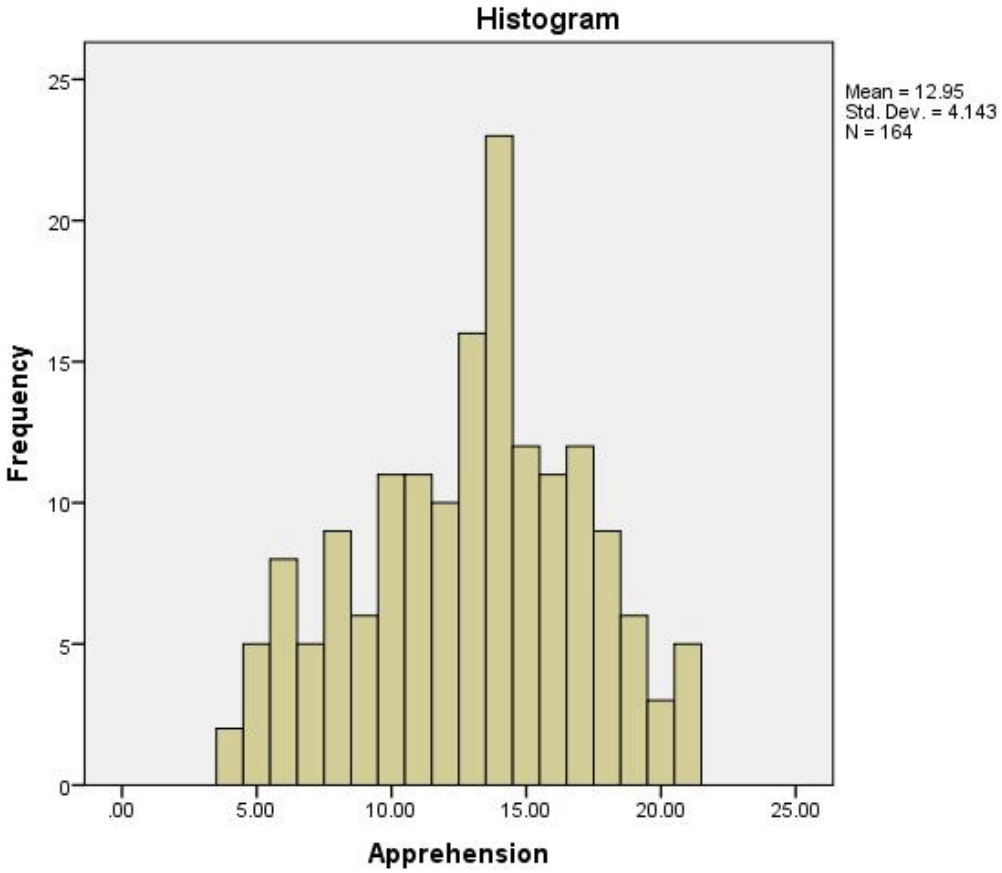
Table 16: Apprehension descriptive statistics

Statistics

Apprehension

N	Valid	164
	Missing	0
Median		13.0000
Mode		14.00

Figure 15: Apprehension variable histogram



5.5.4. Social cost of negotiation

The construct “social cost of negotiation” was collapsed as follows; Scores of 15 and below were labelled “High Social Cost”, and scores of 16 and above were labelled “Low Social Cost”.

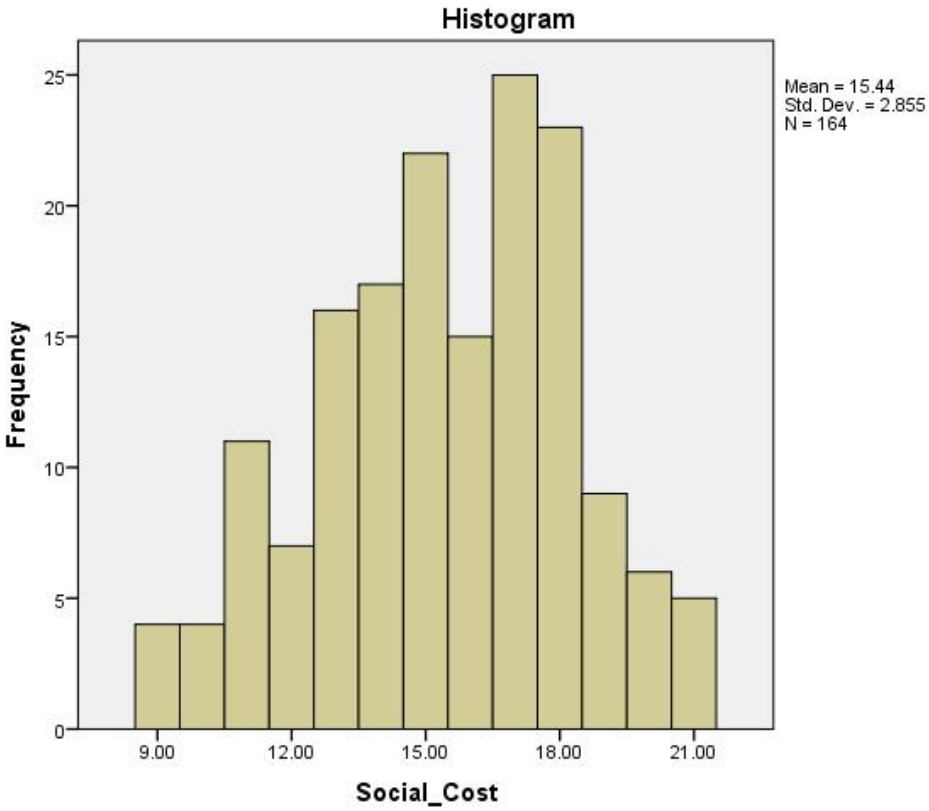
Table 17: Social cost descriptive statistics

Statistics

Social_Cost

N	Valid	164
	Missing	0
Median		16.0000
Mode		17.00

Figure 16: Social cost variable histogram



5.5.5. Pay secrecy

The construct “Pay Secrecy” was collapsed as follows; Scores of 16 and below were labelled “Agree Less”, and scores of 17 and above were labelled “Highly Agree”.

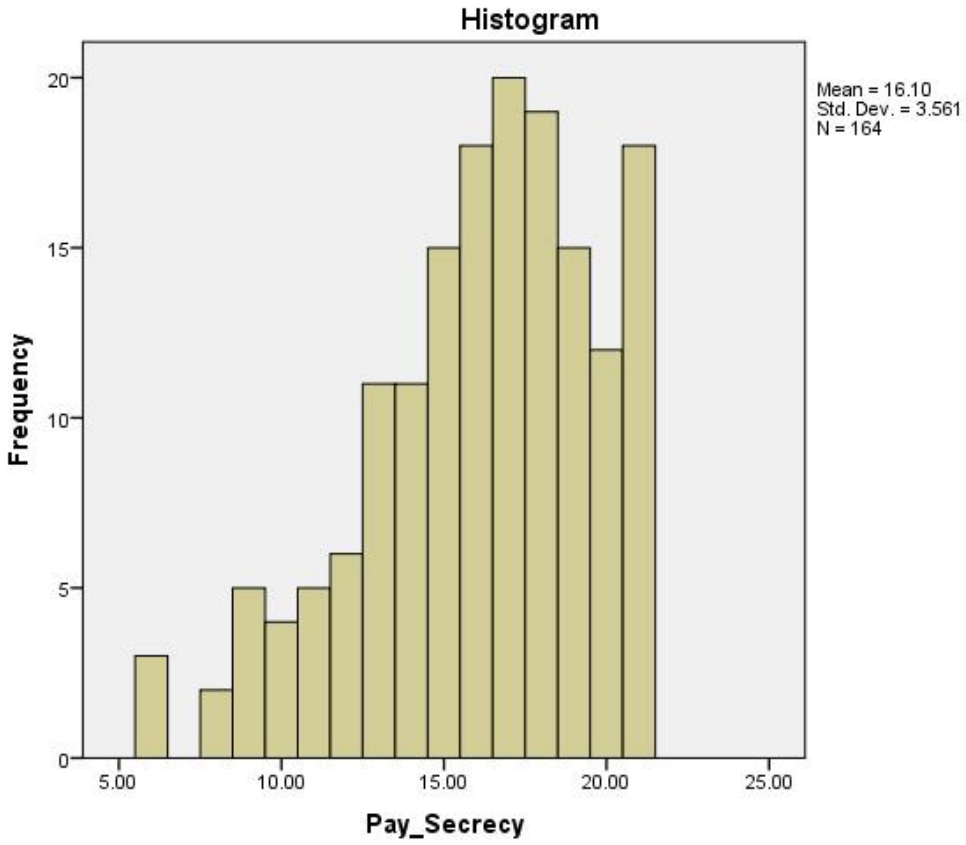
Table 18: Pay secrecy descriptive statistics

Statistics

Pay_Secrecy

N	Valid	164
	Missing	0
Median		17.0000
Mode		17.00

Figure 17: Pay secrecy variable histogram



5.6. Proposition 1

5.6.1. Hypothesis 1

Gender plays a significant role on the perceptions of pay secrecy policy.

Result: Fail to reject null hypothesis

Table 19: Expected and observed gender count of pay secrecy

			Pay Secrecy		
			Agree Less	Highly Agree	Total
Gender of Respondent	Male	Count	35	42	77
		Expected Count	37.6	39.4	77.0
	Female	Count	45	42	87
		Expected Count	42.4	44.6	87.0
Total		Count	80	84	164
		Expected Count	80.0	84.0	164.0

Table 20: Chi-square gender result for pay secrecy

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.643[a]	1	.423		
Continuity Correction[b]	.416	1	.519		
Likelihood Ratio	.643	1	.423		
Fisher's Exact Test				.438	.260
Linear-by-Linear Association	.639	1	.424		
N of Valid Cases	164				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 37.56.

b. Computed only for a 2x2 table

Differences in the expected and observed frequencies can be seen in Table 19. However, these differences are not statistically significant at the 95% confidence interval. Yates's continuity correction (Yates, 1934) should be used for two-by-two tables (Pallant, 2013); this can be seen in Table 20 as 0.519.

X^2 (1, N=164) = 0.416, p>.05.

No gendered differences were found in the "perceptions of pay secrecy" construct. Therefore, there is no need to report effect size.

5.7. Proposition 2

5.7.1. Hypothesis 2

Gender plays a significant role on the perceptions of empowerment during wage negotiations.

Result: Fail to reject null hypothesis.

The three sub-constructs that make up the empowerment latent variable are “recognition of opportunity”, “entitlement” and “apprehension”. The results of the Chi-Square test for independence are depicted below.

Table 21: Expected and observed gender count for empowerment

		Gender			
		Male		Female	
		Expected Count	Count	Expected Count	Count
Recognition of Opportunity	High Recognition of Opportunity	39	46	44	37
	Low Recognition of Opportunity	38	31	43	50
	Total	77	77	87	87
Entitlement	Agree	59,6	58	67,4	69
	Agree Less	17,4	19	19,6	18
	Total	77	77	87	87
Apprehension	High Apprehension	38	34	43	47
	Low Apprehension	39	43	44	40
	Total	77	77	87	87

Table 22: Chi-square gender result for empowerment

		Value	df	Asymptotic Significance
Recognition of Opportunity	Pearson Chi-Square	4,841	1	0,028
	Continuity Correction	4,177	1	0,041
Entitlement	Pearson Chi-Square	0,371	1	0,542
	Continuity Correction	0,178	1	0,673
Apprehension	Pearson Chi-Square	1,591	1	0,207
	Continuity Correction	1,221	1	0,269

Differences in the expected and observed frequencies can be seen in Table 21. These differences are confirmed as statistically significant at the 95% confidence interval only for the “recognition of opportunity” sub-construct.

Recognition of opportunity: X^2 (1, N=164) = 4.177, p<.05.

Entitlement: X^2 (1, N=164) = 0.416, p>.05.

Apprehension: X^2 (1, N=164) = 0.416, p>.05.

Table 23: Recognition of opportunity effect size

		Value	Approximate Significance
Nominal by Nominal	Phi	-.172	.028
	Cramer's V	.172	.028
N of Valid Cases		164	

The effect size of the “recognition of opportunity” sub-construct is represented by the Phi value of -0.172. This indicates a weak relationship (Cohen, 1988) where more males have a higher recognition of opportunity than females.

5.7.2. Perception of negotiation skill by gender

Question 16 was a direct question asking respondents their feelings on whether males were stronger (or better) negotiators than females. Due to distribution and low representation across the seven points of the Likert scale, the variable was collapsed into categorical data. Scores of three and below were labelled disagree, four was labelled neutral and scores higher than five labelled agree.

Table 24: Expected and observed gender count for male negotiation skills

Gender * Categorical_Negotiation_Skill_of_Males Crosstabulation

			Categorical_Negotiation_Skill_of_Males			
			Disagree	Neutral	Agree	Total
Gender	Male	Count	26	30	21	77
		Expected Count	21.1	21.6	34.3	77.0
		Adjusted Residual	1.7	2.9	-4.2	
	Female	Count	19	16	52	87
		Expected Count	23.9	24.4	38.7	87.0
		Adjusted Residual	-1.7	-2.9	4.2	
Total		Count	45	46	73	164
		Expected Count	45.0	46.0	73.0	164.0

Table 25: Chi-square gender result for male negotiation skills

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	17.971[a]	2	.000
Likelihood Ratio	18.404	2	.000
Linear-by-Linear Association	11.606	1	.001
N of Valid Cases	164		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 21.13.

X^2 (2, N=164) = 17.971, p<.05.

The result is statistically significant at the 95% confidence interval p=0.000. Post hoc analysis (Table 24) showed adjusted residual scores of 4.2 (Z-Score > 1.96) for females agreeing with the statement and males disagreeing. The effect size reported in Table 26 is of moderate strength (Cohen, 1988) where females believe men are better negotiators than females, but men disagree with this statement.

Table 26: Effect size for male negotiation skills

Symmetric Measures

		Value	Approximate Significance
Nominal by Nominal	Phi	.331	.000
	Cramer's V	.331	.000
N of Valid Cases		164	

5.7.3. Hypothesis 3

Age impacts the perceptions of empowerment during wage negotiations.

Result: Fail to reject null hypothesis.

Table 27: Expected and observed count for empowerment by age

		Age					
		18 - 29		30 - 39		40 - 65	
		Expected Count	Count	Expected Count	Count	Expected Count	Count
Recognition of Opportunity	High Recognition of Opportunity	12,7	6	45	50	25,3	27
	Low Recogntion of Opportunity	12,3	19	44	39	24,7	23
	Total	25	25	89	89	50	50
Entitlement	Agree	19,4	17	68,9	73	38,7	37
	Agree Less	5,6	8	20,1	16	11,3	13
	Total	25	25	89	89	50	50
Apprehension	High Apprehension	12,3	16	44	42	24,7	23
	Low Apprehension	12,7	9	45	47	25,3	27
	Total	25	25	89	89	50	50

Table 28: Chi-square result for empowerment by age

		Value	df	Asymptotic Significance
Recognition of Opportunity	**Pearson Chi-Square**	8,416	2	0,015
	Likelihood Ratio	8,762	2	0,013
	Linear-by-Linear Association	3,892	1	0,049
Entitlement	**Pearson Chi-Square**	2,684	2	0,261
	Likelihood Ratio	2,628	2	0,269
	Linear-by-Linear Association	0,033	1	0,856
Apprehension	**Pearson Chi-Square**	2,537	2	0,281
	Likelihood Ratio	2,563	2	0,206
	Linear-by-Linear Association	1,597	1	0,206

Recognition of opportunity: X^2 (2, N=164) = 8.416, p<.05.

Entitlement: X^2 (2, N=164) = 2.684, p>.05.

Apprehension: X^2 (2, N=164) = 2.537, p>.05.

The only sub-construct to show a significant result at the 95% confidence interval p=0.015 is “recognition of opportunity”. Post-hoc analysis revealed an adjusted residual score of 2.9 for the 18 – 29 age category, marking this category as the category giving rise to the difference (Z-Score > 1.96). The effect size (Table 29) shows a weak relationship (Cohen, 1988). Persons under the age of 30 have a lower recognition of opportunity when compared to other age categories. This is probably the result of experience.

Table 29: Effect size for recognition of opportunity and age

Symmetric Measures

		Value	Approximate Significance
Nominal by Nominal	Phi	.227	.015
	Cramer's V	.227	.015
N of Valid Cases		164	

5.8. Proposition Three

5.8.1. Hypothesis 4

Manager gender plays a role in employee's perceived willingness to negotiate salary.

Result: Fail to reject null hypothesis

Table 30: Expected and observed count for empowerment by manager gender

		Manager Gender			
		Male		Female	
		Expected Count	Count	Expected Count	Count
Recognition of Opportunity	High Recognition of Opportunity	50,6	61	32,4	22
	Low Recognition of Opportunity	49,4	39	31,6	42
	Total	100	100	64	64
Entitlement	Agree	77,4	81	49,6	46
	Agree Less	22,6	19	14,4	18
	Total	100	100	64	64
Apprehension	High Apprehension	49,4	45	31,6	36
	Low Apprehension	50,6	55	32,4	28
	Total	100	100	64	64

Table 31: Chi-square result for empowerment by manager gender

	Value	df	Asymptotic Significance
Pearson Chi-Square	11,067	1	0,001
Continuity Correction	10,028	1	0,002
Pearson Chi-Square	1,86	1	0,173
Continuity Correction	1,374	1	0,241
Pearson Chi-Square	1,976	1	0,16
Continuity Correction	1,551	1	0,213

Recognition of opportunity: X^2 (1, N=164) = 10.028, p<.05.

Entitlement: X^2 (1, N=164) = 1.374, p>.05.

Apprehension: X^2 (1, N=164) = 1.551, p>.05.

The only sub-construct to show a significant result at the 95% confidence interval p=0.002 is “recognition of opportunity”. Per Cohen (1988) post-hoc analysis showed a weak relationship (Phi = -0.260). Respondents with male managers showed a higher recognition of opportunity than respondents with female managers.

Table 32: Effect size of recognition of opportunity by manager gender

Symmetric Measures

		Value	Approximate Significance
Nominal by Nominal	Phi	-.260	.001
	Cramer's V	.260	.001
N of Valid Cases		164	

5.8.2. Comfort in negotiating salary with a manager of the same sex

Question 15 was a direct question that was asked of respondents to gauge the comfort levels by gender of negotiating with someone of the same sex. Due to distribution and low representation across the seven points of the Likert scale, the variable was collapsed into categorical data. Scores of three and below were labelled disagree, four was labelled neutral and scores higher than five labelled agree.

Table 33: Expected and observed count for preference of negotiation counterpart of the same gender

			Cat_Negotiation_Comfort			
			Disagree	Neutral	Agree	Total
Gender	Male	Count	19	36	22	77
		Expected Count	24.9	35.7	16.4	77.0
		Adjusted Residual	-2.0	.1	2.1	
	Female	Count	34	40	13	87
		Expected Count	28.1	40.3	18.6	87.0
		Adjusted Residual	2.0	-.1	-2.1	
Total		Count	53	76	35	164
		Expected Count	53.0	76.0	35.0	164.0

Table 34: Chi-square result for preference of negotiation counterpart of the same gender

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	6.183[a]	2	.045
Likelihood Ratio	6.245	2	.044
Linear-by-Linear Association	6.083	1	.014
N of Valid Cases	164		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 16.43.

X^2 (2, N=164) = 6.183, p<.05.

A statistically significant result was found at the 95% confidence interval p=0.045. Post-hoc analysis (Table 33) showed an adjusted residual score 2.1 (Z-Score > 1.96) for males agreeing with the statement and 2.0 for females disagreeing with the statement. The effect size reported in Table 35 shows a weak relationship (Cohen, 1988). Thus, both males and females prefer negotiating salary with male counterparts.

Table 35: Effect size for negotiation comfort preference of negotiation counterpart of the same gender

Symmetric Measures

		Value	Approximate Significance
Nominal by Nominal	Phi	.194	.045
	Cramer's V	.194	.045
N of Valid Cases		164	

5.9. Proposition 4

5.9.1. Hypothesis 5

There is a social cost for females who are perceived as strong negotiators.

Result: Fail to reject null hypothesis

The data collected in questions nine, ten and 11, the social cost construct, were compared across the Amanda and John questionnaires. The data were cleaned on the basis of correctly identifying the gender of the job seeker in question 17.

Table 36: Expected and observed gender count for social cost

Identifier * Catagorical Social Cost Crosstabulation

			Catagorical Social Cost		
			High Social Cost	Low Social Cost	Total
Identifier	John	Count	30	33	63
		Expected Count	33.1	29.9	63.0
	Amanda	Count	32	23	55
		Expected Count	28.9	26.1	55.0
Total		Count	62	56	118
		Expected Count	62.0	56.0	118.0

Table 37: Chi-square gender result for social cost

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1.314[a]	1	.252		
Continuity Correction[b]	.924	1	.336		
Likelihood Ratio	1.317	1	.251		
Fisher's Exact Test				.273	.168
Linear-by-Linear Association	1.303	1	.254		
N of Valid Cases	118				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 26.10.

b. Computed only for a 2x2 table

X^2 (1, N=118) = 0.924, p>.05.

Whilst the ‘Amanda’ data revealed a higher social cost when compared with the ‘John’ data the difference was not statistically significant at the 95% confidence interval p=0.336.

5.9.2. Unconscious gender bias

Question 17 was set up to control the recognition of gender in the social cost of negotiation construct. The question was also statistically tested to see how many respondents correctly identified 'Amanda' as female and how many correctly identified 'John' as male in the interview scripts.

The data was categorical in nature and required no collapsing. Results are depicted in Tables 38 and 39.

Table 38: Expected and observed gender count for unconscious bias

Identifier * Question_17 Crosstabulation

			Question_17			
			Correct	Dont Remember	Incorrect	Total
Identifier	John	Count	61	15	5	81
		Expected Count	57.3	13.3	10.4	81.0
		Adjusted Residual	1.3	.7	-2.5	
	Amanda	Count	55	12	16	83
		Expected Count	58.7	13.7	10.6	83.0
		Adjusted Residual	-1.3	-.7	2.5	
Total		Count	116	27	21	164
		Expected Count	116.0	27.0	21.0	164.0

Table 39: Chi-square gender result for unconscious bias

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	6.382[a]	2	.041
Likelihood Ratio	6.680	2	.035
Linear-by-Linear Association	3.999	1	.046
N of Valid Cases	164		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 10.37.

X^2 (2, N=164) = 6.382, p<.05.

There is a statistically significant difference between those correctly identifying John as male when compared to those correctly identifying Amanda as female at the 95% confidence interval p=0.041. Post-hoc analysis (Table 38) revealed an adjusted residual

of 2.5 for respondents incorrectly identifying Amanda as male and John as female (Z-Score > 1.96). The effect size reported in Table 40 shows a weak relationship (Cohen, 1988). More respondents incorrectly identified Amanda as male when compared with those who incorrectly identified John as female.

Table 40: Effect size for unconscious gender bias

Symmetric Measures

		Value	Approximate Significance
Nominal by Nominal	Phi	.197	.041
	Cramer's V	.197	.041
N of Valid Cases		164	

5.10. Conclusion - Summary of Results

For all five hypotheses outlined in Chapter 3 and tested in Chapter 5 the findings fail to reject the null hypotheses. The “recognition of opportunity” sub-construct of empowerment has shown significant differences within hypotheses 2, 3 and 4. Additional tests conducted into the perceptions of male negotiating skills when compared to females, comfort in negotiating with a manager of the same sex, and unconscious gender bias have shown statistical differences by gender.

These findings will be discussed further in terms of the implications on existing literature in the next chapter.

Chapter 6

Discussion of Research Results

6.1. Introduction

This chapter seeks to place the findings outlined in Chapter 5 within the context of the existing literature outlined in Chapter 2 and under the research propositions outlined in Chapter 3. Findings that both support and deviate from the literature will be highlighted and reasons for the support or deviation suggested. This reasoning will include potential bias that has influenced the findings in such a way as to cause the support or deviation.

The research interrogated three levels of potential causation of the adjusted gender wage gap. These are defined and discussed in Chapter 2 as macro, meso and micro environments. The focus of the research was the salary negotiation placed within these three environments within the financial services industry in South Africa, thus controlling for industry and legal framework.

6.2. Discussion of Sample Demographics

The gender representation in the sample comprised 53.1% females and 47% males. This compares with 41% female and 59% male representation in the population being studied (Statistics South Africa, 2016). The sample is thus over-representative of females and under-representative of males when compared to the population of the financial services sector in South Africa.

The majority of the sample were represented in the 30 – 39 age group (54.3%), with the next biggest group being the group 40 years and over (30.5%). Finally, the smallest group by age was the group representing respondents younger than 30 years (15.2%). The youngest respondent to the survey was 22 years old and the oldest was 62; this results in a range of 40 years across the groups. Unfortunately, no data was available to compare the age demographic of the sample with the working population within the financial services industry in South Africa. However, the sample conforms roughly to a normal distribution with the majority of respondents in the middle of their careers.

The four groups chosen to define the sample in terms of racial identity are those used by Statistics South Africa (2016). The majority of respondents classified themselves as White (50%). The next biggest represented race group comprised of those respondents identifying as African (31.7%), followed by respondents who identified as Indian/Asian

(18.1%). Finally, the smallest racial group comprised of those respondents identifying themselves as Coloured (2.4%).

Table 41 compares the racial profile of the sample with that reported in the population by Statistics South Africa (2016). The sample exhibits an over-representation of both the African and White races and an under-representation of the Indian/Asian and Coloured races when compared to the profile of the financial services industry in South Africa. The heterogeneity of the financial services industry in South Africa implies the need for bigger sample sizes as discussed in Chapter 4.

Table 41: Race profile of sample and universe

Race	Population Percentage	Sample Percentage
African	11,6	31.7
Coloured	13,3	2.4
Indian / Asian	18,1	15.9
White	25,2	50.0

Source: Adapted from Statistics South Africa (2016)

When the sample was interrogated on the basis of employee level, it was found that the greatest number of respondents fell within the “employee” category (36.6%). This was followed by the “manager” category (26.2%), “middle manager” category (22%) and finally the “senior manager” category (15.2%). Whilst no population statistics were found with which to compare the sample, the skew towards “employee” is appropriate. It mirrors the hierarchical structure seen within most service industries and the financial services industry conforms in this regard.

Manager gender of the sample aligns with that of the available information on the population in that the majority of respondent’s managers were male (61%), with female managers making up 39% of the sample. The sample most closely aligns with the upper management gender profile of the upper management population outlined again below in Table 42.

Table 42: Gender representation at upper management level in South Africa

Sectors	Male	Female
Agriculture	76,6%	23,4%
Mining and quarrying	83,9%	16,1%
Manufacturing	75,3%	24,7%
Electricity, gas and water	67,7%	32,3%
Construction	81,1%	18,9%
Retail and Motor trade / repair service	68,4%	31,6%
Wholesale trade / Commercial agents / allied services	67,3%	32,7%
Catering / Accommodation / Other trade	55,6%	44,4%
Transport / storage / communications	69,5%	30,5%
Finance / business services	62,0%	38,0%
Community / social / personal services	58,1%	41,9%

Source: Adapted from Statistics South Africa (2016)

6.3. Discussion of Findings relating to Proposition 1

Proposition: South African financial sector employee's perceptions on pay secrecy are significantly different between male and females.

6.3.1. Hypothesis 1

"Gender plays a significant role on the perceptions of pay secrecy policy"

The research sought to investigate perceptions of pay secrecy within the legal and cultural context of the financial services industry in South Africa. The aim was to establish if differences in perception of pay secrecy existed on the basis of gender, given that the non-transparent nature of bilaterally agreed pay could allow for gender discrimination.

Past literature has attempted to define the role of pay secrecy as a determinant in the gender wage gap by investigating the gender wage gap in jurisdictions that legislate for pay secrecy with those that legislate against pay secrecy (Kim, 2015). The gendered differences in access to organisational networks, found by Durbin (2011), also suggest that pay secrecy could be more detrimental to females than males.

The research did not find gendered differences in perceptions of pay secrecy. It is clear, however, from the results that the majority of respondents to the questionnaires, regardless of gender, have a low tolerance of pay secrecy and believe it to be an unfair practice (Figure 17).

The finding adds to the existing literature by discounting gender differences in perception of pay secrecy. Regardless of literature indicating females may be more disadvantaged

than males in environments where pay secrecy is enforced, the abhorrence of pay secrecy as a concept is shared across gender.

This finding, together with the detrimental economic effects outlined by Belogolovsky and Bamberger (2014), suggest companies should desist from this practice. However, caution should be exercised, given the effect this can have on the motivation of lower paid employees as highlighted by Obloj and Zenger (2015). This is especially important for the population of this study, given the high sense of entitlement found across both genders as part of the empowerment construct, transparency may motivate those that feel highly entitled, but underpaid relative to their peers, to leave the organisation.

Where pay secrecy allows lower paid employees within companies to be segregated on the basis of demographics as opposed to productivity, pay secrecy needs should be legislated in a more targeted approach. This is further developed in areas for future research.

6.4. Discussion of Findings relating to Proposition 2

Proposition: South African financial sector employees' perceived willingness to negotiate salary is dependent on differences in demographics.

6.4.1. Hypothesis 2

"Gender plays a significant role on the perceptions of salary negotiation empowerment."

The research sought to test the findings of Babcock et al. (2006), whilst controlling for culture. This was done through limiting the population to the financial services industry in South Africa. Culture could influence the gendered nature of the salary negotiation. Negotiation could be seen as part of the culture in certain industries.

Whilst question 1 was not included in the "recognition of opportunity" sub-construct, it is interesting to note that there were no differences on the basis of gender in pay satisfaction. Both male and female respondents felt equally satisfied or dissatisfied with their level of pay.

Hypothesis 2 was rejected on the basis that gendered differences were found in only one of the sub-constructs that comprised the empowerment variable. In a sample of diverse employment, Babcock et al. (2006) found significant gendered differences for all three of the sub-constructs. The findings only support the "recognition of opportunity" finding of this literature.

The “recognition of opportunity” sub-construct showed significant gendered differences, with males more likely to have negotiated their salary than females. This supports the findings of Babcock (2002), Babcock et al. (2006), Bowles et al. (2005), Leibbrandt and List (2014), who found gendered differences in the absence of environmental cues to negotiate. The finding is contrary to that of Artz et al. (2016), who did not find gendered differences in propensity to negotiate.

No significant differences by gender were found in the “entitlement” sub-construct. The data within this sub-construct were highly skewed, with most respondents, regardless of gender, indicating they felt entitled to a pay increase. The measure became a single item measure after the survey was piloted, rendering it of limited use in analysis. The deviation of the result from the literature could be explained by the research controlling for industry and country. The compensation culture that exists within financial services worldwide could perhaps explain why the entitlement finding differed from those described within the pre-existing research and why respondents felt so heavily entitled. There is evidence of high levels of entitlement in other studies. In a study that focused on engineers within two large companies within the United States, Zenger (1994) found nearly all employees saw themselves within the top half of performers relative to peers.

The high levels of entitlement complicate efforts to introduce transparency around pay for the sole purpose of addressing the gender wage gap.

The “apprehension” sub-construct also failed to show significant difference when males and female responses were compared. This again contradicted the findings of Babcock (2002) and contradict the stereotype threat argument that females would feel greater apprehension at the thought of a salary negotiation than males.

The findings of the apprehension sub-construct also suggest that apprehension is not the reason that females within the sample are more risk averse than males or avoid competition as suggested by Flory et al. (2015), Grund (2015), Nierderle and Vesterlund (2007). Interestingly, and appropriate, for this sample group, Blau and Kahn (2016) proposed that risk aversion amongst female money managers could negatively impact performance. This could be a motivation as to why there was no gendered result on apprehension; the financial services industry selects talent with less apprehension and those who have a greater appetite for risk-taking behaviour.

Providing further literary weight to the findings, in an experimental review, Croson and Gneezy (2009) found an exception to the generalised concept that females are more risk averse than males in populations of managers and professionals.

Significant gendered results were found when respondents were asked directly their perceptions of the generalised strength of males' negotiation skills. Males did not perceive the male gender as having stronger negotiation skills, whereas females did perceive males as stronger negotiators. Research strongly supports the theory of males being stronger negotiators (Babcock, 2002; Babcock et al., 2006; Bowles et al., 2005; Ors et al., 2013; Small et al., 2007; Tellhed & Björklund, 2011). Social acceptance bias could be one explanation for these results. Males may not want to appear conceited, or perhaps sexist, and therefore answer contrary to their true belief. Alternatively, males could be attempting to mask the advantage they hold.

The findings of this investigation highlight that females do not ask for salary increases as often as males within the financial services sector in South Africa; however, this is not due to them feeling less entitled or more apprehensive about asking when compared with males.

The research objective of testing gendered perceptions of empowerment during salary negotiations within the financial services industry in South Africa was thus met.

6.4.2. Hypothesis 3

"Age impacts the perceptions of wage negotiation empowerment."

The purpose of this hypothesis was to interrogate, if there was a learning aspect to perceptions of empowerment during salary negotiations that came with work experience.

Blau, and Kahn (2016) noted that even given recent gender equality improvements within the workplace, females generally have less work experience than males, due to the career breaks they take. Literature suggests significant widening of the gender wage gap throughout the working life of the employee (Bertrand et al., 2010; De Pater et al., 2014; Noonan et.al.,2005). It is argued that the rationale for this widening of the gender wage gap is due to flexibility choices of females that carry a financial penalty (Goldin, 2014; Noonan et al., 2005). Females place higher value on flexibility (Flabbi & Moro, 2012).

Only one variable of the empowerment construct "recognition of opportunity" showed a significant difference within the 18-29 years' age category. It therefore appears from these findings that recognition of opportunity can improve with experience, but only initially. Within the full span of a working career, workers learn to negotiate for higher salary. This finding may be explained by the lack of bargaining power held by people

within the 18-29 age group. They have less work experience and therefore less leverage with which to negotiate.

It is of interest that the lack of work experience is not borne out in the results of the entitlement or apprehension constructs. Respondents within this age group feel as entitled to a salary increase and show the same amount of apprehension as the other two age groups.

The research objective was thus met as within the sample group, perceptions of empowerment do not change with age. Only recognition of opportunity showed a significant difference in workers embarking on their careers.

6.5. Discussion of Findings relating to Proposition 3

Proposition: Manager gender plays a role in employee's perceived willingness to negotiate salary.

6.5.1. Hypothesis 4

"Manager gender impacts the perceptions of wage negotiation empowerment."

The research objective was to test whether female managers increased the perceptions of empowerment during salary negotiation in accordance with the documented effect female managers have within organisations.

Hypothesis 4 was set up to test for differences in perceptions of negotiation empowerment by manager gender. Female managers work to reduce the gender wage gap and female representation in the workforce (Cardoso & Winter-Ebmer, 2010; Hensvik, 2014; Wang & Kelan, 2013). Conventional wisdom would therefore suggest that female respondents would prefer to negotiate salary terms with female managers. Furthermore, female managers could be seen to cultivate gender neutral environments, where greater perceptions of salary negotiation would thrive.

No differences were found in the overall empowerment variable when the respondents with female managers were compared to respondents with male managers. Differences were seen only in the "recognition of opportunity" sub-construct that were contrary to existing literature. Respondents with male managers had higher recognition of opportunity than respondents with female managers. No differences were reported across the entitlement and apprehension sub-constructs.

Further insight into this finding can be gained by looking at the results of the direct question, “I feel more comfortable negotiating a salary with a manager of the same sex as me”. The answers to this question were significantly gendered, with females disagreeing with the statement to a greater extent than males. Whilst quantitative evidence shows female managers narrowing the wage gap (Cardoso & Winter-Ebmer, 2010; Hensvik, 2014), the results of this study show females are more comfortable negotiating their salary with males and male managers inculcate greater perceptions of recognition of opportunity. This finding is interesting as Bowles et al. (2007) found that both males and females penalised female negotiators equally.

This finding lends literary support for the findings of Geiler and Renneboog (2015), who found that female managers working in “male industries” experienced smaller gender wage gaps. The financial services industry within South Africa could be seen as a “male industry”, given the gender representation in both top and upper management (see tables 3 and 4). Another explanation for females preferring to negotiate salary with male counterparts could be an awareness of the “queen bee syndrome” (Staines et al., 1974), where female managers show misogyny when dealing with female subordinates. Srivastava and Sherman (2015) demonstrated this phenomenon in research, which revealed female managers punish female subordinates through their salary to a greater extent than male subordinates in the first year under their management.

The research objective for this hypothesis has thus been met as it sought to interrogate the role of manager gender within perceptions of empowerment during salary negotiations. The findings shed new light on the view female employees hold of female managers in terms of the opportunities they create for negotiation and as opponent in negotiating salary. Both of these views are contrary to the majority of literature available at present on the role of the female manager within the context of the gender wage gap.

6.6. Discussion of Findings relating to Proposition 4

Proposition: The social cost of salary negotiation is unequally carried depending on gender.

6.6.1. Hypothesis 5

“There is a social cost for females who are perceived as strong negotiators.”

The research objective was to test whether − within the context of the financial services industry in South Africa − a social cost did exist for females who negotiated strongly. The

industry requires that employees negotiate strongly in favour of their organisations. It would, therefore, be expected within the industry that salary is negotiated across gender and thus, unlikely that females would experience the social cost found in the research outlined below.

Past literature has described a social cost that females experience when they choose to negotiate, and that certain personality traits associated to negotiation are gendered (Babcock, 2002; Bowles et al., 2007; Mazei et al., 2015; Mueller & Plug, 2006).

The test constructed by the research to establish if indeed there is a social cost to female negotiators asked respondents' opinions of a salary negotiation script. The negotiation script differed only by gender of the negotiator, with half the respondents receiving the script with a male negotiator and the other half a female negotiator. Respondents were then asked their feelings across three questions.

No statistically significant differences were found between the responses to the male negotiator when compared to the responses to the female negotiator after controlling for correct gender identification of job seeker. There is a possibility that the results were affected by social acceptance bias as very few respondents disagreed with the statements.

An additional test set up to test unconscious gender bias did show statistical significance. Of the respondents who incorrectly identified the gender of the negotiator, more respondents incorrectly identified the female as male than the other way around. This is suggestive that when presented with a negotiation script, more people will associate the negotiator with the male gender rather than the female gender. This finding adds support to the argument made by Babcock (2002) that socially, the skillset required for strong negotiation is seen as a masculine trait.

6.7. Conclusion

The findings to the hypotheses listed in Chapter 3 and tested in Chapter 5 have been discussed and located within the existing literature introduced in Chapter 2. Through limiting the industry and legal framework of the study sample the research has challenged previous findings, which may have been prone to ecological fallacy. There are limitations to the findings, which will be discussed in the next chapter, along with recommendations to management and human resource practitioners and suggestions for future research.

Chapter 7

Conclusion and Recommendations

7.1. Introduction

This chapter highlights the main findings of the research, pulling the results together into a cohesive set of findings. It also includes recommendations to stakeholders based directly on the findings; gives recommendations for future research and managerial implications.

7.2. Principal Findings

True gender equality within the workplace will never be attained whilst the gender wage gap persists. Significant strides have been made in reducing the size of the gender wage gap (Blau & Khan, 2007; Blau & Khan 2016); however, a residual adjusted wage gap persists, making further investigations relevant and necessary.

The goal of this research was to investigate the salary negotiation perceptions within the financial services sector of South Africa. The motivation behind the investigation was the assumption that gendered differences in approach to salary negotiations would result in an adjusted gender wage gap within the sector and thus, provide a theoretical explanation to the persistent adjusted wage gap.

Following a non-exhaustive literature review, it appeared previous research primarily consisted of cross-industry studies, with very few industry-specific studies having been conducted. Controlling for industry is relevant and appropriate in ensuring subjects are commensurable as risk taking, competitiveness and compensation frameworks are linked to industry and indeed organisational culture.

Whilst there was general opposition to the concept of pay secrecy, no gendered results in opinions were found. Respondents to the survey showed no difference in responses by gender to the empowerment variable. There was no statistically relevant difference in salary negotiation empowerment by age either, pointing to a weak learning effect. When tested by manager gender, the empowerment variable also failed to produce a statistically significant result. Finally, no social cost was found for the female job seeker within the survey, although the influence of social acceptance bias is noted.

The results contrast, to a large extent, the literature outlined within Chapter 2 and this is highlighted in Chapter 4. The deviation from the literature highlights the need for further studies with narrowed contexts.

7.2.1. Recognition of opportunity

One sub-construct of the empowerment measurement variable that did show statistically significant gendered results was “Recognition of Opportunity”. These results were found in hypotheses 2, and 4. This finding suggests that the financial services industry conforms to the cross-vocational studies in regard to males negotiating their salary to a greater extent than females. It also has implications for managers and human resource professionals within the financial services industry.

Hypothesis 3 also showed statistical significance in the “18-29 year” age category. Continuing on a theme developed in Chapter 6 the reason for this finding could be due to lack of bargaining power, given the relatively low levels of work experience these respondents possess.

Therefore, it may be prudent to look at the gendered results found within this sub-construct in hypothesis 2 through the bargaining power lens. For both the entitlement and apprehension sub-constructs, females and males scored equally. The question then remains, why then do females not negotiate as often as males? No actual social cost was found to explain the reluctance either. Perhaps it is not through lack of recognising the opportunity to negotiate salary and more as a result of a perceived lack of bargaining power, due to career breaks and a preference for flexible working conditions.

The study did not control for breaks in employment, therefore it could be that those females within the population who took time off to start families and have returned with flexible work arrangements or those who generally need more flexible working hours because of private commitments do not feel they have the bargaining power to initiate a salary negotiation. It could also be an emotional barrier, where females more often feel subconsciously that they do not have the “right” to ask for more.

Flabbi and Moro (2012) showed that females with college degrees in the United States value flexibility. The premium payed by females for such flexibility offered by employers may be reluctance to negotiate other terms of employment. However, further takeaways for management and human resource practitioners is their finding that jobs that require a college education can provide flexibility at a reduced cost. The premium, which workers pay for flexibility should be a function of productivity and not time, otherwise paying less for employees with flexible work arrangements may be seen as gender discrimination.

It should also be noted that as the financial sector becomes less hands-on, people oriented and geared towards electronic services, flexibility may well become an attractive option for both genders, offering a work-life balance.

7.2.2. Manager preferences

The findings relating to gender of negotiation counterparts confirmed suspicions that exist among female respondents when engaging in salary negotiations with female managers. Chapter 6 put this within the literary framework of the “queen bee syndrome” (Staines et al., 1974). Rather than showing in group preference, female respondents chose males over female negotiation opponents. Interestingly, males demonstrated in-group preference through indicating comfort with male negotiators with statistical significance.

7.3. Implications for Policy Makers, Management and Human Resource Practitioners

Policy makers should look to the findings of Kaas (2009) when looking to institute policy within the context of the financial services industry in South Africa. The findings demonstrated that equal pay legislation is effective where tastes for discrimination were low and competition high. The findings on pay secrecy intimated a low taste for discrimination, amongst employees within the industry. The oligopolistic nature of the industry within South Africa however, does limit competition.

Bosch (2015) highlighted remedial actions for identified causes of the gender wage gap, which were adapted and presented as Table 2 in this report. The format of this table is recreated to highlight the findings and human resource remedial actions pertinent to the research undertaken.

Table 43: Implications of findings and suggested action

Theme	Human Resource Implications of Findings	Suggested Remedies
Pay Secrecy	Employees favour pay transparency over secrecy	HR departments should be proactive in publishing pay bands for hirarchical work levels, rather than providing it only when employees ask
Salary Negotiation Perceptions by Gender	Females negotiate less than males with the implication that they could, over time, therefore be paid within the lower spectrum of the pay band when compared to males	Create gender neutral salary negotiation environments. Ensure that all candidates are aware of the negotiability of the remuneration package as well as the upper and lower limits. Further information around what demonstrated skills are needed in order to be paid within the upper limit would allow benchmarking and greater certainty around bargaining power.
Salary Negotiation Perceptions by Age	Employees younger than 30 negotiate salary less than more experienced employees.	Ensure that all candidates are aware of the negotiability of the remuneration package as well as the upper and lower limits. Further information around what demonstrated skills are needed in order to be paid within the upper limit would allow benchmarking and greater certainty around bargaining power.
Salary Negotiation Perceptions by Manager Gender	Employees negotiate more often when negotiating with male managers and prefer negotiating with male managers.	In addition to the above recommendations around gender neutral salary negotiation environments, HR practitioners must sensitise female managers to this finding and offer negotiation training
Social Cost of Negotiation	Unconscious gender bias exists around the traits of strong salary negotiation	Gender neutral salary negotiation environments and gender equality and unconscious bias training programs

In addition to supporting the human resources in implementing the above, management can institute pay audits as suggested by Boninelli (2015) to ensure there are no gender discrepancies creeping into the pay bands. The audit should also look to document valid productivity-based reasons as to why certain employees are paid a premium over others.

Gender equality in the workplace requires management to be aware of the gender differences around salary negotiation and to ensure the awareness extends to all people managers within the firm. People managers need to encourage all employees to negotiate salary regardless of gender. Negotiation needs to be seen not as an adversarial process, but rather a process of problem solving (Neale, 2016). Management needs to highlight the compounded long-term social dangers of not negotiating salary.

Management need to be aware that gender stereotypes create bias, and both males and females are prone to gender bias. Managers need to challenge these stereotypes. Flexible work needs to be assessed on the basis of productivity and not hours spent in the office. Management need to create a culture wherein females who wish to start families don't feel they can be parents as well as be committed to their careers. This will

go some way to address the assumed feeling of lack of bargaining power in salary negotiations.

7.4. Limitations of the Research

The “entitlement” sub-construct of the empowerment variable is limiting as it is composed of only one item. The original construct consisted of three items; however, due to applicability and the removal of negatively-framed questions following the pilot survey, only one item remained. The highly skewed nature of the responses to the concept of entitlement is not unique to this research and has been documented previously in literature by Zenger (1994). The justification of the inclusion of a single item construct was made in 5.4.3.

The research objective of controlling for industry and legal framework presents another limitation. The applicability of the stated findings beyond the context of the financial services industry in South Africa is problematic due to the Financial Services Charter of the Black Economic Empowerment legislation. This charter provides both race and gender equity guidelines specifically applicable to the financial services industry in South Africa.

Social acceptance bias may have influenced the results of hypothesis 5, potentially influencing the validity of the results. Responses were skewed in favour of the job seeker, regardless of gender. Even given the anonymous nature of the survey, respondents may not have wanted to seem to be anti-social in disagreeing with the items that made up the sub-construct.

7.5. Suggestions for Future Research

A study of secondary pay data of the industry should be conducted to complement these findings through determining the actual wage gaps that exist within the industry. The inclusion of such data fell beyond the scope of this research project.

Further research could look to interrogate differences in the responses by gender in each age group. This would require a larger sample, but would enable the gendered difference in perception to be studied by age. This would provide greater insights into why, according to existing literature, the gender wage gap widens with age.

Through the addition of family-related demographic information and work arrangement information, future research could explore the effect having a family has on the

"recognition of opportunity" sub-construct. By controlling for family or work arrangement, the study could reveal if females who choose to have a family or are employed within flexible work arrangements negotiate less often or less successfully. The deviation in findings from the existing cross-industry studies makes a case for further studies of this nature within the context of different industries.

7.6. Concluding Statement

The research aimed to further understand gendered differences in perceptions of salary negotiations within the financial services industry in South Africa. The context was chosen to test the majority of existing literature which based its findings on cross-industry study samples.

The research has met this objective and has shown that industry specific studies in this regard are warranted. Across the hypothesis, limited gendered differences were found. These findings provide additional resources for organisations and human resource practitioners. They also contribute to the global body of knowledge around this subject.

Whilst great strides have been made, the gender wage gap remains a blight on the efforts to create gender-equal work environments. Gender stereotyping and bias remain the greatest challenges to overcome in addressing this dilemma. Understanding and addressing these biases, it would seem, is the only way to eliminate the gender wage gap once and for all.

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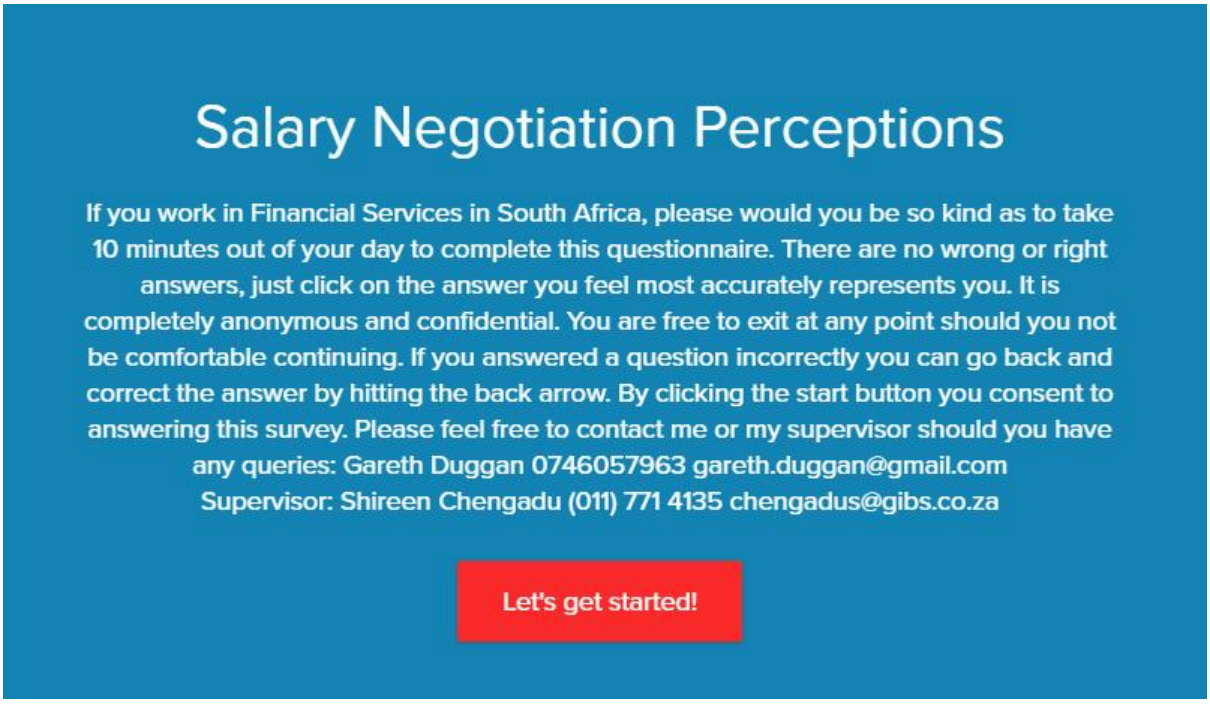
Appendices

Appendix 1 – Survey questionnaire



Proposition and Hypothesis	Item							Test Area - Literature
Proposition 2 & 3 - Hypothesis 2, 3 and 4 dependent on demographic information	**Item 1: I feel I am paid a fair market rate.**							Recognition of Opportunity
	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree	
	Item 2: My salary increase is negotiable.							
	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree	
	Item 3: I negotiated my starting salary when I started my current role							
	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree	
	Item 4: I believe I will be successful if I negotiate for a higher salary increase.							
	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree	
	Item 5: I have earned the right to a salary increase.							

	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree	**Entitlement**
	Item 6: I feel anxious at the thought of asking for a salary increase.							**Apprehension**
	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree	
	Item 7: I feel guilty at the thought of asking for a salary increase.							
	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree	
	Item 8: A lack of confidence holds me back from asking for a salary increase.							
	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree	
Proposition 4 - Hypothesis 5	**Remaining items to relate to the below script and must be answered based on the manner in which they negotiate, the gender of the negotiator will be alternated every survey: I have two more years of experience and formal training than you required in the job description. I have also demonstrated my capabilities in my last position at my previous company by increasing sales in my division by 25% and personally landed several multi-million rand sales deals. With my expertise, an acceptable salary would fall in the range of R1 500,000-R1 700,000, at least 50% higher than your offer of R1 000,000.**							**Social Cost of Negotiation**
	Item 9: This person would be a great business partner.							
	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree	
	Item 10: I would consider joining the company where this person worked.							
	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree	
	Item 11: A friend is looking to conclude a business transaction with this person, I would recommend them based on the above.							
	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree	
Proposition 1 - Hypothesis 1	**Item 12: Pay secrecy allows for unfair pay discrimination.**							**Fairness of pay secrecy /**
	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree	
	Item 13: Pay secrecy is a fair mechanism for companies to reward performance.							

	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree	**regulation**
	Item 14: Companies should be transparent about applicable pay per level of work.							
	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree	
Proposition 3 - Hypothesis 4	**Item 15: I feel more comfortable negotiating salary with a manager of the same sex as me.**							**Negotiation Gender Stereotype**
	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree	
	Item 16: Males are stronger negotiators than females.							
	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree	
Test Item	**Item 17: I perceived the gender of the job applicant in the negotiation script as.**							**Unconscious Gender Bias**
	Male		Female		I don't remember			
Demographics	**Gender**							**Demographics**
	Male				Female			
	Gender of line manager							
	Male				Female			
	Age							
	Numerical data entry							
	Work Experience							
	Numerical data entry							
	Employment level							
	Employee		Manager		Middle Manager		Senior Manager	
	Race							
	African		Coloured		Indian/Asian		White	

Appendix 2 – Mapping Table

Data Coding Table		
Item	**Input Data**	**Coded Value**
Questions 1 - 8 and 12 - 16	Strongly Disagree	1
	Disagree	2
	Somewhat Disagree	3
	Neutral	4
	Somewhat Agree	5
	Agree	6
	Strongly Agree	7
Question 9	I strongly disagree that Amanda/John would be a good business partner	1
	I disagree that Amanda/John would be a good business partner	2
	I somewhat disagree that Amanda/John would be a good business partner	3
	Neutral	4
	I somewhat agree that Amanda/John would be a good business partner	5
	I agree that Amanda/John would be a good business partner	6
	I strongly agree that Amanda/John would be a good business partner	7
Question 10	I strongly disagree that I would consider joining the company where Amanda/John/John worked	1
	I disagree that I would consider joining the company where Amanda/John worked	2
	I somewhat disagree that I would consider joining the company where Amanda/John worked	3
	Neutral	4
	I somewhat agree that I would consider joining the company where Amanda/John worked	5
	I agree that I would consider joining the company where Amanda/John worked	6
	I strongly agree that I would consider joining the company where Amanda/John worked	7
Question 11	I strongly disagree that I would recommend her/him	1
	I disagree that I would recommend her/him	2
	I somewhat disagree that I would recommend her/him	3
	Neutral	4
	I somewhat agree that I would recommend her/him	5
	I agree that I would recommend her/him	6
	I strongly agree that I would recommend her/him	7
Question 17, 18, and 19	Female	1
	Male	0
	I don't remember	99

Question 20	Age	Uncoded
Question 21	Work Experience	Uncoded
Question 22	Employee	1
	Manager	2
	Middle Manager	3
	Senior Manager	4
Question 23	African	1
	White	2
	Indian / Asian	3
	Coloured	4

Appendix 3 – Parallel Analysis Code

The below parallel analysis code is provided by O'Connor (2000)

```
"* Parallel Analysis Program For Raw Data and Data Permutations.

* To run this program you need to first specify the data
  for analysis and then RUN, all at once, the commands
  from the MATRIX statement to the END MATRIX statement.

* This program conducts parallel analyses on data files in which
  the rows of the data matrix are cases/individuals and the
  columns are variables;  Data are read/entered into the program
  using the GET command (see the GET command below);  The GET
  command reads an SPSS data file, which can be either the
  current, active SPSS data file or a previously saved data file;
  A valid filename/location must be specified on the GET command;
  A subset of variables for the analyses can be specified by using
  the "/ VAR =" subcommand with the GET statement;  There can be
  no missing values.

* You must also specify:
  -- the # of parallel data sets for the analyses;
  -- the desired percentile of the distribution and random
     data eigenvalues;
  -- whether principal components analyses or principal axis/common
     factor analysis are to be conducted, and
  -- whether normally distributed random data generation or
     permutations of the raw data set are to be used in the
     parallel analyses.

* Permutations of the raw data set can be time consuming;
  Each parallel data set is based on column-wise random shufflings
  of the values in the raw data matrix using Castellan's (1992,
  BRMIC, 24, 72-77) algorithm; The distributions of the original
  raw variables are exactly preserved in the shuffled versions used
  in the parallel analyses; Permutations of the raw data set are
  thus highly accurate and most relevant, especially in cases where
  the raw data are not normally distributed or when they do not meet
  the assumption of multivariate normality (see Longman & Holden,
  1992, BRMIC, 24, 493, for a Fortran version); If you would
  like to go this route, it is perhaps best to (1) first run a
  normally distributed random data generation parallel analysis to
  familiarize yourself with the program and to get a ballpark
  reference point for the number of factors/components;
  (2) then run a permutations of the raw data parallel analysis
  using a small number of datasets (e.g., 100), just to see how long
  the program takes to run; then (3) run a permutations of the raw
  data parallel analysis using the number of parallel data sets that
  you would like use for your final analyses; 1000 datasets are
  usually sufficient, although more datasets should be used if
  there are close calls.


* These next commands generate artificial raw data
  (500 cases) that can be used for a trial-run of
  the program, instead of using your own raw data;
  Just select and run this whole file; However, make sure to
  delete the artificial data commands before attempting to
  run your own data.
```

```
* Start of artificial data commands.
set length=none printback = off  width = 120.
input program.
loop #a=1 to 500.
compute com1 = normal (10).
compute com2 = normal (10).
compute com3 = normal (10).
compute var1 = normal (10) + com1.
compute var2 = normal (10) + com1.
compute var3 = normal (10) + com1.
compute var4 = normal (10) + com2.
compute var5 = normal (10) + com2.
compute var6 = normal (10) + com2.
compute var7 = normal (10) + com3.
compute var8 = normal (10) + com3.
compute var9 = normal (10) + com3.
end case.
end loop.
end file.
end input program.
factor var = var1 to var9.
* End of artificial data commands.



set mxloops=9000 printback=off width=80  seed = 1953125.
matrix.

* Enter the name/location of the data file for analyses after "FILE
=";
  If you specify "FILE = *", then the program will read the current,
  active SPSS data file; Alternatively, enter the name/location
  of a previously saved SPSS data file instead of "*";
  you can use the "/ VAR =" subcommand after "/ missing=omit"
  subcommand to select variables for the analyses.
GET raw / FILE = * / missing=omit / VAR = var1 to var9.

* Enter the desired number of parallel data sets here.
compute ndatsets = 100.

* Enter the desired percentile here.
compute percent  = 95.

* Enter either
  1 for principal components analysis, or
  2 for principal axis/common factor analysis.
compute kind = 1 .

* Enter either
  1 for normally distributed random data generation parallel analysis,
or
  2 for permutations of the raw data set.
compute randtype = 1.


****************** End of user specifications. ******************

compute ncases   = nrow(raw).
compute nvars    = ncol(raw).
```

```
* principal components analysis & random normal data generation.
do if (kind = 1 and randtype = 1).
compute nm1 = 1 / (ncases-1).
compute vcv = nm1 * (sscp(raw) - ((t(csum(raw))*csum(raw))/ncases)).
compute d = inv(mdiag(sqrt(diag(vcv)))).
compute realeval = eval(d * vcv * d).
compute evals = make(nvars,ndatsets,-9999).
loop #nds = 1 to ndatsets.
compute x = sqrt(2 * (ln(uniform(ncases,nvars)) * -1) ) &*
            cos(6.283185 * uniform(ncases,nvars) ).
compute vcv = nm1 * (sscp(x) - ((t(csum(x))*csum(x))/ncases)).
compute d = inv(mdiag(sqrt(diag(vcv)))).
compute evals(:,#nds) = eval(d * vcv * d).
end loop.
end if.

* principal components analysis & raw data permutation.
do if (kind = 1 and randtype = 2).
compute nm1 = 1 / (ncases-1).
compute vcv = nm1 * (sscp(raw) - ((t(csum(raw))*csum(raw))/ncases)).
compute d = inv(mdiag(sqrt(diag(vcv)))).
compute realeval = eval(d * vcv * d).
compute evals = make(nvars,ndatsets,-9999).
loop #nds = 1 to ndatsets.
compute x = raw.
loop #c = 1 to nvars.
loop #r = 1 to (ncases -1).
compute k = trunc( (ncases - #r + 1) * uniform(1,1) + 1 )  + #r - 1.
compute d = x(#r,#c).
compute x(#r,#c) = x(k,#c).
compute x(k,#c) = d.
end loop.
end loop.
compute vcv = nm1 * (sscp(x) - ((t(csum(x))*csum(x))/ncases)).
compute d = inv(mdiag(sqrt(diag(vcv)))).
compute evals(:,#nds) = eval(d * vcv * d).
end loop.
end if.

* PAF/common factor analysis & random normal data generation.
do if (kind = 2 and randtype = 1).
compute nm1 = 1 / (ncases-1).
compute vcv = nm1 * (sscp(raw) - ((t(csum(raw))*csum(raw))/ncases)).
compute d = inv(mdiag(sqrt(diag(vcv)))).
compute cr = (d * vcv * d).
compute smc = 1 - (1 &/ diag(inv(cr)) ).
call setdiag(cr,smc).
compute realeval = eval(cr).
compute evals = make(nvars,ndatsets,-9999).
compute nm1 = 1 / (ncases-1).
loop #nds = 1 to ndatsets.
compute x = sqrt(2 * (ln(uniform(ncases,nvars)) * -1) ) &*
            cos(6.283185 * uniform(ncases,nvars) ).
compute vcv = nm1 * (sscp(x) - ((t(csum(x))*csum(x))/ncases)).
compute d = inv(mdiag(sqrt(diag(vcv)))).
compute r = d * vcv * d.
compute smc = 1 - (1 &/ diag(inv(r)) ).
call setdiag(r,smc).
compute evals(:,#nds) = eval(r).
end loop.
end if.
```

```
* PAF/common factor analysis & raw data permutation.
do if (kind = 2 and randtype = 2).
compute nm1 = 1 / (ncases-1).
compute vcv = nm1 * (sscp(raw) - ((t(csum(raw))*csum(raw))/ncases)).
compute d = inv(mdiag(sqrt(diag(vcv)))).
compute cr = (d * vcv * d).
compute smc = 1 - (1 &/ diag(inv(cr)) ).
call setdiag(cr,smc).
compute realeval = eval(cr).
compute evals = make(nvars,ndatsets,-9999).
compute nm1 = 1 / (ncases-1).
loop #nds = 1 to ndatsets.
compute x = raw.
loop #c = 1 to nvars.
loop #r = 1 to (ncases -1).
compute k = trunc( (ncases - #r + 1) * uniform(1,1) + 1 )  + #r - 1.
compute d = x(#r,#c).
compute x(#r,#c) = x(k,#c).
compute x(k,#c) = d.
end loop.
end loop.
compute vcv = nm1 * (sscp(x) - ((t(csum(x))*csum(x))/ncases)).
compute d = inv(mdiag(sqrt(diag(vcv)))).
compute r = d * vcv * d.
compute smc = 1 - (1 &/ diag(inv(r)) ).
call setdiag(r,smc).
compute evals(:,#nds) = eval(r).
end loop.
end if.

* identifying the eigenvalues corresponding to the desired percentile.
compute num = rnd((percent*ndatsets)/100).
compute results = { t(1:nvars), realeval, t(1:nvars), t(1:nvars) }.
loop #root = 1 to nvars.
compute ranks = rnkorder(evals(#root,:)).
loop #col = 1 to ndatsets.
do if (ranks(1,#col) = num).
compute results(#root,4) = evals(#root,#col).
break.
end if.
end loop.
end loop.
compute results(:,3) = rsum(evals) / ndatsets.

print /title="PARALLEL ANALYSIS:".
do if (kind = 1 and randtype = 1).
print /title="Principal Components & Random Normal Data Generation".
else if (kind = 1 and randtype = 2).
print /title="Principal Components & Raw Data Permutation".
else if (kind = 2 and randtype = 1).
print /title="PAF/Common Factor Analysis & Random Normal Data
Generation".
else if (kind = 2 and randtype = 2).
print /title="PAF/Common Factor Analysis & Raw Data Permutation".
end if.
compute specifs = {ncases; nvars; ndatsets; percent}.
print specifs /title="Specifications for this Run:"
 /rlabels="Ncases" "Nvars" "Ndatsets" "Percent".
print results
```

```
 /title="Raw Data Eigenvalues, & Mean & Percentile Random Data
Eigenvalues"
 /clabels="Root" "Raw Data" "Means" "Prcntyle"  /format "f12.6".

do if   (kind = 2).
print / space = 1.
print /title="Warning: Parallel analyses of adjusted correlation
matrices".
print /title="eg, with SMCs on the diagonal, tend to indicate more
factors".
print /title="than warranted (Buja, A., & Eyuboglu, N., 1992, Remarks
on parallel".
print /title="analysis. Multivariate Behavioral Research, 27, 509-
540.).".
print /title="The eigenvalues for trivial, negligible factors in the
real".
print /title="data commonly surpass corresponding random data
eigenvalues".
print /title="for the same roots. The eigenvalues from parallel
analyses".
print /title="can be used to determine the real data eigenvalues that
are".
print /title="beyond chance, but additional procedures should then be
used".
print /title="to trim trivial factors.".
print / space = 2.
print /title="Principal components eigenvalues are often used to
determine".
print /title="the number of common factors. This is the default in
most".
print /title="statistical software packages, and it is the primary
practice".
print /title="in the literature. It is also the method used by many
factor".
print /title="analysis experts, including Cattell, who often
examined".
print /title="principal components eigenvalues in his scree plots to
determine".
print /title="the number of common factors. But others believe this
common".
print /title="practice is wrong. Principal components eigenvalues are
based".
print /title="on all of the variance in correlation matrices,
including both".
print /title="the variance that is shared among variables and the
variances".
print /title="that are unique to the variables. In contrast,
principal".
print /title="axis eigenvalues are based solely on the shared
variance".
print /title="among the variables. The two procedures are
qualitatively".
print /title="different. Some therefore claim that the eigenvalues
from one".
print /title="extraction method should not be used to determine".
print /title="the number of factors for the other extraction method.".
print /title="The issue remains neglected and unsettled.".
end if.

compute root      = results(:,1).
compute rawdata = results(:,2).
```

```
compute percntyl = results(:,4).

save results /outfile= 'screedata.sav' / var=root rawdata means
percntyl .

end matrix.

* plots the eigenvalues, by root, for the real/raw data and for the
random data.
GET file= 'screedata.sav'.
TSPLOT VARIABLES= rawdata means percntyl /ID= root /NOLOG.”
```

Appendix 4 – Ethics Approval

Dear Mr Gareth Duggan

Protocol Number: **Temp2016-01347**

Title: **SALARY NEGOTIATION PERCEPTIONS BY GENDER AND THEIR ROLE ON THE GENDER PAY GAP**

Please be advised that your application for Ethical Clearance has been APPROVED.

You are therefore allowed to continue collecting your data.

We wish you everything of the best for the rest of the project.

Kind Regards,

Adele Bekker

Appendix 5 – Turnitin Report

Turnitin Originality Report
Final Research by Gareth Duggan
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