# Assessing satisfaction of employee motivational needs in a selected explosive manufacturing plant

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ABSTRACT

The main aim of the study is to compare the extent to which the need for autonomy, relatedness and competence of baby boomers, generation X, Y and Z employees of Denel Dynamics is being satisfied and how this influences motivational strategies. The issue of generation is becoming more important due to different ways and methods required to manage different generations. A quantitative study was done by means of a structured questionnaire which was used in to determine the motivational preferences of the participants. This questionnaire was developed by Van den Broeck, Vansteenkiste, De Witte, Soenens and Lens (2010) and is based on the self-determination theory developed by Deci and Ryan.

Results indicate that baby boomers have a stronger need for autonomy as compared to the other generations. Similar needs for relatedness were shown by all the generations. In view of the findings, recommendations are made to management to optimize motivational strategies and these recommendations show how each generational needs relating to self-determination theory should be addressed.

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CHAPTER 1: NATURE AND SCOPE OF THE STUDY

1.1   INTRODUCTION

According to Lisboa (2014), "encouraging employees to behave as if they are owners of the company has proven to be a successful strategy for business growth. At the other end of the spectrum, canned employee motivation programmes often lead to a lack of motivation because they lack the personal touch that shows an individual employee that you care".

According to Lisboa (2014), employee motivation can mean the difference between success and failure for your business. Lisboa (2014) argues that many are of the mind-set that the almighty pay check should be all the motivation employees need. Lisboa (2014) furthers states that "others believe it will bankrupt the company to invest in employee motivation strategies, failing to see that they can't afford not to. Some cynical managers even believe it isn't possible to motivate employees to grow a business at all. Others recall past employee motivation strategies that failed. Many companies have performance pay structures that reward the employee who shines with the same pay as the employee who merely warms a seat. Failure to maintain a culture of employee motivation will not lead a company toward achieving its goals, but will instead foster mediocrity and apathy among the team. Companies that are most successful at keeping their employees motivated to exceed expectations have gone beyond implementing performance standards and rewards. They have created a culture of employee motivation that feeds into every level of the organization and is a foundation for every process".

According to Stack as quoted by Lisboa (2014) the power of employee motivation was demonstrated by Springfield Remanufacturing Corp. (SRC) during the 1991 recessions when net profits actually increased at SRC. According to Lisboa (2014) "Stack, SRC's CEO at the time, saw first-hand the results of a team of motivated employees when the company achieved a production goal beyond any previously imagined. Very solid profits were earned for the company and the employees were not forced to do anything different. They solved several business issues themselves and achieved the goal because they wanted to do it. He coined the phrase, "You gotta wanna." He motivated

his team, which had historically produced two or three tractors each day, to push 800 tractors out the door in only 20 work days".

The above clearly shows that employee motivation in any organisation is very vital in order for the organisation to succeed. The same applies to Denel Dynamics which has generational gaps among employees and whose potentially diverse needs must be considered in the motivational process.

According to Deci and Ryan (2000), self-determination theory (SDT) represents a broad framework for the study of human motivation and personality. SDT articulates a meta-theory for framing motivational studies, a formal theory that defines intrinsic and varied extrinsic sources of motivation, and a description of the respective roles of intrinsic and types of extrinsic motivation in cognitive and social development and in individual differences. Deci and Ryan (2000) state that conditions supporting the individual's experience of autonomy, competence, and relatedness are argued to foster the most volitional and high quality form of motivation and engagement for activities, including enhanced performance, persistence and creativity. According to Deci and Ryan (2000) "SDT proposes that the degree to which any of these three psychological needs is unsupported or thwarted within a social context will have a robustly detrimental impact on wellness in that setting". This theory may be useful to improve the understanding of the nature and extent to which the different generation's needs are being addressed by Denel Dynamics.

Much research has been conducted about different generations and their attributes (Baby boomers, generation X, generation Y and generation Z).

According to Tolbize (2008) the U.S. Census Bureau defines Baby Boomers as individuals born between 1946 and 1964; generation X are those that were born between 1965 and 1980 and generation Y are those that were born between 1980 and 1994. According to Jackson (2013) generation Z was born after 1995; they are not yet adults and have never known a life without the internet, computers and mobile phones. These different generations behave differently from each other and there is no one motivation style that can fit all generations equally.

According to Yusoff and Kian (2013) generation X was found to display higher preference for intrinsic motivations compared to generation Y. Jang as quoted by Yusoff

and Kian (2013) concludes that "Generation Y employees seem to be more motivated by extrinsic motivation than their elder generations. They are, for example, more likely to leave their jobs when another company provides better extrinsic factors such as pay and benefits". This suggests that generation Y employees give higher priority to those needs that are likely to be satisfied by extrinsic motivations from their jobs as compared to older generations.

Generational gaps exist in many organisations; hence a challenge of motivating different generations in a specific way will always exist as these generations possess different characteristics. According to Mask (2007), values often collide when members of different generations work together. In today's complex mix of generations, traditionalists are found working with boomers and boomers working with generation Xers. Mask (2007) stated that "trends towards later retirement mean that traditionalists are still working and generation Xers are quickly moving into positions of power and influence where they are supervising and leading members of older generations".

Mask (2006) further states that each generation has different work values, different perceptions of authority, and different views about what is important in life in general. This is often referred to as the generation gap. Mask (2006) furthermore highlights the fact that cross-generation team managers are not prepared for these differences in values; it can create conflict, poor performance and low morale in the workplace. Cross-generational team members also need training to overcome the same challenges. These findings by Mask (2006) suggest that the motivational gap will exist by default as long as there are different generations.

According to Fuller *et al* (2008), "motivation is a person's intensity, direction and persistence of efforts to attain a specific objective". Scholl (2002) also defines motivation as the force that energizes, directs, and sustains behaviour. Rabideau (2005) states that the influence of an individual's needs and desires has a strong impact on the direction of their behaviour and that motivation is based on one's emotions and achievement-related goals. It is thus vital that managers should understand the needs of their subordinates, as these are pivotal in directing employee behaviour towards desired organisational goals. Consequently, an organisation cannot close or manage the gap if they don't know any general preference of motivation from each generation.

Currently, there is no one-size-fits-all motivation for all generations. According to Sage executive group (2012) one consideration to make regarding motivation centres on motivating all generations of employees. Sage (2012) states that "what specifically excites a generation X employee (born between 1964 and 1981) may not motivate a Millennial (born between 1982 and 2000). Generation X employees have demonstrated motivation in the workplace when an environment of fun, feedback, and flexibility is apparent. Generation X employees are motivated by flexible work arrangements. While their parents may have got used to punching the clock every morning at 9am sharp and grabbing their lunch pail at exactly 5pm, generation Xers appreciate and are motivated by flexible work schedules, breaks in the routine and tangible rewards. For the Baby Boomer generation, motivation takes on a different meaning. "Being in charge" can motivate Boomers. Titles, perks of the job, and anything that helps distinguish and accentuate the heights that a Boomer has achieved will go a long way toward motivating the employee. Older employees – say those born before 1945 - are motivated by those who recognize the talents and depth of experience that these workers bring to the table".

The problem is that most of the organisations have the generational gap and are struggling to motivate and retain all the different generations; some organisations even make the mistake of thinking that what works for one generation will work for others. Denel Dynamics is no different to these organisations and is also facing similar challenges.

1.2   PROBLEM STATEMENT

The study took place at Denel Dynamics in Centurion. Denel Dynamics is part of the Denel Group, South Africa's largest manufacturer of defence equipment. A leader in advanced systems engineering technology, Denel Dynamics' core business covers tactical missiles, precision-guided weapons, unmanned aerial vehicle systems (UAVS), integrated air defence and related technology solutions.

Currently the organization has more than 800 employees and most of the employees are baby boomers with the number of generation X and Y starting to increase as well.

Currently Denel Dynamics doesn't have different methods in place for motivating these different generations especially for generation X and Y. This leaves the company

frustrated when these generations can't be retained within the organisation. In the near future generation Z will start to join industries as well. Denel Dynamics will also be affected by this inevitable trend and it will be vital to have motivational needs of every generation in place.

With this mixed generational workforce, it would be important to be able to understand each generation properly in order to be able to know what to expect from them and what the organization can do in order to keep them happy and motivated. At times most organisations think that they can throw money at the problem and make the problem disappear. As much as it is true to a certain extent that money can motivate employees, it is not always that employees only want money to make them motivated and feel happy in the company. Just as the self-determination theory explains, some employees could just want autonomy, competence or relatedness more than the others and it would be a mistake to assume that they want the same things.

From the discussion thus far, the following primary research question arises: Do baby boomers, generation X, Y and Z employees of Denel Dynamics differ in terms of the satisfaction of their needs for autonomy, relatedness and competence?

The objective of this research is to establish ways to motivate different generations using self-determination theory. The research will provide insight into different generations and how organisations like Denel Dynamics can be able to motivate employees according to their needs. Currently most organisations motivate different employee generations, perhaps at the expense of others. This research scientifically determines work-related motivational needs of employees from different generations to see how these overlap and / or differ from one generation to the other. This will assist Denel Dynamics to optimise motivational strategies encompassing all generations of employees.

1.3 GAP AND VALUE ADDED

Much research has been conducted about different generations and their attributes (baby boomers, generation X, generation Y and generation Z) and also about self-determination theory. There is, however, no research as yet that links generational needs to self-determination theory; hence this research focuses on the gap by linking the two constructs. This can assist Denel Dynamics in dealing with these different

generations more appropriately by motivating them according to their needs and ultimately improve retention of valued employees.

Currently the generational characteristics have been well researched and the self-determination theory is well researched, especially by Edward Deci and Richard Ryan. This research adds much value in terms of determining which element of the self-determination theory suits a certain generation best. The study aims to close this gap and to shed light on how to motivate these diverse generations from a self-determination theory point of view.

Currently there is no study of this kind that has been conducted in Denel Dynamics or outside Denel Dynamics. Even though studies of different generations have been done and also studies of self-determination theory separately, there is currently nothing that links self-determination theory and different generations.

This research is well worth doing because it will add value to the company's human resource motivational and employee retention strategies. Currently there are young newcomers into the organisation and it will be critical to know exactly how to deal with the new generation without neglecting the old ones and hence this study will add value on these aspects. This research might also be useful to other organisations where there is a generational gap besides Denel Dynamics.

Although research about generations and motivation has been conducted in the past, this is a unique research angle that will be focusing on the generational motivation using only one theory of motivation (self-determination theory). Many organisations will need to have this kind of information as we are slowly moving into an era where there will be more than four different generations in one workplace at the same time.

1.4 RESEARCH OBJECTIVES

1.4.1 Primary objectives

The primary objective is to compare the extent to which the need for autonomy, relatedness and competence of baby boomers, generation X, Y and Z employees of Denel Dynamics is being satisfied and how this influences motivational strategies.

1.4.2 Secondary objectives

The specific objectives of this research are to:

- do a literature survey on the way in which the generation gap between baby boomers, generation X, Y and Z manifests itself in the workplace;
- determine how other successful organisations motivate and retain different generations;
- determine the relevance of self-determination theory for motivational practices in the workplace in general;
- establish the generational profile in Denel Dynamics;
- determine the level of need satisfaction with respect to autonomy, relatedness and competence of employees in Denel Dynamics;
- compare the different generations within Denel Dynamics regarding the extent to which their needs for autonomy, relatedness and competence are being satisfied; and
- make recommendations to management in view of the findings.

1.5 SCOPE

This study lies within the field of organisational behaviour and psychology. The study covers generational studies and motivational aspects of self-determination theory. The study was conducted in an ammunition sector, namely Denel Dynamics situated in Centurion, Gauteng Province in South Africa.

1.6 RESEARCH METHODOLOGY

1.6.1 Research approach

According to Tohoku University (2009) the aim of qualitative analysis is a complete, detailed description: "no attempt is made to assign frequencies to the linguistic features which are identified in the data, and rare phenomena receive (or should receive) the same amount of attention as more frequent phenomena. Qualitative analysis allows for fine distinctions to be drawn because it is not necessary to shoehorn the data into a finite number of classifications. Ambiguities, which are inherent in human language, can be recognized in the analysis. For example, the word "red" could be used in a corpus to

signify the colour red, or as a political categorization (e.g. socialism or communism). In a qualitative analysis both senses of *red* in the phrase "the red flag" could be recognized".

According to research conducted by academics of Tohoku University (2009) the disadvantage of a qualitative approach is that their findings cannot be extrapolated to wider populations with the same degree of certainty that quantitative analyses can: "this is because the findings of the research are not tested to discover whether they are statistically significant or due to chance". According to Tohoku University (2009) quantitative research classify features, count them, and even construct more complex statistical models in an attempt to explain what is observed. Tohoku University (2009), states that "findings can be generalized to a larger population, and direct comparisons can be made between two corpora, so long as valid sampling and significance techniques have been used. Thus, quantitative analysis allows us to discover which phenomena are likely to be genuine reflections of the behaviour of a language or variety, and which are merely chance occurrences. The more basic task of just looking at a single language variety allows one to get a precise picture of the frequency and rarity of particular phenomena, and thus their relative normality or abnormality". Their research furthermore states that the disadvantage of a quantitative approach is that the picture of the data which emerges from quantitative analysis is less rich than that obtained from qualitative analysis.

This research is primarily interested in quantitative results obtained from structured questionnaires based on Likert scaled ratings. Therefore, after considering the advantages and disadvantages of both qualitative and quantitative research approaches, it was decided that this study should follow a quantitative research approach.

The research was conducted in two phases. First, a literature survey was done on self-determination theory and then generational differences, and the study was conducted different four generations.

For the literature survey, the following sources were consulted:

- Academic text books;
- Academic journals;

- Google scholar; and
- Company information databases.

The subjects that were addressed in this study are:

- Organisational behaviour.
- Industrial Psychology, particularly concerning motivation and generational gaps.
- Labour relations.

In the second phase of this research, an empirical study was conducted. The procedures for Phase 2 were as follows:

1.6.2 Phase 2: Empirical study

1.6.2.1 Research design

According to Gimblett (2006), the research design refers to "the overall strategy that you choose in order to integrate the different components of the study in a coherent and logical way, thereby, ensuring you will effectively address the research problem; it constitutes the blueprint for the collection, measurement, and analysis of data". According to Jang (2013), the purpose of a research design is to provide a plan of study that permits accurate assessment of cause and effect relationships between independent and dependent variables. Jang (2013), states that "the classic controlled experiment is an ideal example of good research design. Factors that jeopardize the evaluation of the effect of experimental treatment (internal validity) and the generalizations derived from it (external validity) are identified. Sources of variance can be controlled by eliminating a variable, through randomization, matching, or including a variable as part of the design. A research project should be so designed that (1) it answers the questions being investigated, (2) extraneous factors are controlled, and (3) the degree of generalization that can be made is valid".

This research employed a cross-sectional survey design. Data were captured on Microsoft Excel format and analysed with SPSS (Statistical Package for Social Science).

According to William (2006), descriptive statistics are used to describe the basic features of the data in a study: "they provide simple summaries about the sample and

the measures. Together with simple graphic analysis, they form the basis of virtually every quantitative analysis of data. Descriptive statistics are typically distinguished from inferential statistics. With descriptive statistics you are simply describing what is or what the data show. With inferential statistics, you are trying to reach conclusions that extend beyond the immediate data alone. For instance, we use inferential statistics to try to infer from the sample data what the population might think. Or we use inferential statistics to make judgments of the probability that an observed difference between groups is a dependable one or one that might have happened by chance in this study. Thus, we use inferential statistics to make inferences from our data to more general conditions; we use descriptive statistics simply to describe what's going on in our data". This study uses descriptive research to describe the needs profile of different generations of Denel employees, but with due consideration of the limitations imposed by the cross-sectional convenience sampling strategy that was used.

Factor analysis, reliability analysis and ANOVA (Analysis of Variance) methods were applied in order to populate findings between the different generations.

1.6.2.2 Participants

The research was conducted using convenience sampling; this was due to unequal number of generational representatives from each department as some departments have more of a certain generation than others. According to Welman *et al* (2005:69) convenience or haphazard sampling involves selecting haphazardly those cases that are easiest to obtain for our sample, such as the person interviewed at random in a shopping centre for a television program. Welman *et al* (2005:69), states that "the sample selection process is continued until we reach the required sample size. Although this technique of sampling is used widely, it is prone to bias and influences that are beyond our control due to the fact that the cases appear in the sample because they were easy to obtain". Often the sample is intended to present the total population.

Employees of Denel Dynamics from different generations within departments were asked to take part in the study as all the generations must be represented in order to have accurate findings and recommendations that would add value to the organization. Denel Dynamics employs approximately 863 employees with these employees divided into supply chain department, missiles, DISS and UAV's among others (see Appendix A

for Denel Dynamic's hierarchy). Questionnaires were sent to everyone in the organization with the target of 100 respondents from every generation in order to make a representative conclusion under convenience sampling.

1.6.2.3 Procedure

Permission to conduct the study was formally obtained from the human resource manager of Denel Dynamics (see Appendix B for the formal letter).

Questionnaires were e-mailed and also distributed by hand to the target population within the company. These procedures are discussed in more detail in Chapter 3.

1.6.2.4 Ethical considerations

Denel dynamics has strict rules and regulations regarding the confidentiality of the products that the company manufactures. A formal document was signed that clearly stipulates that all the sensitive matters that relate to the products of the company would be handled with caution. Participants were not asked to put personal details on the questionnaire like their names and employee numbers in order to guarantee anonymity and make sure they were as honest as possible without fear of being traced. After due consideration of ethical concerns, the study was finally approved by the ethics committee of the NWU.

1.7   LIMITATIONS/ANTICIPATED PROBLEMS

The study was only focused on generational issues in the organisation and how these relate to aspects of self-determination theory of motivation. The study did not intend to provide comprehensive overviews of all aspects related to motivation.

Some of the problems anticipated during the study were problems such as availability of participants, availability of generation Z participants and participants finishing the questionnaires before the required date.

CHAPTER 2: LITERATURE REVIEW

2.1   INTRODUCTION

The primary objective of this chapter is to provide the literature review of the study. This literature review provides the challenges of the modern workplace, elements of motivation, history of motivational theories, characteristics of different generations and characteristics of self-determination theory together with the links from previous researches. The literature review also addresses the gap that currently exists between self-determination theory and different generations.

2.2   WORKFORCE GENERATIONAL DIVERSITY

As time changes, there are always new challenges that workplaces face. One of the most pressing challenges that modern workplaces face due to globalisation, is the increasing diversity of the workforce.

According to Woods *et al* (2010) of the Cornell University "workplace diversity is a people issue, focused on the differences and similarities that people bring to an organization. It is usually defined broadly to include dimensions beyond those specified legally in equal opportunity and affirmative action non-discrimination statutes". Woods *et al* (2010) further states that diversity is often interpreted to include dimensions which influence the identities and perspectives that people bring, such as profession, education, parental status and geographic location.

McShane and Von Glinow (2010:21) state that diversity presents both opportunities and challenges in organisations. According to Johnson (2014) to reap the benefits of workplace diversity, employees and managers must understand the challenges and know how to effectively deal with them. Johnson (2014) also states that although workplace diversity benefits an organization as a whole, some employees and managers may not react positively to changes made: "employees who oppose workforce diversity usually reject new ideas and make work environments more difficult". Prominent diversity issues in the SA workplace include gender, racial and age diversity.

Gender diversity

According to Renne (2014) the oldest and most common diversity issue in the workplace is the "men vs. women" topic. Renne (2014) states that "over the years, a new element in the disputes over equal pay and opportunity has been the transgender employee. Some corporations have trouble dealing with the fact that a man in women's clothing or a woman in the stages of "becoming a man" may perform equally as well on the job done as those in traditional gender roles". These may require an organisation to intensively train the managers in order to be able to deal with these kinds of gender diversity problems.

Racial diversity

According to Bester (2007), "since 1994 new laws around employment equity, affirmative action and Black Economic Empowerment (BEE) have been enacted to accelerate redress and transformation but more than ten years down the line, there is still much to be done". This change in the workplace also brings challenges to the organisation in terms of managing the racially diverse workforce properly.

These are some of the modern workplace diversity that globalization brings to the organization that need to be managed efficiently.

2.3 GENERATIONAL DIVERSITY IN THE WORKPLACE

The typical workforce is also increasingly diverse in terms of its generational composition. These generations differ widely from each other and it is thus unlikely that a one-size-fits-all approach would be effective to unlock potential from them. According to Kupperschmidt (2000), generation is defined as people who are grouped within a certain range of ages, the location where they live, and significant life events that they experienced at critical developmental stages. According to Lyon *et al* (2006), any given generation will contain several distinct "generational units" or societal subcultures whose members develop a shared identity and share similar life experiences. These "generational units" are cohorts: groups of people bound not by biological linkages but by their shared historical experiences.

Twenge *et al* (2010) state that one of the biggest challenges for organizations in the coming years will be the retirement of more than 75 million older workers and their replacement by a comparable number of young people entering the workforce. Twenge *et al (2010)* further argue that to most effectively attract and manage this new cohort of employees, organizations need a clear understanding of the work values of the new generation and how they may differ from the values of previous generations.

Because generational diversity is of particular interest to this study, characteristics of the different generations will be discussed in more depth in the next section.

Characteristics of different generations

Baby Boomers [Born 1946–1964]

According to Twenge *et al* (2010) individuals born between 1946 and 1964 are labelled *Boomers.* According to Dixon *et al* (2013) baby boomers are characterized as having a sense of ownership in the organization and are expected to demonstrate high levels of assumed responsibility, i.e., stewardship and ownership. Dixon *et al* (2013) also state that baby boomers have a tendency to migrate to opportunities for accomplishment and, therefore, will reflect modest measures of affective commitment.

Rath (1999) states that baby boomers are willing and expecting to work with others. In terms of leadership style, baby boomers accept the chain of command. In addition, they expect their managers to give direction and to lead them towards organisational goals. Baby boomers are, however, not highly technologically savvy, nor do they generally like change. Yu and Miller (2005) state that baby boomers were oriented into workplaces when corporate loyalty was highly valued and they expected long careers in the one organisation. These expectations have been dealt a severe below in the last 15 years.

According to Value Option (2012) the following are the characteristics of baby boomers:

Values

- Individual choice.
- Community involvement.
- Prosperity.
- Ownership.

- Self-actualization.
- Health and wellness.

Attributes

- Adaptive.
- Goal-oriented.
- Focus on individual choices and freedom.
- Adaptive to a diverse workplace.
- Positive attitude.

Work styles

- Confidence in tasks.
- Emphasis on team-building.
- Seeking collaborative, group decision-making.
- Avoidance of conflict.

According to Talent management (2012) the following are seven ways to motivate baby boomers:

- Give them titles and authority commensurate with their responsibility.
- Provide them with opportunities to mentor younger generations.
- Encourage them to attend conferences and participate in related professional associations.
- Provide them with challenges.
- Involve them in decision-making.
- Have established policies and operate your company fairly.
- Offer them post-retirement opportunities.

Generation X [born 1965–1980]

According to Twenge *et al.* (2010) generation X experienced the AIDS pandemic, economic uncertainty and the fall of the Soviet Union. They had a substantially higher probability of witnessing their parents' divorce or job loss due to downsizing than had any prior generation. As a result of these experiences, members of this cohort are

purported to be independent and less committed to their employing organization and likely to job hop to increase marketability and to see work–life balance as extremely important.

Dixon *et al.* (2013) state that generation X, while reflecting a self-centred approach to work and commitment, is expected to demonstrate modest measures of assuming responsibility based on their comfort with teamwork and a willingness to nurture their personal network. With a stronger need to invest in relationships over employer loyalty, measures of commitment will tend to demonstrate modest levels. According to Smith (2013) gen X can help gen Y to understand that Boomers are looking for initiative. Staying late to work on an important project communicates teamwork and loyalty to the company for generation X employees. There is also a huge difference between how Boomers and gen Y view the structure of an organization. Gen Y doesn't see any problem with marching right into the CEO's office to pitch an idea; however, Boomers prefer to follow the established chain of command. Gen X can help Boomers understand that gen Y is not disrespectful of authority, but their experiences have "flattened" their view of organizations. At the same time, gen X can help gen Y understand the organization's established channels and how following those paths can help them be much more successful.

According to Value Options (2012) the following are the characteristics for generation X:

Values

- Contribution.
- Feedback and recognition.
- Autonomy.
- Time with manager.

Attributes

- Adaptability.
- Independence.

Work style

- High-quality end results.

- Productivity.
- Balance between work and life—work to live not live to work.
- Flexible work hours/job sharing appealing.
- Free agents.
- Seeing self as a marketable commodity.
- Comfortable with authority but not impressed with titles.
- Technically competent.
- Internal promotion.
- Ethnic diversity.

According to Javitch (2010) the following are ways that can be used to motivate gen X employees:

- Room to grow.
- Opportunities to make choices.
- Mentoring.

Generation Y [born 1980-1994]

According to Gibson (2013) generation Y people are confident and ambitious: "expectations typically need to be managed as gen Y's are confident about taking on important roles within organisations as soon as they begin. With young entrepreneurs like Mark Zuckerburg the millennials believe there is no limit to what they can achieve. As an organisation the difficulty is managing these expectations without stifling creativity and development. Giving generation Y's the resources they require to see development is a strategic way businesses look to keep the generation happy. Generation Y people have high expectations of their employers and expect this to be matched. Many are not afraid to seek employment elsewhere if this ambition is not met. Unlike generations before them they are happy to change job roles more often to find the right organisation to work within".

Dixon *et al* (2013) state that generation Y individuals are the group newest to employment. Digitarians are used to teams, teamwork and social networking. Raised in day-care with their peers, they quickly assume responsibilities associated with their work group(s) resulting in high measures of affective commitment. Dixon *et al* (2013)

further argue that generation Y individuals expect to be managed well and challenged in their work assignments as a rite-of-passage.

According to Value Options (2012) the following are the characteristics for generation Y:

Values

- Self-expression is more important than self-control.
- Marketing and branding the self are important.
- Violence is an acceptable means of communication.
- Fear living poorly—this is related to lifestyle enjoyment, not wealth.
- Respect must be earned; it is not freely granted based on age, authority or title.

Attributes

- Adapt rapidly.
- Crave change and challenge.
- Create constantly.
- Exceptionally resilient.
- Committed and loyal when dedicated to an idea, cause or product.
- Accept others of diverse backgrounds easily and openly.
- Global in perspective.

Work style

- Want to know how what they do fits into the big picture and need to understand how everything fits together—want to effect change and make an impact.
- View their work as an expression of themselves; not as a definition of themselves.
- Exceptional multi-taskers—need more than one activity happening at a time.
- Seek active versus passive involvement.
- Less likely to seek managerial or team leadership positions that would compromise life outside of work.
- Seek flexibility in work hours and dress code.
- Seek a relaxed work environment—bright colours, open seating, personal touches.

- Expect corporate social responsibility and will not work for, or purchase products from, organizations that are not socially responsible.
- Seek work in teams.
- Seek continuing learning and will take advantage of training made available to them.
- Want everything instantly—everything now.
- Effort can be separated from reward—there is no such thing as pay for performance.
- Feeling of entitlement.
- Seek to balance lifestyle and work, with more focus on lifestyle.

According to Bacharach (2014) the following ways can be used to motivate generation Y employees:

- Make your expectations clear.
- Develop and coach.
- Stretch the comfort zones.
- Promote team cohesiveness.
- Encourage career planning - even outside your company.

Generation Z [1995 – current]

According to Jackson (2009) the following are the characteristics for generation Z:

"Generation Z was born after 1995. They are not yet adults and have never known a life without the internet, computers and mobile phones. They are also known as Digital Natives and are used to instant action and satisfaction due to internet technology. They are mainly the children of generation X and are born into smaller families with older mothers. Their means of communication is mainly through online communities and social media like Google, MySpace, Twitter and Facebook rather than personally meeting their friends and developing relationships. They are capable of belonging to huge communities and have massive collaborations using the Internet without knowing anyone personally". They may not perform well in areas such as public speaking. According to Tabscott (2009:6) this generation has eight special characteristics, or norms; these special characteristics are as follows:

- Freedom.
- Customization.
- Collaboration.
- Scrutiny.
- Integrity.
- Fun.
- Speed.
- Innovation.

According to Williams (2012), the following are ways that can be used to motivate generation Z employees:

- Provide constant stimulation.
- Encourage opportunities for collaboration.
- Be flexible.
- Accommodate for portfolio careers.
- Have a responsible approach.
- Create a feedback culture.
- Give them room to create and innovate.
- Offer them diversity.

Intergroup conflict

According to Slocum and Hellriegel (2008) intergroup conflict refers to opposition, disagreements and disputes between groups or teams. At times intergroup conflict is intense, drawn out and costly to those involved. Slocum and Hellriegel (2008) further state that intergroup conflict within organisations can occur across teams, departments or division and between different levels of the organisation such as between top management and first-level employees. Slocum and Hellriegel (2008) list the following sources as some of the causes of intergroup conflict:

- Perceived goal incompatibility.
- Perceived diversification.

According to Slocum and Hellriegel (2008) "this refers to the greater number of ways in which groups see themselves as different from each other (e.g. the gen Y generation versus gen X), the greater the potential for conflict between them. These different ways may actually be sources of strength such as specialised expertise and insights that those from different functions and background contribute to achieve the organisation's goal. Unfortunately, these differences too often serve as the base for stimulating distrust and conflicts between the groups or teams".

From the perceived diversification by Slocum and Hellriegel (2008) arising from generational differences, managers must be able to take out the best diverse strength from each generation to the benefit of the organisation. Managers should also create environments that support diversification from various generations.

2.4   ELEMENTS OF MOTIVATION

Harmer (2001:51) defines motivation as some kind of internal drive which pushes someone to do things in order to achieve something. Deci and Ryan (2000a) state that to be motivated means to be moved to do something. According to The Economic Administration University of China (2003) "motivation is the process by which a person's efforts are energized, directed, and sustained toward attaining a goal. The energy element is a measure of intensity, drive or vigour. The high level of effort needs to be directed in ways that help the organization achieve its goals. Employees must persist in putting forth effort to achieve those goals".

Motivation is voluntary and under the individual's direct control as they can choose to act based on what motivates them; they can also choose how much energy they want to spend on a particular activity and for how long they want to persevere on the same task.

Intrinsic motivation

According to Deci and Ryan (2000b) intrinsic motivation is defined as the doing of an activity for its inherent satisfaction rather than for some separable consequence. When intrinsically motivated, a person is moved to act for the fun or challenge entailed rather than because of external products, pressures or reward. Competence and autonomy are the important issues in intrinsic motivation. Deci and Ryan (2000a) further state that socio-contextual events such as feedback, communications, rewards which cause

feelings of competence foster intrinsic motivation. Suslu (2006) cited Raffini (1996:8) who also state that intrinsic motivation is likely to be increased by a sense of relatedness. Deci and Ryan (2000b) also state that intrinsic motivation is clearly visible in young infants that consistently try to grasp, throw, bite, squash or shout at new objects they encounter. Even if less important as they grow, human adults are still often intrinsically motivated while they play crosswords, make paintings, do gardening or just read novels or watch movies.

According to Deci and Ryan (2000c) intrinsically motivated behaviours represent the prototype of self-determined activities: They are activities that people do naturally and spontaneously when they feel free to follow their inner interests.

Extrinsic motivation

Deci and Ryan (2000b) define extrinsic motivation as a construct that obtains whenever an activity is done in order to attain some separable outcome. Extrinsic motivation thus contrasts with intrinsic motivation, which refers to doing an activity simply for the enjoyment of the activity itself, rather than its instrumental value. Deci and Ryan (2000b) further state that unlike some perspectives that view extrinsically motivated behaviour as invariantly non-autonomous; SDT proposes that extrinsic motivation can vary greatly in the degree to which it is autonomous. For example, a student who does his homework only because he fears parental sanctions for not doing it is extrinsically motivated because he is doing the work in order to attain the separable outcome of avoiding sanctions.

According to Ingram (2014) intrinsic motivation comes from within, driving you to succeed based on inner goals and ambition. Extrinsic motivation comes from external sources, motivating you with incentives to push your performance; hence managers would prefer to have intrinsically motivated employees over extrinsically motivated.

2.5 ROLE OF NEEDS VERSUS DRIVERS

According to Deci and Ryan (2000c) self-determination theory (SDT) maintains that an understanding of human motivation requires a consideration of innate psychological needs for competence, autonomy and relatedness. Needs are understood as physiological deficits that disturb the organism's quiescence and push the organism to

behave in ways that were learned because they satisfied the needs and returned the organism to quiescence. Deci and Ryan further state that need satisfaction is a process of replenishing deficiencies; and the purpose of behaviour is need satisfaction and by contrast, in SDT, the set point is growth-oriented activity.

Deci and Ryan (2000c) also state that rather than viewing people as passively waiting for disequilibrium, we view them as naturally inclined to act on their inner and outer environments, engage activities that interest them, and move toward personal and interpersonal coherence. Thus, they do not have to be pushed or prodded to act. According to Deci and Ryan (2000c) autonomy occupies a unique position in the set of three needs: being able to satisfy the needs for competence and relatedness may be enough for controlled behaviour, but being able to satisfy the need for autonomy is essential for the goal-directed behaviour to be self-determined and for many of the optimal outcomes associated with self-determination to accrue.

Furthermore Deci and Ryan (2000c) state that "according to SDT, the three basic psychological needs are universal and thus must be satisfied in all cultures for people to be optimally healthy. Unlike several social-learning and cognitive theories that are in the mainstream of current, empirically based psychological thought, SDT does not abide by the so-called standard social science model but rather posits that people have an evolved human nature that includes basic psychological needs and integrative propensities. Nonetheless, there is considerable variability in the values and goals held in different cultures, suggesting that some of the avenues to basic need satisfaction may differ widely from culture to culture. For example, in a collectivist culture, people may resonate with group norms, so that acting in accord with them might lead them to experience relatedness and autonomy insofar as they have fully internalized the collectivist values of their culture".

Robbins (1998:175) states that McClelland's theory of need focuses on three needs: Need for achievement, need for power and need for affiliation. Human needs tend to vary over time as well as the level of intensity. Some of these needs could be more important that the others and some might be more difficult or simple for the workplace to meet and some need could be universal, thus managers need scientifically researched-based strategies to help them manage these needs. Various theories like Maslow hierarchy needs have also shown different types of human needs Most of the

motivational needs have shown the need for self-realization which is what the self-determination theory entails with its need for autonomy, competence and relatedness. According to Nohria *et al.* (2008) the following are the four drivers that underlie motivation:

The drive to acquire

Nohria *et al* (2008), states that "we are all driven to acquire scarce goods that bolster our sense of well-being. We experience delight when this drive is fulfilled, discontent when it is thwarted. This phenomenon applies not only to physical goods like food, clothing, housing, and money, but also to experiences like travel and entertainment. The drive to acquire tends to be relative (we always compare what we have with what others possess) and insatiable (we always want more). That explains why people always care not just about their own compensation packages but about others' as well".

The drive to bond

Nohria *et al* (2008), states that "the drive to bond, when met, is associated with strong positive emotions like love and caring and, when not, with negative ones like loneliness and anomie. At work, the drive to bond accounts for the enormous boost in motivation when employees feel proud of belonging to the organisation and for their loss of morale when the institution betrays them. It also explains why employees find it hard to break out of divisional or functional silos: People become attached to their closest cohorts".

The drive to comprehend

Nohria *et al* (2008), states that "we want very much to make sense of the world around us, to produce theories and accounts – scientific, religious, and cultural – that makes events comprehensible and suggests reasonable actions and responses. We are frustrated when things seem senseless, and we are invigorated, typically, by the challenge of working out answers. In the workplace, there is a drive to comprehend accounts for the desire to make meaningful contributions. Employees are motivated by jobs that challenge them and enable them to grow and learn, and they are demoralized by those that seem to be monotonous or to lead to a dead end".

The drive to defend

Nohria *et al* (2008), states that "we all naturally defend ourselves, our property and accomplishments, our family and friends, and our ideas and beliefs against external threats. This drive is rooted in the basic fight-or-flight response common to most animals. In humans, it manifests itself not just as aggressive or defensive behaviour, but also as a quest to create institutions that promote justice, that have clear goals and intentions, and that allow people to express their ideas and opinions. Fulfilling the drive to defend leads to feelings of security and confidence; not fulfilling it produces strong negative emotions like fear and resentment. The drive to defend tells us a lot about people's resistance to change; it is one reason employees can be devastated by the prospect of a merger or acquisition – an especially significant change – even if the deal represents the only hope for an organization's survival".

2.6 HISTORY OF MOTIVATIONAL THEORIES

According to Weber (2013) of Michigan State University, historically, mechanistic theories dominated the field, viewing humans as passive and driven to act by biological disequilibrium toward homeostatic restoration. Behaviour was thought to involve stimulus response contingencies, with little or no attention given to cognitions in behavioural regulation. However, by the 1960s, with the onset of the cognitive revolution, theories now viewed humans as active explorers with goals, interests, perceptions, values and choices-all of which play a role in understanding behaviour. Theories of intrinsic motivation developed during this time and focused specifically on understanding why people do activities for their own sake rather than for instrumental reasons. According to Michigan State University (2013), the following highlight some of the major theories that dominated the field of motivation over the past 100 years:

Behaviourism: Drive Theory: Clark Hull 1940-1960

According to Weber (2013), "all humans have four biologically-based needs: hunger, thirst, sex and avoidance of pain. When any one of these needs is deprived, a person is driven to act in a way that restores a state of biological equilibrium. Exactly which behaviour results depend on how successful that particular act in the repertoire has previously been in satisfying the need (habit strength)".

B= Drive X Habit

Behaviourism: Operant Conditioning: B. F. Skinner 1948-1960

According to Weber (2013), "contingencies of reinforcement exist in the environment, linking stimuli to responses. Those behaviours that are immediately rewarded are likely to be repeated, while those that lead to unpleasant outcomes are not. All behaviour can be explained through past reinforcements".

Field Theory: Lewin 1940-1960

According to Weber (2013), "behaviour is a function of both the person and the environment: B=f(P, E) People have needs and goals that arise from their experience of reality. These goals cause an energizing or tension in the person until they are achieved. Goals have worth, potency and psychological proximity. An individual plans his behaviour according to how valuable the desired outcome is and how able he feels to meet it (termed *level of aspiration*). Force= f(t, G)/e where t=tension, G=goal and e=psychological distance of person from the goal".

Social Learning Theory: Rotter 1960-1990

According to Weber (2013), "behaviour is chosen. People choose to engage in behaviours that they expect will lead to the most personally rewarding goals: B= f(E, RV) where E=expectancy, RV=reinforcement value. Expectancies come from past reinforcement for behaviour or experiences of reinforcement in similar situations. People can feel responsible for their behaviour and the reinforcement they receive i.e. have an internal locus of control OR people can feel that others' luck or uncontrollable circumstances are responsible for their behaviour and subsequent reinforcement, i.e. have an external locus of control".

Maslow's hierarchy of needs theory: Abraham Maslow

According to Robbins *et al* (2009:145) Maslow hypothesised that within every human being; there exists a hierarchy of need. The physiological needs include hunger, thirst, shelter, sex and other bodily needs. Safety needs include security and protection from physical and emotional harm. Social needs include Affection, belongingness, acceptance and friendship. Needs of esteem include internal factors such as self-

respect, autonomy and achievement, and external factors such as status, recognition and attention. Self-actualisation needs include the drive to become what one is capable of becoming; including growth, achieving one's potential and self-fulfilment.

Most of these theories focus on one need and fail to take other aspects of motivation into consideration, especially intrinsic motivation as compared to self-determination theory. According to Deci and Ryan (2008) many theories of motivation have as their primary individual difference the strength of one or more psychological needs—for example, the need for achievement, for intimacy, or for control. The idea is that needs are learned, and some people develop stronger needs than others. Because SDT maintains that the needs for competence, relatedness, and autonomy are basic and universal, the individual differences within the theory do not focus on the varying strength of needs but instead focus on concepts resulting from the degree to which the needs have been satisfied versus thwarted.

2.7   ASPECTS OF SELF-DETERMINATION THEORY

Deci and Ryan (2000d) argue that self-determination theory has five mini-theories, each of which was developed to explain a set of motivationally-based phenomena that emerged from laboratory and field research. The five mini-theories as explained by Deci and Ryan are as follows:

Cognitive Evaluation Theory (CET)

Deci and Ryan (2000d), states that "CET specifically addresses the effects of social contexts on intrinsic motivation, or how factors such as rewards, interpersonal controls, and ego-involvements impact intrinsic motivation and interest. CET highlights the critical roles played by competence and autonomy supports in fostering intrinsic motivation, which is critical in education, arts, sport and many other domains".

Organismic Integration Theory (OIT)

Deci and Ryan (2000d), states that "Organismic Integration Theory addresses the topic of extrinsic motivation in its various forms, with their properties, determinants, and consequences. Broadly speaking, extrinsic motivation is behaviour that is instrumental—that aims toward outcomes extrinsic to the behaviour itself. Yet there are

distinct forms of instrumentality, which include external regulation, introjection, identification, and integration. These sub-types of extrinsic motivation are seen as falling along a continuum of *internalization*. The more internalized the extrinsic motivation the more autonomous the person will be when enacting the behaviours. OIT is further concerned with social contexts that enhances or forestalls internalization—that is, with what leads toward people resisting, partially adopting, or deeply internalizing values, goals, or belief systems. OIT particularly highlights supports for autonomy and relatedness as critical to internalization".

Causality Orientations Theory (COT)

Deci and Ryan (2000d), states that "Causality Orientations Theory describes individual differences in people's tendencies to orient toward environments and regulate behaviour in various ways. COT describes and assesses three types of causality orientations: the autonomy orientation in which persons act out of interest in and valuing of what is occurring; the control orientation in which the focus is on rewards, gains, and approval; and the impersonal or motivated orientation characterized by anxiety concerning competence".

Basic Psychological Needs Theory (BPNT)

Deci and Ryan (2000d), states that "Basic Psychological Needs Theory elaborates on the concept of evolved psychological needs and their relations to psychological health and well-being. BPNT argues that psychological well-being and optimal functioning is predicated on autonomy, competence, and relatedness. Therefore, contexts that support versus contexts that thwart these needs should invariantly impact on wellness. The theory argues that all three needs are essential and that if any is thwarted there will be distinct functional costs. Because basic needs are universal aspects of functioning, BPNT looks at cross-developmental and cross-cultural settings for validation and refinements".

Goal Contents Theory (GCT)

Deci and Ryan (2000d), states that "Goal Contents Theory grows out of the distinctions between intrinsic and extrinsic goals and their impact on motivation and wellness. Goals are seen as differentially affording basic need satisfactions and are thus differentially

associated with well-being. Extrinsic goals such as financial success, appearance, and popularity/fame have been specifically contrasted with intrinsic goals such as community, close relationships, and personal growth, with the former more likely to be associated with lower wellness and greater ill-being".

As stated by Deci and Ryan (2000d), self-determination theory addresses autonomy, competence and relatedness. The following are the meaning of each aspect of self-determination theory:

Autonomy

According to Robbins *et al* (2009:170) autonomy is the degree to which a job provides substantial freedom, independence and discretion to the individual in scheduling the work and in determining the procedures to be used in carrying it out. An example of a job scoring high on autonomy is the job of a salesperson who schedules his or her own work each day and decides on the most effective sales approach for each customer without supervision. Chu (2006) examined the relationship between autonomy and well-being in Chinese in the United States. According to Chu (2006) "correlation and multiple regression analysis revealed a positive relationship between self-esteem and life satisfaction, and higher autonomy was related to higher self-esteem. However, no significant relationship was found between autonomy and life satisfaction. Moreover, autonomy and esteem were related".

According to Smith (2014) autonomy can be beneficial for individual employees as well as for the company. When a staff member has some power over her professional activities, she is less likely to fall into the trap of feeling helpless and out of control. As such, she may be more satisfied with her position and the company. With autonomy, an employee bears more responsibility and ownership of her work, which can motivate her to work harder and invest more energy and interest in each project. Smith further argues that when employees have more autonomy over their individual workloads, the company can benefit. Satisfied employees are more likely to be productive, which contributes to overall business success and that employees with more freedom over their work are also free to come up with innovative solutions that can make the company more competitive

Competence

According to The University of Nebraska-Lincoln (2014) competency is the combination of observable and measurable knowledge, skills, abilities and personal attributes that contribute to enhanced employee performance and ultimately result in organizational success. To understand competencies, it is important to define the various components of competencies.

The University argues that when utilizing competencies, it is important to keep the following in mind:

- Competencies do not establish baseline performance levels; rather they are used to raising the bar on employee performance. They provide employees with road maps to increase their capabilities incrementally.
- Competencies focus on an organization's culture and values.
- Competencies reflect the organization's strategy; that is, they are aligned to short and long-term missions and goals.
- Competencies focus on how results are achieved rather than merely the end result. In this manner they bridge the gap between performance management and employee development and are an integral component of personal development plans.
- Competencies close skill gaps within the organization.
- Competency data can be used for employee development, compensation, promotion, training and new hire selection decisions.

Relatedness

According to Van den Broeck *et al* (2010), the need for relatedness is defined as individuals' inherent propensity to feel connected to others, that is, to be a member of a group, to love and care and be loved and cared for. The need for relatedness is satisfied if people experience a sense of communion and develop close and intimate relationships with others. The assumption that individuals have the natural tendency to integrate themselves in the social matrix and benefit from being cared for is equally emphasized in developmental approaches such as attachment. It is consistent with concepts in organizational psychology such as social support and loneliness at work.

Oostroom *et al* (2010) cited Gilliland (1993) who defined job relatedness as the extent to which a test appears to measure content relevant to the job (face validity) and at the same time appears to be predictively valid (perceived predictive validity).

Self-determination theory and intrinsic motivation

The following are the aspects of how self-determination theory supports intrinsic motivation:

According to Vansteenkiste *et al* (2006) within SDT, intrinsic motivation is seen as the motivational instantiation of the proactive, growth-oriented nature of human beings. Indeed, intrinsically motivated activity is the natural basis for learning and development. Vansteenkiste *et al.* (2006) suggested that a need for competence underlies intrinsic motivation, that people engage in many activities in order to experience a sense of effectiveness and competence. Later, Vansteenkiste *et al.* (2006) proposed that people have a primary motivational propensity to engage in activities that allow them to feel a sense of personal causation and that this is the basis of intrinsic motivation. Vansteenkiste *et al.* (2006) further state that intrinsic motivation was considered as being self-determined, whereas extrinsic motivation was thought to reflect a lack of self-determination.

Vansteenkiste *et al.* (2006) also state that just as with intrinsic motivation, competence and autonomy are considered important energizers of internalization, but the need for relatedness is also critically important for internalization. According to SDT, the more autonomy-supportive the social context the more it maintains or enhances intrinsic motivation and the more it facilitates the internalization and integration of extrinsic motivation because such contexts tend to satisfy rather than thwart the learners' basic psychological needs.

2.8   LINK BETWEEN CURRENT AND PREVIOUS RESEARCH

Research has been previously conducted by various scholars on different generations (Baby boomers, Generation X, Generation Y and Generation Z) and the characteristics together with motivational strategies that can be used to motivate them. Deci and Ryan also conducted extensive research on self-determination theory and its aspects; however, there is a missing link between how self-determination theory can be applied

differently according to the generational category that the specific individual falls under. A Nexus search was done and there were no previous research outcomes found to integrate self-determination theory and different generational needs.

Different generations have different needs and the self-determination theory cannot be homogeneously applied across all generations as they all have different needs. It would be advantageous for a manager to know which generation requires more of a certain aspect from among the three aspects of self-determination theory (autonomy, competence and relatedness) and hence there is a need to conduct this research as it is relevant to the contemporary diversified workplace.

2.9 SUMMARY

In this section, the main aspects relating to self-determination theory and generational difference have been covered. Characteristics of different generations have been discussed (Baby boomers, Generation X, Generation Y and Generation Z) together with current research that has been conducted on how to motivate them. Intrinsic motivation has been thoroughly discussed together with its advantages over extrinsic motivation. The roles of needs related to self-determination theory have also been discussed together with the drives. The aspects of self-determination theory have been broadly discussed according to the champions of the theory (Deci and Ryan) and previous research linking self-determination theory and different generations was established (if already existing). Conclusion is in chapter 5.

CHAPTER 3: PROCEDURE USED TO OBTAIN FINDINGS

3.1 INTRODUCTION

This chapter provides the procedure that was followed to obtain findings from the participants. The type of analysis used to obtain the data and the details of the participants and sample are addressed in this chapter. The challenges with regards to responses from the participants are also discussed in this chapter together with the actions that were taken to get more response from participants.

3.2 RESEARCH APPROACH

A quantitative approach was used to obtain data from the participants of Denel Dynamics.

3.3 RESEARCH DESIGN

A cross-sectional design was used when gathering data from the participants. Since different generations are in question, the cross-sectional research design was the one that fitted the kind of research best.

3.4 MEASUREMENT INSTRUMENT

A structured questionnaire was used in order to determine the motivation of the participants. The self-determination questionnaire used was developed by Van den Broeck, Vansteenkiste, De Witte, Soenens and Lens (2010) and is based on SDT as developed by Deci and Ryan. According to Deci and Ryan (2013) the self-determination scale (SDS) was designed to assess individual differences in the extent to which people tend to function in a self-determined way. It is thus considered a relatively enduring aspect of people's personalities which reflects (1) being more aware of their feelings and their sense of self, and (2) feeling a sense of choice with respect to their behaviour. The self-determination theory questionnaire used consists of three latent variables (autonomy, relatedness and competence) and statements that were stated in the questionnaire include statements like "I feel free to express my ideas and opinions in this job" and "I doubt whether I am able to execute my job properly" where participants must rate a statement using a scale of 1 to 5 with 1 meaning totally disagree and 5 meaning totally agree.

The self-determination scale has been used successfully by Thrash and Elliot (2002) of the University of Rochester in their study, where application was shown to be reliable.

3.5 PARTICIPANTS

The target population is 863 employees of Denel Dynamics. The target population comprises employees from various divisions in Denel Dynamics (Supply chain department, missiles, DISS and UAVs). The target population ranges from general workers, supervisors, first-line managers, middle managers, senior managers, top management and executive management throughout the company.

3.6 SAMPLE

According to Prince (2013) a convenience sample, also called a non-probability or opportunity sample, among other names, is a sample drawn without any underlying probability-based selection method. Basically a convenience sample is any data that is neither a complete enumeration of all the possible data — a census — nor a careful, scientific sample. "Convenience samples" are rarely convenient to draw, but they are referred to in this way to distinguish them from random samples. Examples of convenience samples include testimonies presented to NGOs, UN Missions, or truth commissions, lists of airstrikes documented by observing them, text messages coming in from disaster-stricken areas, records collected by police forces during their daily duties, investigation records, and press reports, among many, many others. All these are important, useful sources of data and many convenience samples are collected through very carefully designed data-collection procedures.

Prince further states that a random sample, also called a probability sample, is one in which every member of the population has some chance (probability) of being selected into the sample, and this probability of selection can be calculated. This feature makes it possible to describe quantitatively the relationship between a random sample and the underlying population of interest.

A convenience sampling technique was utilised when gathering data from participants; this is due to the simplicity in administering the method. The target rate was 100 respondents per each generation but a minimum of 30 respondents per generation would also enable the research to be concluded, although this would imply that findings

could only be interpreted in terms of the sample and could not be generalised to the population.

3.7   QUESTIONNAIRE RELIABILITY

According for Field (2006) one way to think of reliability is that, all other things being equal, a person should get the same score on a questionnaire if they completed it at two different points in time (test-retest reliability). Another way to look at reliability is to say that two people, who are the same in terms of the construct being measured, should get the same score. In statistical terms, the usual way to look at reliability is based on the idea that individual items (or sets of items) should produce results consistent with the overall questionnaire.

Field further states that the simplest way to do this in practice is to use split half reliability. This method randomly splits the data set into two. A score of each participant is then calculated based on each half of the scale. If a scale is very reliable, a person's score on one half of the scale should be the same (or similar) to the score of the other half: therefore, across several participants scores from the two halves of the questionnaire should correlate perfectly (well, very highly). The correlation between the two halves is the statistic computed in the split half method, with large correlation being a sign of reliability. The problem with this method is that there are several ways in which a set of data can be split into two and so the results could be a product of the way in which the data were split. To overcome this problem Cronbach came up with a measure that is loosely equivalent to splitting data in two in every possible way and computing the correlation coefficient for each split. The average of these values is equivalent to Cronbach's alpha (α), which is the most common measure of scale reliability.

Field states that values substantially lower for Cronbach's alpha indicate unreliable scale, generally accepted value of 0.8 is appropriate for cognitive tests such as intelligence tests, for ability tests a cut-off point of 0.7 is more suitable.

According to Phelan and Wren (2005) "average inter-item correlation is a subtype of internal consistency reliability. It is obtained by taking all the items on a test that probe the same construct (e.g., reading comprehension), determining the correlation coefficient for each *pair* of items, and finally taking the average of all of these correlation coefficients. This final step yields the average inter-item correlation".

3.8   ANOVA ANALYSIS

According to Taylor (2014) analysis of variance, or ANOVA, is a technique derived from statistical inference that allows us to deal with several populations. Taylor (2014) further states that "to deal with situations in which we need to make multiple comparisons we use ANOVA. This test allows us to consider the parameters of several populations at once, without getting into some of the problems that confront us by conducting hypothesis tests on two parameters at a time". According to Creech (2014), the null hypothesis for ANOVA is that the mean (average value of the dependent variable) is the same for all groups. The alternative or research hypothesis is that the average is not the same for all groups. Creech (2014), further states that the "ANOVA test procedure produces an F-statistic, which is used to calculate the p-value (significance value), if $p < .05$, we reject the null hypothesis. We can then conclude that the average of the dependent variable is not the same for all groups. With ANOVA, if the null hypothesis is rejected, then all we know is that at least 2 groups are different from each other. In order to determine which groups are different from which, post-hoc t-tests are performed using some form of correction (such as the Bonferroni correction) to adjust for an inflated probability of a Type I error".

CHAPTER 4: RESEARCH METHODOLOGY AND RESULTS

4.1 INTRODUCTION

This chapter provides the response rate that was obtained together with the interpretation of the response rate. The reliability of the data is also discussed in this section using Cronbach's alpha as the measurement for the reliability.

4.2 RESPONSE RATE

The targeted rate was 100 respondents per each generation but a minimum of 30 respondents per generation would also enable the research to be concluded on behalf of the population. The questionnaires were e-mailed to everyone in the organisation and the initial response was 48 for baby boomers, 40 for generation X and only 29 for generation Y. There were no responses from generation Z as there are no generation Z employees in Denel Dynamics.

Since the response was far from the targeted number, remainder e-mails were sent to the whole organisation to remind those who had not filled in the questionnaire to do so. 66 questionnaires were received from baby boomers, 61 questionnaires from generation X and 41 respondents from generation Y. A physical follow-up was done to close colleagues of generation Y to fill in the questionnaires and a total number of 52 questionnaires were collected after the physical follow-up. The number of response from each generation was sufficient to conclude on the whole population of Denel Dynamics.

4.3 SAMPLE DEMOGRAPHIC PROFILE

The following tables show the frequency rate.

TABLE 4.3.1:   RESPONDENTS' GENERATION

#	Answer	Response	%
1	Baby boomers	67	37.2
2	Generation X	61	33.9
3	Generation Y	52	28.9
	Total	**180**	**100**
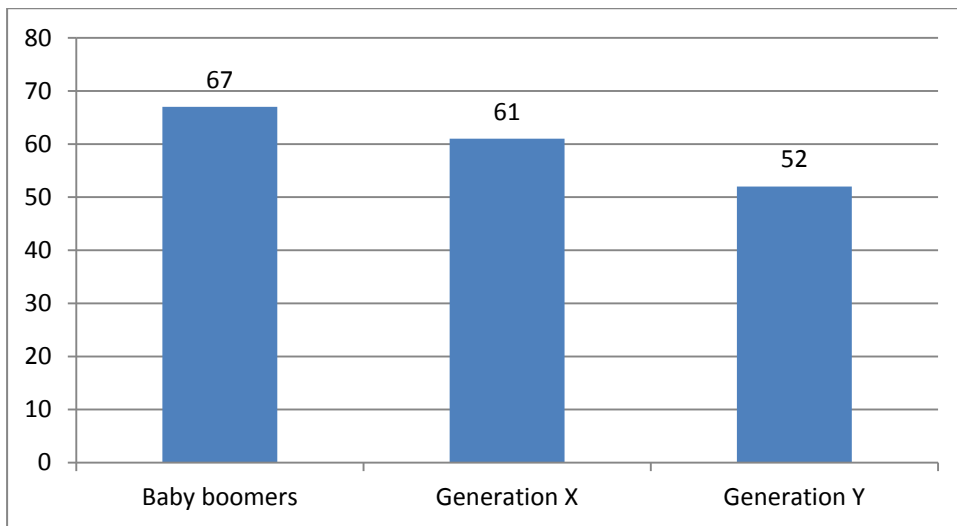
FIGURE 4.3.1:   GENERATION GRAPHIC REPRESENTATION

From the 180 respondents, 67 (37.2%) are baby boomers, 61 (33.9%) are generation X and 52 (28.9%) are generation Y.

TABLE 4.3.2:   RESPONDENTS' GENDER

#	Answer	Response	%
1	Male	113	62.8
2	Female	67	37.2
	Total	**180**	**100.0**
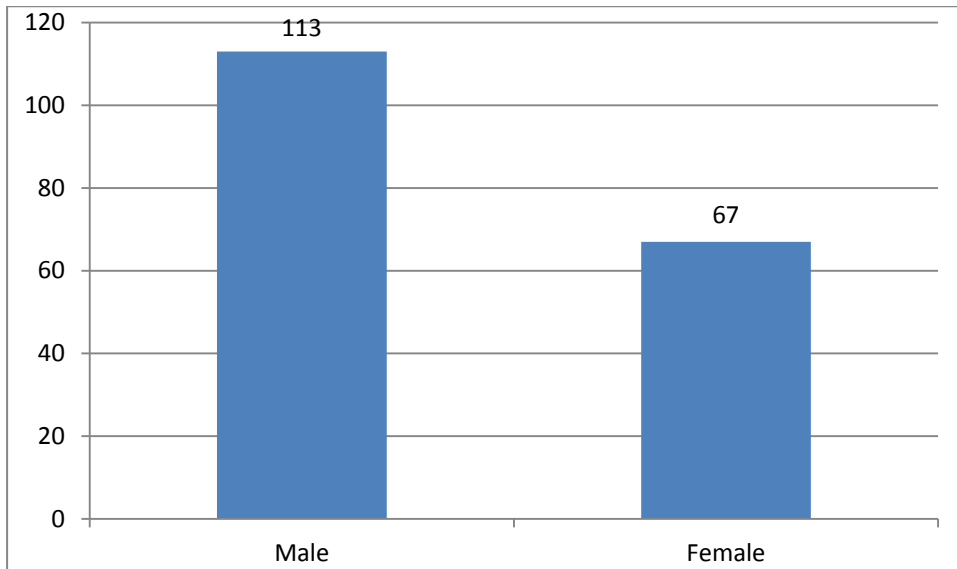
FIGURE 4.3.2:   **GENDER GRAPHIC REPRESENTATION**

From the 180 respondents, 113 (62.8%) are male and 67 (37.2%) are female.

TABLE 4.3.3:   **RESPONDENTS' RACE**

#	Answer	Response	%
1	Black	48	26.7
2	White	108	60.0
3	Coloured	9	5.0
4	Indian	14	7.8
5	Other	1	.6
	Total	**180**	**100.0**
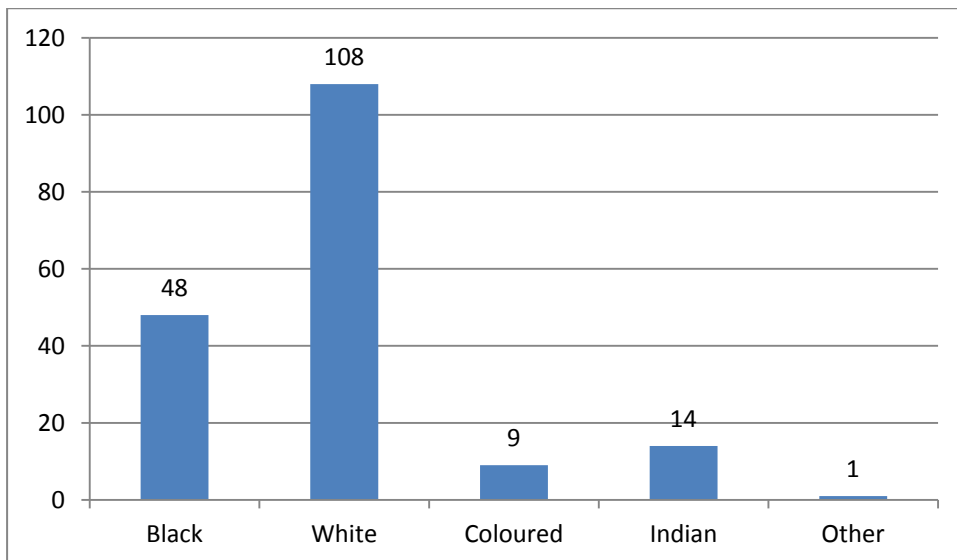
FIGURE 4.3.3:   RACE GRAPHIC REPRESENTATION

48 (26.7%) of the respondents are black, 108 (60%) are white, 9 (5%) are coloured, 14 (7.8%) are Indian and only 1 (0.6%) belong to other races not specified.

TABLE 4.3.4:   RESPONDENTS' LEVELS OF EMPLOYMENT

#	Answer	Response	%
1	Junior	36	20
2	Middle	77	42.8
3	Senior	65	36.1
4	Top	2	1.1
	Total	**180**	**100**
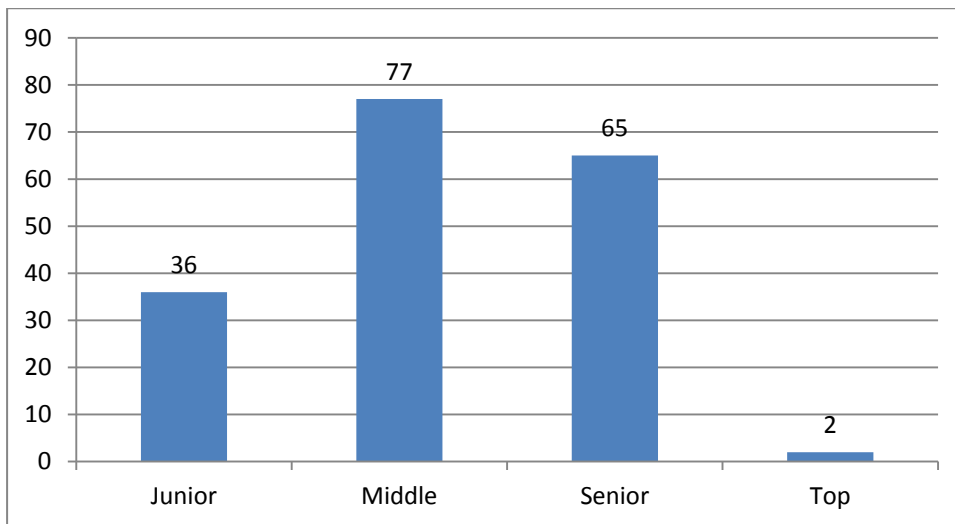
FIGURE 4.3.4:   LEVEL OF EMPLOYMENT GRAPHIC REPRESENTATION

36 (20%) of the respondents are junior-level employees, 77 (42.8%) are middle-level employees, 65 (36.1%) of the respondents occupy senior positions and 2 (1.1%) are in top positions.

TABLE 4.3.5:   RESPONDENTS' DURATION OF EMPLOYMENT IN CURRENT POSITIONS

#	Answer	Response	%
1	0 – 2 years	52	28.9
2	3 – 5 years	33	18.3
3	6 – 10 years	24	13.3
4	>10 years	71	39.4
	Total	**180**	**100.0**
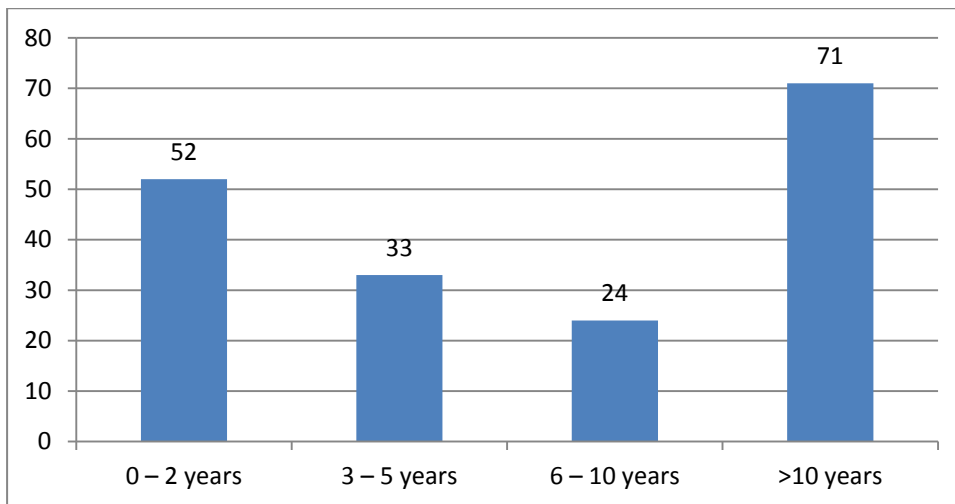
FIGURE 4.3.5:   DURATION OF EMPLOYMENT IN CURRENT POSITION GRAPHIC REPRESENTATION

Out of 180 respondents, 52 (28.9%) have been in their current position for less than two years, 33 (18.3%) have been in their current position for 3 – 5 years, 24 (13.3%) have been in their current position for 6 – 10 years and 71 (39.4%) have been in their current position for more than 10 years.

TABLE 4.3.6:   RESPONDENTS' HIGHEST QUALIFICATION

#	Answer	Response	%
1	Below Matric	5	2.8
2	Matric	26	14.4
3	Diploma/ Degree	110	61.1
4	Postgraduate	39	21.7
	Total	**180**	**100.0**
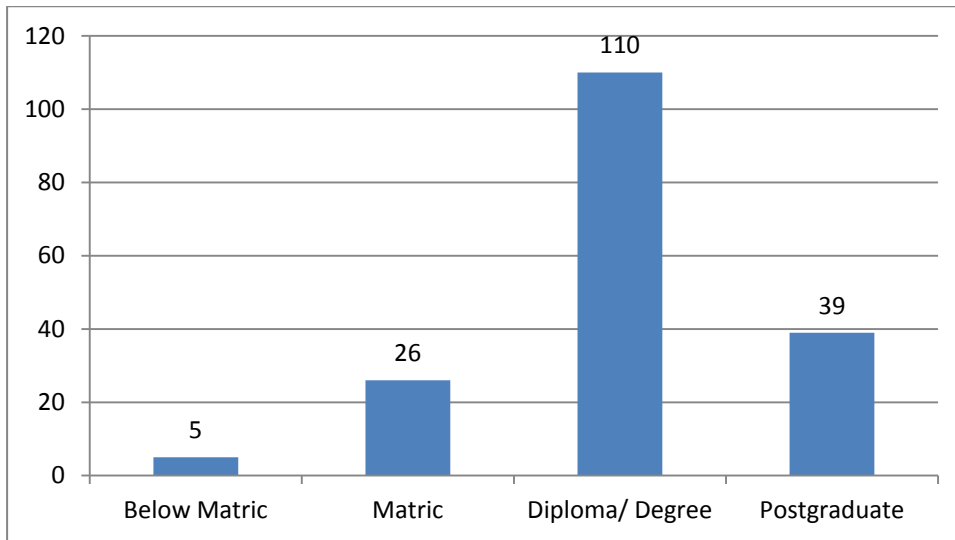
FIGURE 4.3.6: **HIGHEST QUALIFICATION GRAPHIC REPRESENTATION**

Five (2.8%) of the respondents have a qualification that is below matric (Grade 12), 26 (14.4%) have a matric qualification, 110 (61.1%) either have a diploma or degree and 39 (21.7%) have a postgraduate qualification.

4.4 GENERATIONAL DEMOGRAPHIC PROFILE

TABLE 4.4.1: **GENERATION AND GENDER**

#	Generation	Male	Female	**Total**
1	Baby boomers	56	11	**67**
2	Generation X	32	29	**61**
3	Generation Y	25	27	**52**
	Total	**113**	**67**	**180**
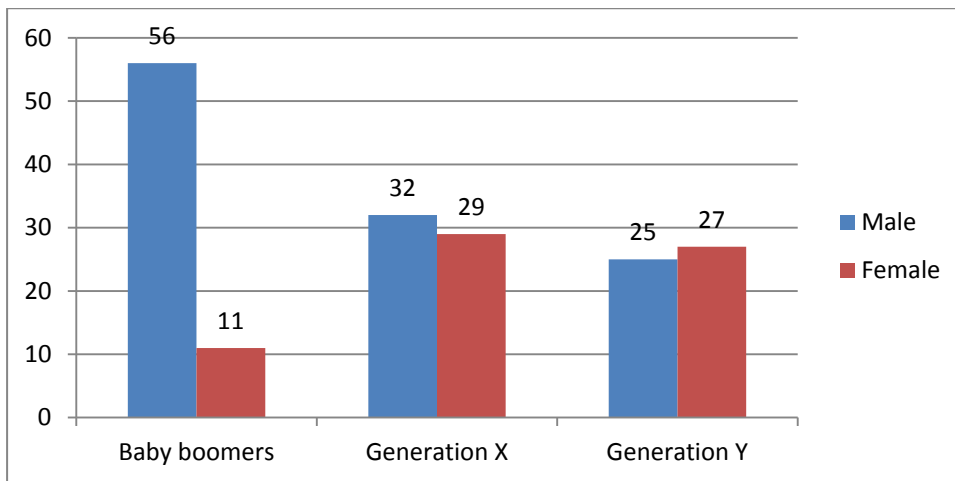
FIGURE 4.4.1:   GENERATION AND GENDER GRAPHIC REPRESENTATION

Out of 180 respondents, 67 are baby boomers of which 56 are males and eleven are females. 61 are generation x of which 32 are males and 29 are females. 52 are generation y of which 25 are males and 27 are females.

TABLE 4.4.2:   GENERATION AND RACE

#	Generation	Black	White	Coloured	Indian	Other	**Total**
1	Baby boomers	1	63	3			**67**
2	Generation X	16	35	6	3	1	**61**
3	Generation Y	31	10		11		**52**
	Total	**48**	**108**	**9**	**14**	**1**	**180**
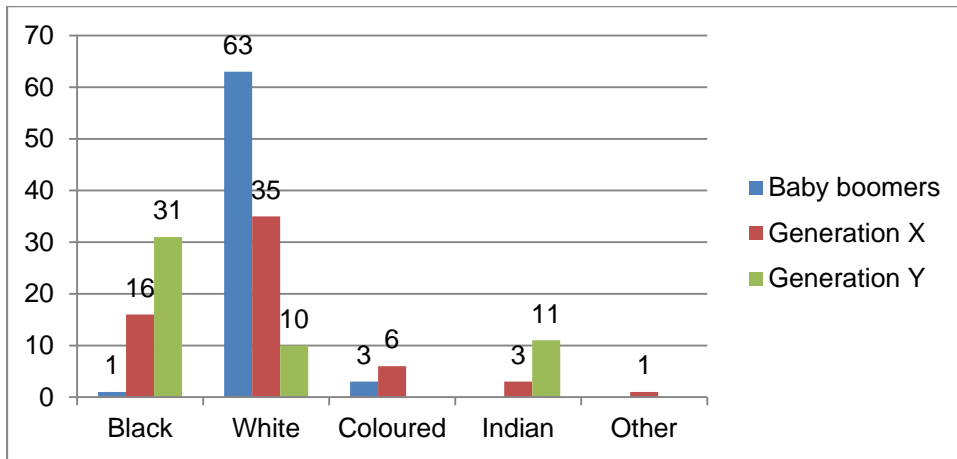
FIGURE 4.4.2:   **GENERATION AND RACE GRAPHIC REPRESENTATION**

Out of 180 respondents, 48 are black and out of the 48, one is a baby boomer, sixteen are generation X and 31 are generation Y. 108 respondents are white in which 63 are baby boomers, 35 are generation X and 10 are generation Y. Nine respondents are coloured of which three are baby boomers and six are generation X. There are fourteen Indian respondents of which three are generation X and 11 are generation Y. There is one other race which is generation X.

TABLE 4.4.3:   **GENERATION AND LEVEL OF EMPLOYMENT**

#	Generation	Junior	Middle	Senior	Top	Total
1	Baby boomers	4	28	32	2	**66**
2	Generation X	3	32	26		**61**
3	Generation Y	28	17	7		**52**
	Total	**35**	**77**	**65**	**2**	**179**
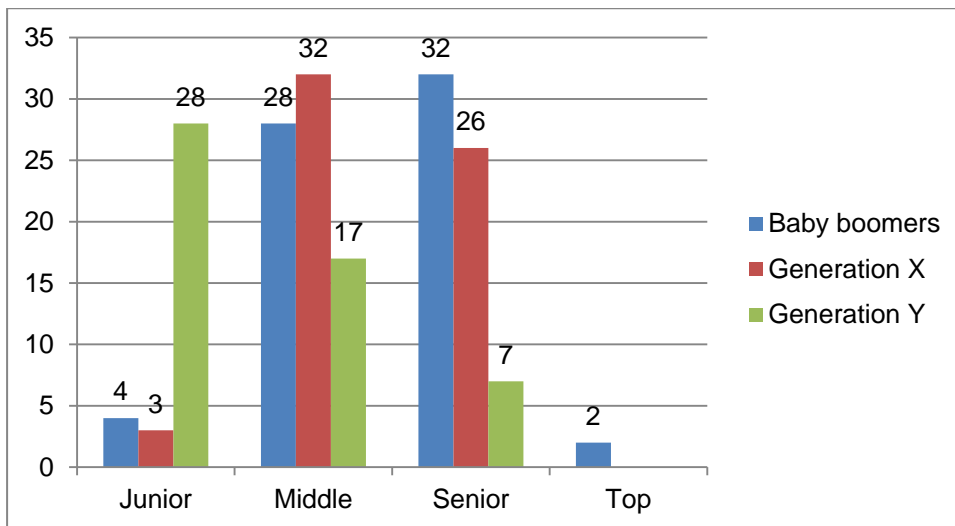
**FIGURE 4.4.3:   GENERATION AND LEVEL OF EMPLOYMENT GRAPHIC
REPRESENTATION**

35 respondents are junior level employees of which four are baby boomers, three are
generation X and 28 are generation Y. 77 respondents are middle-level employees of
which 28 are baby boomers, 32 are generation X and seventeen are generation Y. 65
respondents are senior level employees of which 32 are baby boomers, 26 are
generation X and seven are generation Y. Two respondents are top-level employees
who are all baby boomers. One respondent's feedback got lost in the system

**TABLE 4.4.4:   GENERATION AND DURATION OF EMPLOYMENT IN
CURRENT POSITION**

#	Generation	0–2 Years	2-3 Years	6-10 Years	>10 Years	Total
1	Baby boomers	5	3	7	52	**67**
2	Generation X	12	15	17	17	**61**
3	Generation Y	35	15	2		**52**
	Total	**52**	**33**	**26**	**69**	**180**
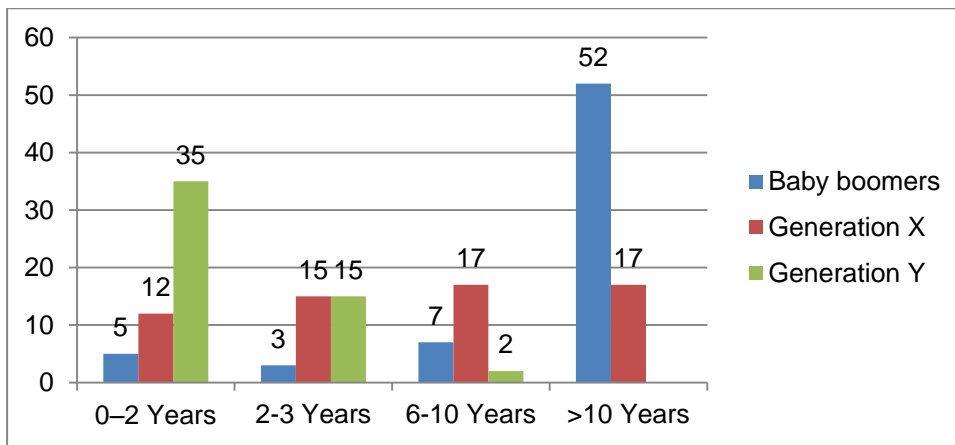
FIGURE 4.4.4: **GENERATION AND DURATION OF EMPLOYMENT IN CURRENT POSITION GRAPHIC REPRESENTATION**

Out of 180 respondents, 52 have been in their current positions for less than two years of which five are baby boomers, twelve are generation X and 35 are generation Y. 33 have been in current positions for 2 – 3 years of which three are baby boomers, fifteen are generation X and fifteen are generation Y. 26 respondents have been in current positions for 6 – 10 years of which seven are baby boomers, seventeen are generation X and two are generation Y. 69 respondents have been in current positions for more than ten years of which 52 are baby boomers and seventeen are generation X.

TABLE 4.4.5: **GENERATION AND HIGHEST QUALIFICATION**

#	Generation	Below Matric	Matric	Diploma/ Degree	Postgraduate	**Total**
1	Baby boomers	3	10	33	21	**67**
2	Generation X	2	13	30	16	**61**
3	Generation Y		3	47	2	**52**
	Total	**5**	**26**	**110**	**39**	**180**
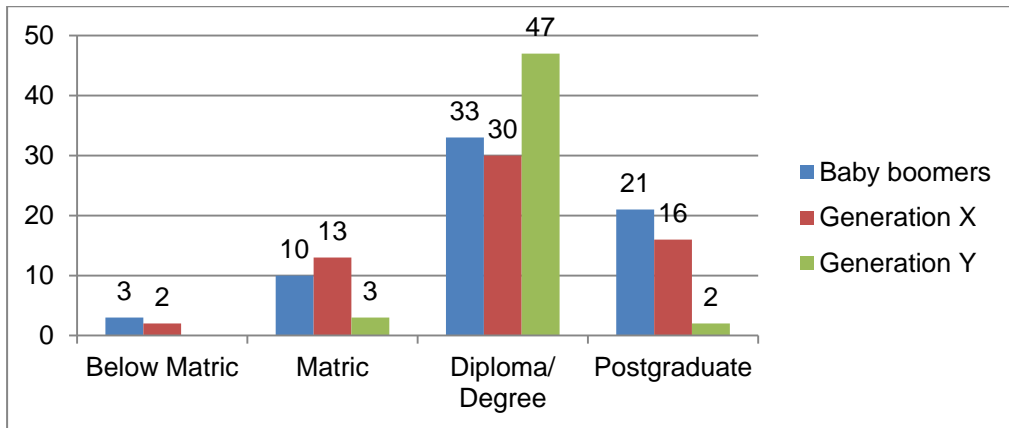
FIGURE 4.4.5:   **GENERATION AND HIGHEST QUALIFICATION GRAPHIC REPRESENTATION**

Five respondents have qualifications below matric of which three are baby boomers and two are generation X. 26 respondents have a matric qualification of which ten are baby boomers, thirteen are generation X and three are generation y. 110 respondents either have a degree or diploma of which 33 are baby boomers, 30 are generation X and 47 are generation Y. 39 have postgraduate qualifications of which 21 are baby boomers, sixteen are generation X and two are generation Y.

4.5   SUMMARY

Most of the respondents comprise baby boomers and generation X, with 37.2% baby boomers and 33.9% generation X, males are the dominant respondents at 62.8%. Most of the respondents are white (60%) and also occupy middle level positions (36.1%). The majority of the respondents (39.4%) have worked in the organisation for more than ten years; most of them (61.1%) hold a diploma or a degree.

The next section provides a breakdown of the respondents' demographic profile per generation group, since the different generations were of specific interest for this study.

4.6   QUESTIONNAIRE GENERATIONAL FREQUENCIES

The following are response frequencies for the statements in the questionnaire where respondents had to rate from 1 – 5 with 1 = totally disagree and 5 = totally agree.

TABLE 4.6.1: **GENERATIONAL RATING FREQUENCY ON "I FEEL FREE TO EXPRESS MY IDEAS AND OPINIONS IN THIS JOB" (QUESTION 1)**

#	Generation	Totally disagree	Disagree	Somewhat agree/ somewhat disagree	Agree	Totally agree	Total
1	Baby boomers		1	11	31	24	**67**
2	Generation X	4	5	14	23	15	**61**
3	Generation Y	1	4	12	30	5	**52**
	Total	**5**	**10**	**37**	**84**	**44**	**180**
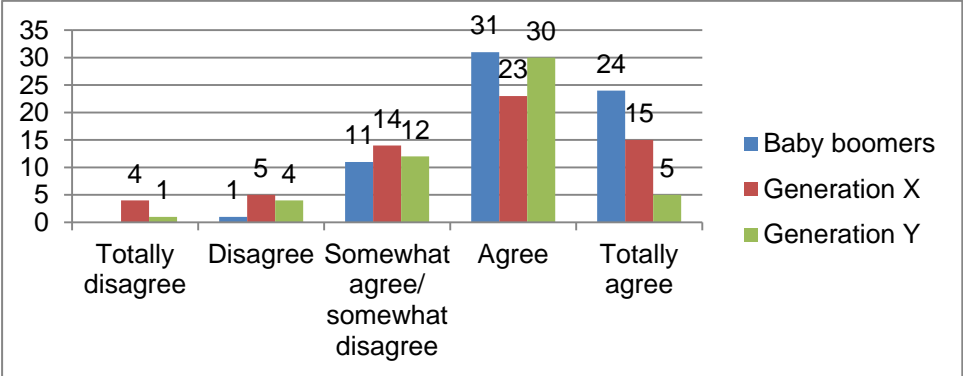
FIGURE 4.6.1: **GRAPHIC REPRESENTATION FOR "I FEEL FREE TO EXPRESS MY IDEAS AND OPINIONS IN THIS JOB"**

Out of 180 respondents, five totally disagree that they feel free to express their ideas and opinion in their job of which four are generation X and one is generation Y. Ten respondents disagree with the statement of which one is a baby boomer, five are generation X and four are generation Y. 37 respondents somewhat agree/ somewhat disagree of which eleven are baby boomers, fourteen are generation X and twelve are generation Y. 84 respondents agree of which 31 are baby boomers, 23 are generation X and 30 are generation Y. 44 totally agree of which 24 are baby boomers, fifteen are generation X and five are generation Y.

TABLE 4.6.2: **GENERATIONAL RATING FREQUENCY ON "I DON'T REALLY FEEL COMPETENT IN MY JOB" (QUESTION 2)**

#	Generation	Totally disagree	Disagree	Somewhat agree/ somewhat disagree	Agree	Totally agree	**Total**
1	Baby boomers	35	23	2	4	3	**67**
2	Generation X	33	22	3	3		**61**
3	Generation Y	16	29	6	1		**52**
	Total	**84**	**74**	**11**	**8**	**3**	**180**
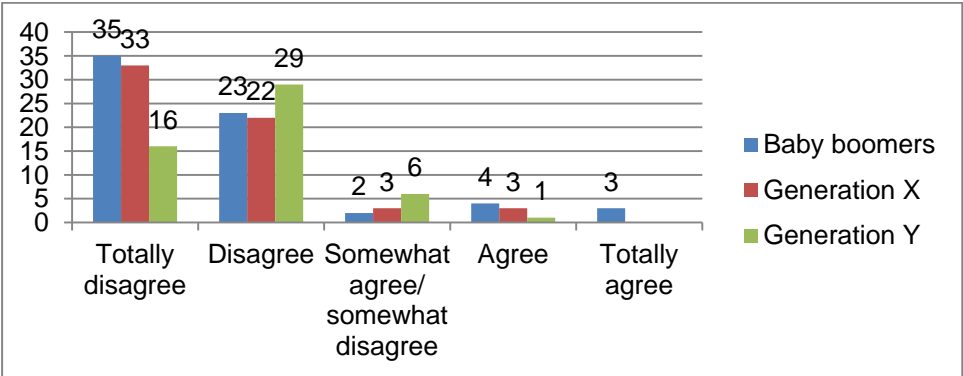
FIGURE 4.6.2: **GRAPHIC REPRESENTATION FOR "I DON'T REALLY FEEL COMPETENT IN MY JOB"**

Out of 180 respondents, 84 totally disagree that they don't really feel competent in their job of which 35 baby boomers, 33 are generation X and sixteen are generation Y. 74 respondents disagree with the statement of which 23 are baby boomer, 22 are generation X and 29 are generation Y. Eleven respondents somewhat agree/ somewhat disagree of which two are baby boomers, three are generation X and six are generation Y. Eight respondents agree of which four are baby boomers, three are generation X and one is generation Y. Three totally agree of which all of them are baby boomers

TABLE 4.6.3: GENERATIONAL RATING FREQUENCY ON "I DON'T REALLY FEEL CONNECTED WITH OTHER PEOPLE AT MY JOB" (QUESTION 3)

#	Generation	Totally disagree	Disagree	Somewhat agree/ somewhat disagree	Agree	Totally agree	**Total**
1	Baby boomers	28	17	8	12	1	**66**
2	Generation X	25	23	7	6		**61**
3	Generation Y	13	25	7	4		**49**
	Total	**66**	**65**	**22**	**22**	**1**	**176**
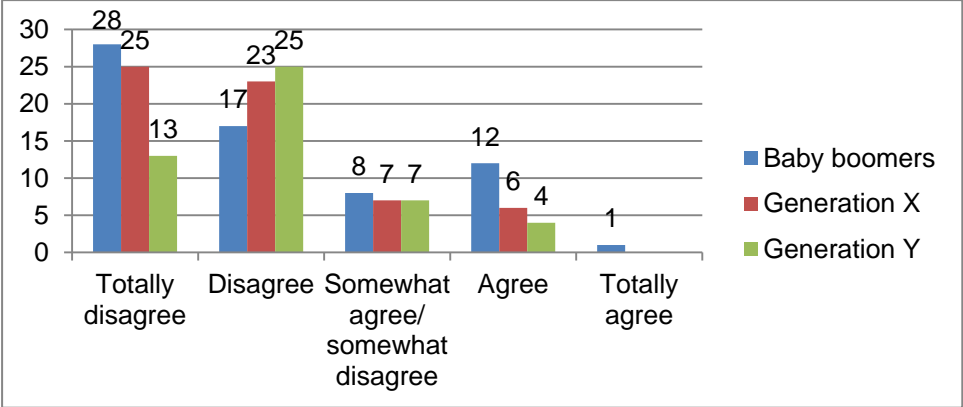
FIGURE 4.6.3: GRAPHIC REPRESENTATION FOR "I DON'T REALLY FEEL CONNECTED WITH OTHER PEOPLE AT MY JOB"

Out of 180 respondents, 66 totally disagree that they don't really feel connected with other people at their job of which seventeen are baby boomers, 23 are generation X and 25 generation Y. 65 respondents disagree with the statement of which seventeen are baby boomers, 23 are generation X and 25 are generation Y. 22 respondents somewhat agree/ somewhat disagree of which eight are baby boomers, seven are generation X and seven are generation Y. 22 respondents agree of which twelve are baby boomers,

six are generation X and four are generation Y. One totally agrees - a baby boomer. Four respondents' feedback got lost in the system.

TABLE 4.6.4:   GENERATIONAL RATING FREQUENCY ON "I FEEL LIKE I CAN BE MYSELF AT MY JOB" (QUESTION 4)

#	Generation	Totally disagree	Disagree	Somewhat agree/ somewhat disagree	Agree	Totally agree	**Total**
1	Baby boomers	1	4	7	34	19	**65**
2	Generation X	1	3	9	33	15	**61**
3	Generation Y		8	16	28		**52**
	Total	**2**	**15**	**32**	**95**	**34**	**178**
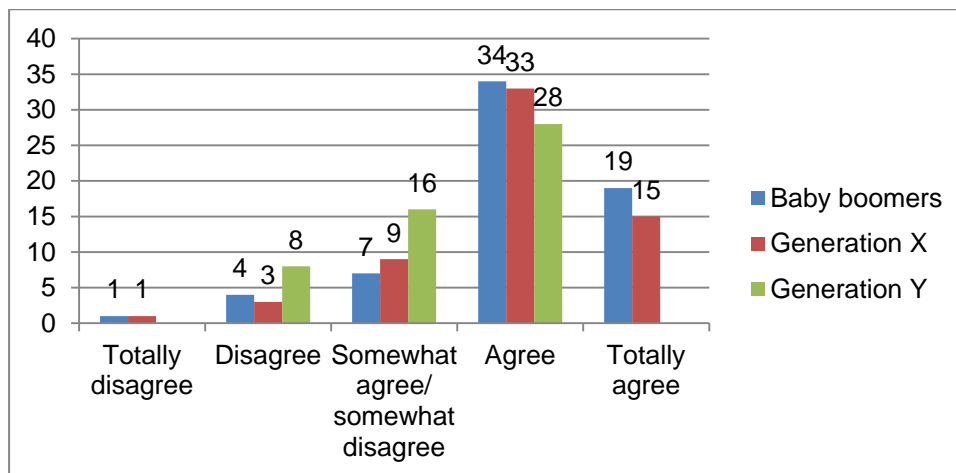
FIGURE 4.6.4:   GRAPHIC REPRESENTATION FOR "I FEEL LIKE I CAN BE MYSELF AT MY JOB"

Out of 180 respondents, two totally disagree that they feel like they can be themselves at their job of which one is a baby boomer and one is a generation X. Fifteen respondents disagree with the statement of which four are baby boomers, three are generation X and eight are generation Y. 32 respondents somewhat agree/ somewhat disagree of which seven are baby boomers, nine are generation X and sixteen are generation Y. 95 respondents agree of which 34 are baby boomers, 33 are generation X

and 28 are generation Y. 34 totally agree of which nineteen are baby boomers and fifteen are generation X. Two respondents' feedback got lost in the system.

TABLE 4.6.5: **GENERATIONAL RATING FREQUENCY ON "I MASTER MY TASKS AT MY JOB" (QUESTION 5)**

#	Generation	Totally disagree	Disagree	Somewhat agree/ somewhat disagree	Agree	Totally agree	**Total**
1	Baby boomers			5	29	30	**64**
2	Generation X	1		7	26	27	**61**
3	Generation Y		4	12	22	14	**52**
	Total	**1**	**4**	**24**	**77**	**71**	**177**
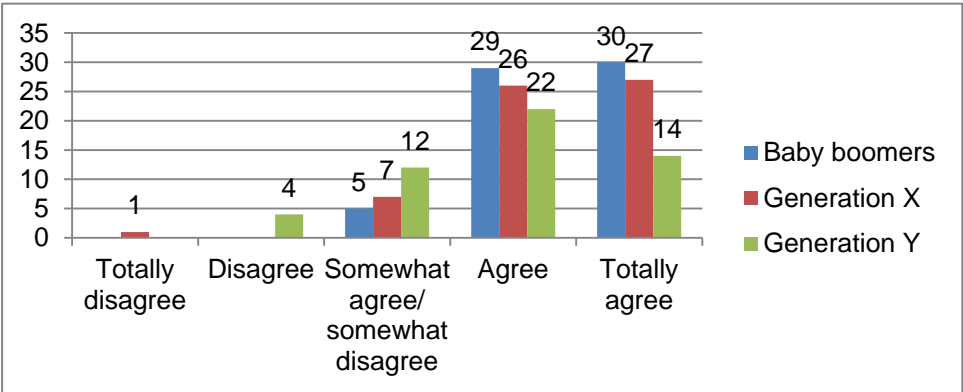
FIGURE 4.6.5: **GRAPHIC REPRESENTATION FOR "I REALLY MASTER MY TASKS AT MY JOB"**

Out of 180 respondents, one respondent totallys disagree that he/ she really masters his/ her tasks at his/ her job of which the respondent is generation X. Four respondents disagree with the statement of which all four are generation Y. 24 respondents somewhat agree/ somewhat disagree of which five are baby boomers, seven are generation X and twelve are generation Y. 77 respondents agree of which 29 are baby

boomers, 26 are generation X and 22 are generation Y. 71 totally agree of which 30 are baby boomers, 27 are generation X and fourteen are generation Y. Three respondents' feedback got lost in the system.

TABLE 4.6.6: **GENERATIONAL RATING FREQUENCY ON "AT WORK, I FEEL PART OF THE GROUP" (QUESTION 6)**

#	Generation	Totally disagree	Disagree	Somewhat agree/ somewhat disagree	Agree	Totally agree	**Total**
1	Baby boomers		5	12	27	17	**61**
2	Generation X	3	3	12	26	17	**61**
3	Generation Y		3	10	25	12	**50**
	Total	**3**	**11**	**34**	**78**	**46**	**172**
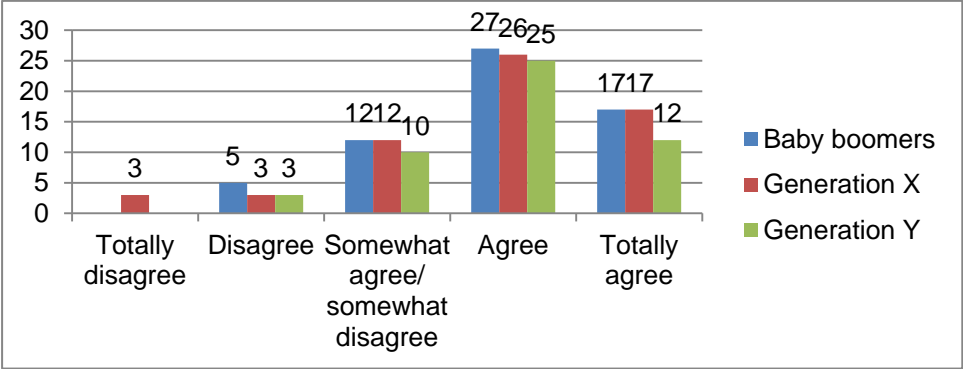
FIGURE 4.6.6: **GRAPHIC REPRESENTATION FOR "AT WORK, I FEEL PART OF A GROUP"**

Out of 180 respondents, three respondents totally disagree that at work, they feel part of a group of which all three respondents are generation X. Eleven respondents disagree with the statement of which five are baby boomers, three are generation X and three are generation Y. 34 respondents somewhat agree/ somewhat disagree of which twelve are

baby boomers, twelve are generation X and ten are generation Y. 78 respondents agree of which 27 are baby boomers, 26 are generation X and 25 are generation Y. 46 totally agree of which seventeen are baby boomers, seventeen are generation X and twelve are generation Y. Eight respondents' feedback got lost in the system.

TABLE 4.6.7: GENERATIONAL RATING FREQUENCY ON "AT WORK, I OFTEN FEEL LIKE I HAVE TO FOLLOW OTHER PEOPLE'S COMMANDS" (QUESTION 7)

#	Generation	Totally disagree	Disagree	Somewhat agree/ somewhat disagree	Agree	Totally agree	**Total**
1	Baby boomers	9	20	26	11		**66**
2	Generation X	3	10	30	16	1	**60**
3	Generation Y	2	15	24	8	3	**52**
	Total	**14**	**45**	**80**	**35**	**4**	**178**
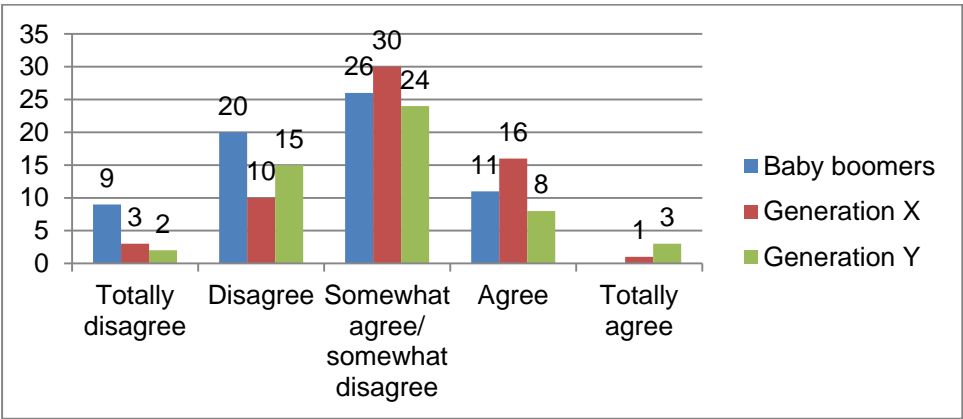
FIGURE 4.6.7: GRAPHIC REPRESENTATION FOR "AT WORK, I OFTEN FEEL LIKE I HAVE TO FOLLOW OTHER PEOPLE'S COMMANDS"

Out of 180 respondents, fourteen respondents totally disagree that they often feel like they have to follow other people's commands of which nine respondents are baby boomers, three are generation X and two are generation Y. 45 respondents disagree with the statement of which 20 are baby boomers, ten are generation X and fifteen are generation Y. 80 respondents somewhat agree/ somewhat disagree of which 26 are baby boomers, 30 are generation X and 24 are generation Y. 35 respondents agree of which eleven are baby boomers, sixteen are generation X and eight are generation Y. Four totally agree of which one is generation X and three are generation Y. Two respondents' feedback got lost in the system.

TABLE 4.6.8: **GENERATIONAL RATING FREQUENCY ON "I FEEL COMPETENT AT MY JOB" (QUESTION 8)**

#	Generation	Totally disagree	Disagree	Somewhat agree/ somewhat disagree	Agree	Totally agree	**Total**
1	Baby boomers		2	6	27	31	**66**
2	Generation X			7	26	28	**61**
3	Generation Y			9	35	8	**52**
	Total	**0**	**2**	**22**	**88**	**67**	**179**
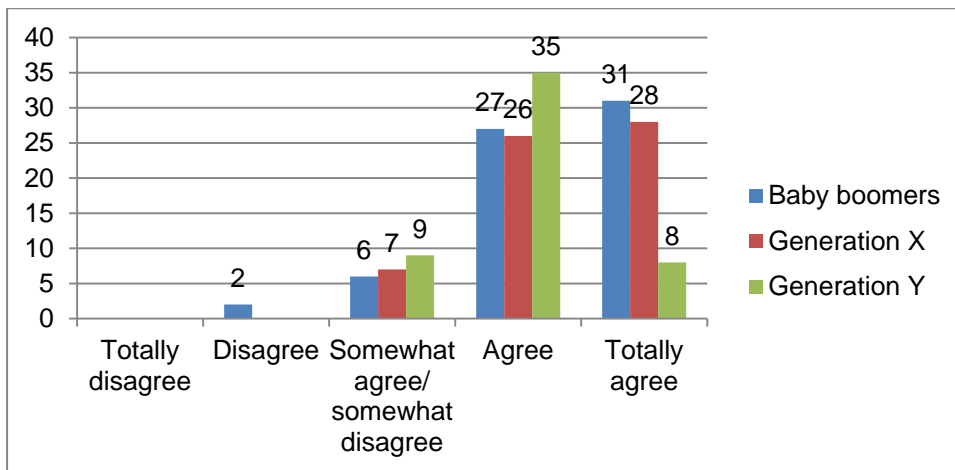
FIGURE 4.6.8: **GRAPHIC REPRESENTATION FOR "I FEEL COMPETENT AT MY JOB"**

Out of 180 respondents, 0 respondents totally disagree that they feel competent at their job. Two respondents disagree with the statement of which all of them are baby boomers. 22 respondents somewhat agree/ somewhat disagree of which six are baby boomers, seven are generation X and nine are generation Y. 88 respondents agree of which 27 are baby boomers, 26 are generation X and 35 are generation Y. 64 totally agree of which 31 are baby boomers, 28 are generation X and eight are generation Y. One respondent's feedback got lost in the system.

TABLE 4.6.9: **GENERATIONAL RATING FREQUENCY ON "I DON'T REALLY MIX WITH OTHER PEOPLE AT MY JOB" (QUESTION 9)**

#	Generation	Totally disagree	Disagree	Somewhat agree/ somewhat disagree	Agree	Totally agree	**Total**
1	Baby boomers	23	19	18	6	1	**67**
2	Generation X	22	27	7	2	3	**61**
3	Generation Y	19	24	8	1		**52**
	Total	**64**	**70**	**33**	**9**	**4**	**180**
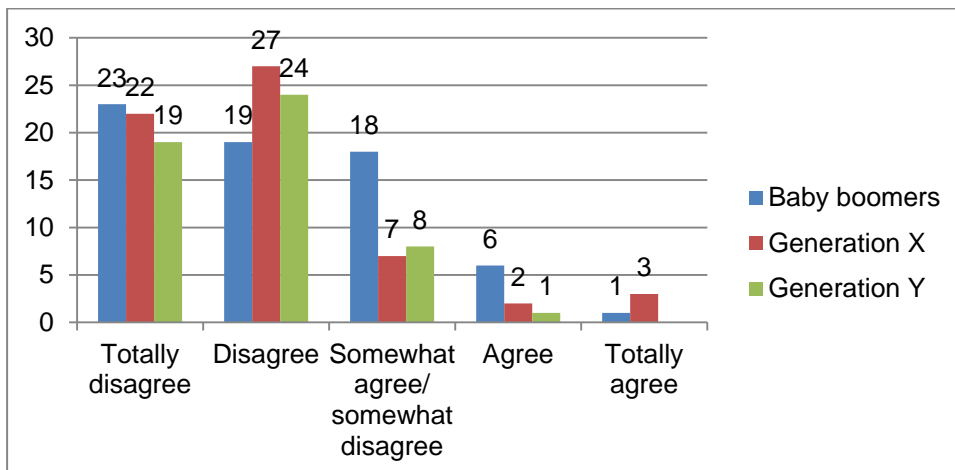
FIGURE 4.6.9:   **GRAPHIC REPRESENTATION FOR "I DON'T REALLY MIX WITH OTHER PEOPLE AT MY JOB"**

Out of 180 respondents, 64 respondents totally disagree that they don't really mix with other people at their job, 23 respondents are baby boomers, 22 are generation X and nineteen are generation Y. 70 respondents disagree with the statement of which nineteen respondents are baby boomers, 27 are generation X and 24 are generation Y. 33 respondents somewhat agree/ somewhat disagree of which eighteen are baby boomers, seven are generation X and eight are generation Y. Nine respondents agree of which six are baby boomers, two are generation X and one is generation Y. Four totally agree of which one is a baby boomer and two are generation X.

TABLE 4.6.10:   GENERATIONAL RATING FREQUENCY ON "IF I COULD CHOOSE, I WOULD DO THINGS AT WORK DIFFERENTLY" (QUESTION 10)

#	Generation	Totally disagree	Disagree	Somewhat agree/ somewhat disagree	Agree	Totally agree	**Total**
1	Baby boomers	3	27	15	16	5	**66**
2	Generation X	5	14	23	13	6	**61**
3	Generation Y	6	16	17	11	2	**52**
	Total	**14**	**57**	**55**	**40**	**13**	**179**
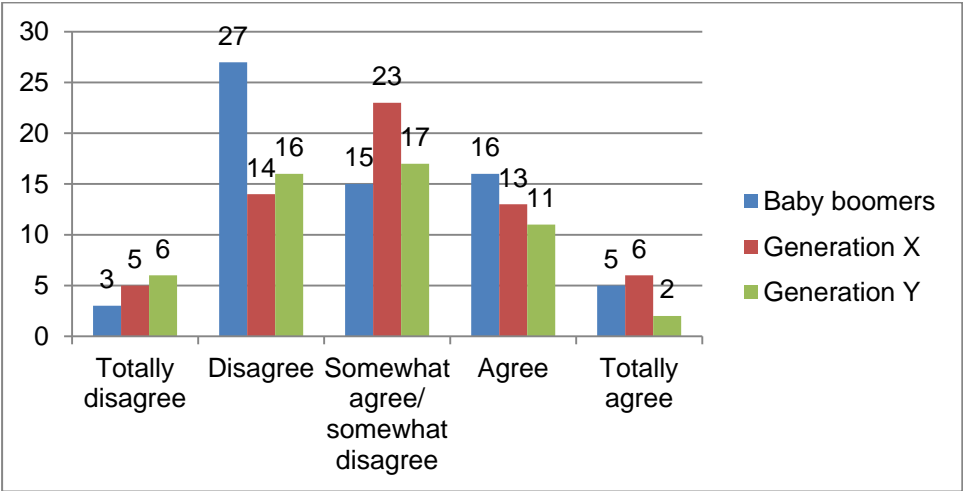
FIGURE 4.6.10:   GRAPHIC REPRESENTATION FOR "IF I COULD CHOOSE, I WOULD DO THINGS AT WORK DIFFERENTLY"

Out of 180 respondents, fourteen respondents totally disagree that if they could choose, they would do things at work differently of which three respondents are baby boomers, five are generation X and six are generation Y. 57 respondents disagree with the statement of which 27 are baby boomers, fourteen are generation X and sixteen are

59

generation Y. 55 respondents somewhat agree/ somewhat disagree of which fifteen are baby boomers, 23 are generation X and seventeen are generation Y. 40 respondents agree of which sixteen are baby boomers, thirteen are generation X and eleven are generation Y. Thirteen totally agree of which five are baby boomers, six are generation X and two are generation Y. One respondent's feedback got lost in the system.

TABLE 4.6.11: **GENERATIONAL RATING FREQUENCY ON "I DOUBT WHETHER I AM ABLE TO EXECUTE MY JOB PROPERLY" (QUESTION 11)**

#	Generation	Totally disagree	Disagree	Somewhat agree/ somewhat disagree	Agree	Totally agree	**Total**
1	Baby boomers	40	23	4			**67**
2	Generation X	29	24	5	2		**60**
3	Generation Y	15	32	2	3		**52**
	Total	**84**	**79**	**11**	**5**		**179**
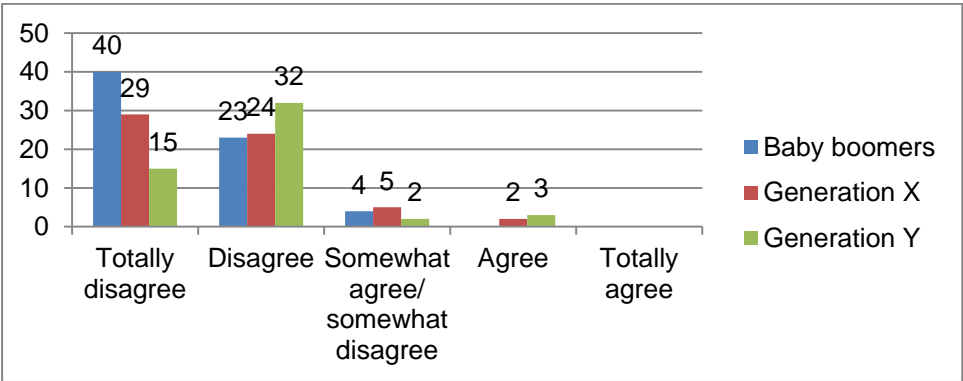
FIGURE 4.6.11: **GRAPHIC REPRESENTATION FOR "I DOUBT WHETHER I AM ABLE TO EXECUTE MY JOB PROPERLY"**

Out of 180 respondents, 84 respondents totally disagree that they doubt whether they are able to execute their job properly of which 40 respondents are baby boomers, 29 are generation X and fifteen are generation Y. 79 respondents disagree with the statement of which 23 are baby boomers, 24 are generation X and 32 are generation Y. Eleven respondents somewhat agree/ somewhat disagree of which four are baby boomers, five are generation X and two are generation Y. Five respondents agree of which two are generation X and three are generation Y. No one totally agreed with the statement. One respondent's feedback got lost in the system.

TABLE 4.6.12: GENERATIONAL RATING FREQUENCY ON "AT WORK, I CAN TALK WITH PEOPLE ABOUT THINGS THAT REALLY MATTER TO ME" (QUESTION 12)

#	Generation	Totally disagree	Disagree	Somewhat agree/ somewhat disagree	Agree	Totally agree	**Total**
1	Baby boomers	4	11	12	25	15	**67**
2	Generation X		11	25	16	9	**61**
3	Generation Y	3	2	16	31		**52**
	Total	**7**	**24**	**53**	**72**	**24**	**180**
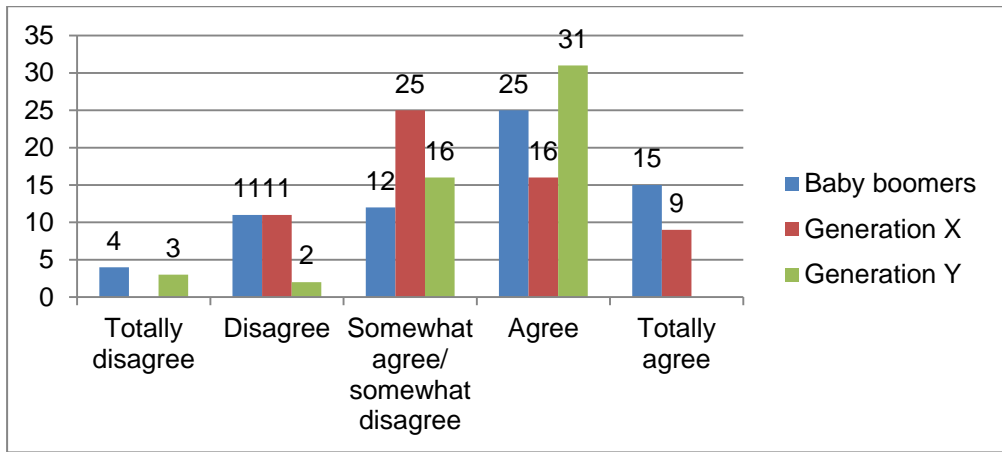
FIGURE 4.6.12: **GRAPHIC REPRESENTATION FOR "AT WORK, I CAN TALK WITH PEOPLE ABOUT THINGS THAT REALLY MATTER TO ME"**

Out of 180 respondents, seven respondents totally disagree that they can talk with people about things that really matter to them of which three respondents are baby boomers and three are generation Y. 24 respondents disagree with the statement of which eleven are baby boomers, eleven are generation X and two are generation Y. 53 respondents somewhat agree/ somewhat disagree of which twelve are baby boomers, 25 are generation X and sixteen are generation Y. 72 respondents agree of which 25 are baby boomers, sixteen are generation X and 31 are generation Y. 24 respondents totally agree of which fifteen are baby boomers and nine are generation X.

TABLE 4.6.13: **GENERATIONAL RATING FREQUENCY ON "THE TASK I HAVE TO DO AT WORK ARE IN LINE WITH WHAT I REALLY WANT TO DO" (QUESTION 13)**

#	Generation	Totally disagree	Disagree	Somewhat agree/ somewhat disagree	Agree	Totally agree	**Total**
1	Baby boomers	1	3	11	39	13	**67**
2	Generation X	3	7	17	25	9	**61**
3	Generation Y	5	6	14	21	6	**52**
	Total	**9**	**16**	**42**	**85**	**28**	**180**
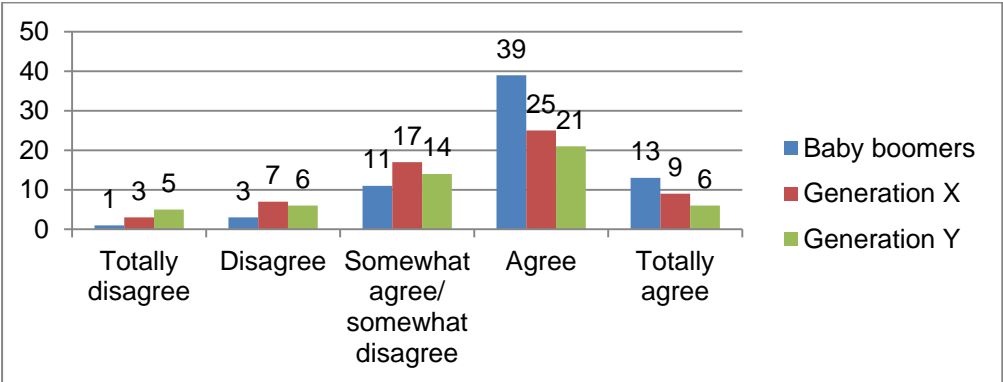
FIGURE 4.6.13: **GRAPHIC REPRESENTATION FOR "THE TASKS I HAVE TO DO AT WORK ARE IN LINE WITH WHAT I REALLY WANT TO DO"**

Out of 180 respondents, nine respondents totally disagree that the tasks they have to do at work are in line with what they really want to do of which one respondent is a baby boomer, three are generation X and five are generation Y. Sixteen respondents disagree with the statement of which three are baby boomers, seven are generation X and six are generation Y. 42 respondents somewhat agree/ somewhat disagree of

which eleven are baby boomers, seventeen are generation X and fourteen are generation Y. 85 respondents agree of which 35 are baby boomers, 25 are generation X and 21 are generation Y. 28 respondents totally agree of which thirteen are baby boomers, nine are generation X and six are generation Y.

TABLE 4.6.14: **GENERATIONAL RATING FREQUENCY ON "I AM GOOD AT THE THINGS I DO IN MY JOB" (QUESTION 14)**

#	Generation	Totally disagree	Disagree	Somewhat agree/ somewhat disagree	Agree	Totally agree	**Total**
1	Baby boomers			5	32	30	**67**
2	Generation X		1	1	33	26	**61**
3	Generation Y		2	7	39	4	**52**
	Total	**0**	**3**	**13**	**104**	**60**	**180**
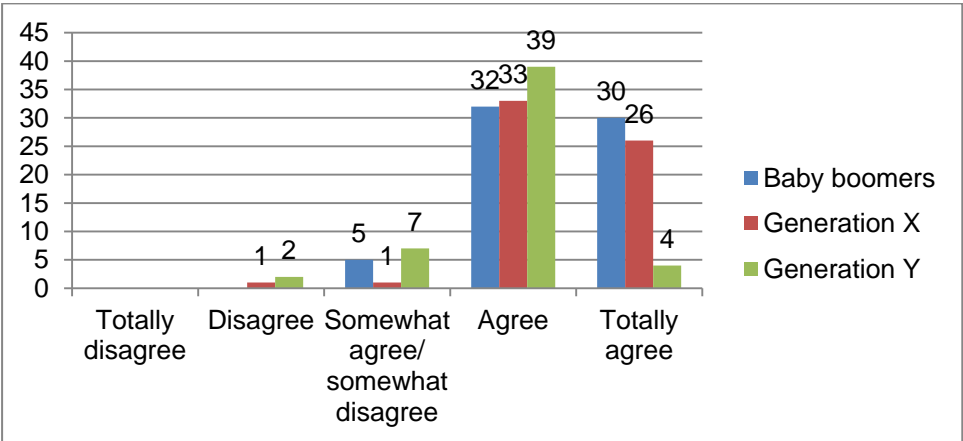
FIGURE 4.6.14: **GRAPHIC REPRESENTATION FOR "I AM GOOD AT THE THINGS I DO IN MY JOB"**

Out of 180 respondents, no one totally disagreed that they are good at the things they do in their job. Three respondents disagree with the statement of which one is

generation X and two are generation Y. Thirteen respondents somewhat agree/ somewhat disagree of which five are baby boomers, one is generation X and seven are generation Y. 104 respondents agree of which 32 are baby boomers, 33 are generation X and 39 are generation Y. 60 respondents totally agree of which 30 are baby boomers, 26 are generation X and four are generation Y.

TABLE 4.6.15: **GENERATIONAL RATING FREQUENCY ON "I OFTEN FEEL ALONE WHEN I AM WITH MY COLLEAGUES" (QUESTION 15)**

#	Generation	Totally disagree	Disagree	Somewhat agree/ somewhat disagree	Agree	Totally agree	**Total**
1	Baby boomers	23	24	18		1	**66**
2	Generation X	20	21	18	2		**61**
3	Generation Y	17	27	5	3		**52**
	Total	**60**	**72**	**41**	**5**	**1**	**179**
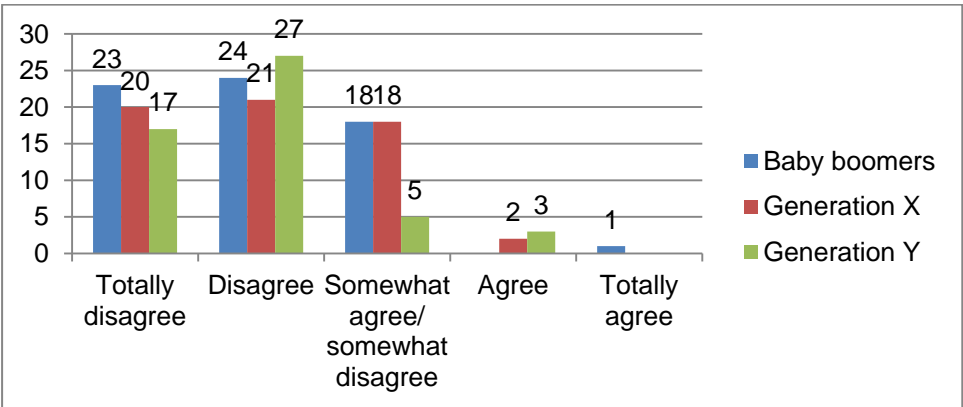
FIGURE 4.6.15: **GRAPHIC REPRESENTATION FOR "I OFTEN FEEL ALONE WHEN I AM WITH MY COLLEAGUES"**

Out of 180 respondents, 60 respondents totally disagree that they often feel alone when they are with their colleagues of which 23 respondents are baby boomers, 20 are generation X and seventeen are generation Y. 72 respondents disagree with the statement of which 24 are baby boomers, 21 are generation X and 27 are generation Y. 41 respondents somewhat agree/ somewhat disagree of which eighteen are baby boomers, eighteen are generation X and five are generation Y. Five respondents agree of which two are generation X and three are generation Y. One respondent who is a baby boomer totally agrees with the statement. One respondent's feedback got lost in the system.

TABLE 4.6.16:   GENERATIONAL RATING FREQUENCY ON "I FEEL FREE TO DO MY JOB THE WAY I THINK IT COULD BEST BE DONE" (QUESTION 16)

#	Generation	Totally disagree	Disagree	Somewhat agree/ somewhat disagree	Agree	Totally agree	**Total**
1	Baby boomers	1	2	12	35	17	**67**
2	Generation X	2	3	15	25	16	**61**
3	Generation Y	2	2	19	29		**52**
	Total	**5**	**7**	**46**	**89**	**33**	**180**
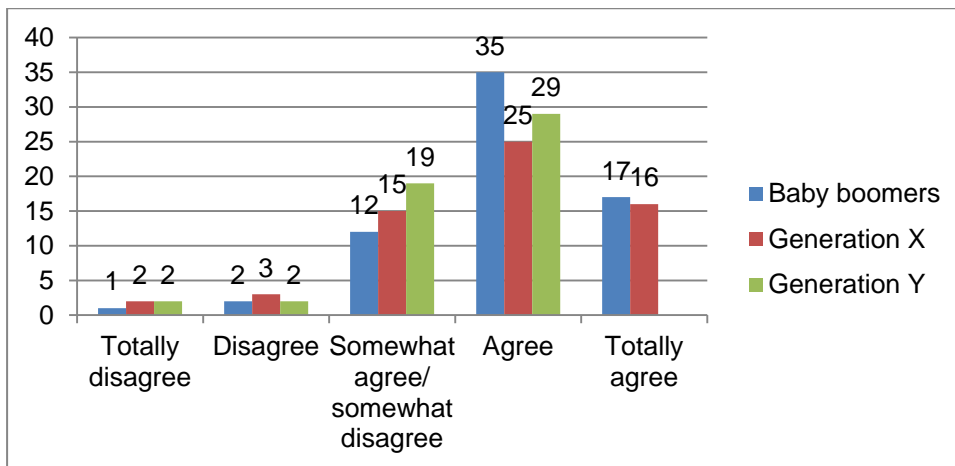
FIGURE 4.6.16:   GRAPHIC REPRESENTATION FOR "I FEEL FREE TO DO MY JOB THE WAY I THINK IT COULD BEST BE DONE"

Out of 180 respondents, five respondents totally disagree that they feel free to do their job the way they think it could best be done of which one respondent is a baby boomer, two are generation X and two are generation Y. Seven respondents disagree with the statement of which two are baby boomers, three are generation X and two are generation Y. 46 respondents somewhat agree/ somewhat disagree of which twelve are baby boomers, fifteen are generation X and nineteen are generation Y. 89 respondents agree of which 35 are baby boomers, 25 are generation X and 29 are generation Y. 33 respondents totally agree of which seventeen are baby boomers and sixteen are generation X.

TABLE 4.6.17: **GENERATIONAL RATING FREQUENCY ON "I HAVE THE FEELING THAT I CAN EVEN ACCOMPLISH THE MOST DIFFICULT TASKS AT WORK" (QUESTION 17)**

#	Generation	Totally disagree	Disagree	Somewhat agree/ somewhat disagree	Agree	Totally agree	**Total**
1	Baby boomers		2	8	43	14	**67**
2	Generation X		4	5	29	22	**60**
3	Generation Y	2	2	6	36	6	**52**
	Total	**2**	**8**	**19**	**108**	**42**	**179**
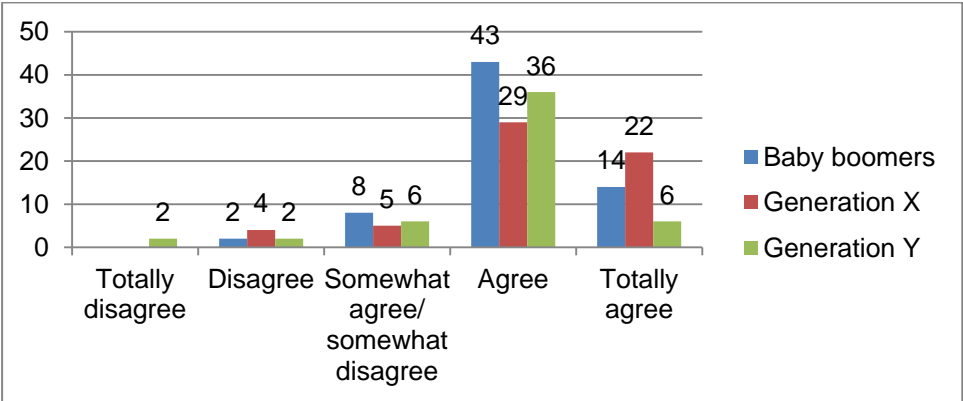
FIGURE 4.6.17: **GRAPHIC REPRESENTATION FOR "I HAVE THE FEELING THAT I CAN EVEN ACCOMPLISH THE MOST DIFFICULT TASKS AT WORK"**

Out of 180 respondents, two respondents totally disagree that they have the feeling that they can even accomplish the most difficult tasks at work of which all two respondents are generation Y. Eight respondents disagree with the statement of which two are baby boomers, four are generation X and two are generation Y. Nineteen respondents somewhat agree/ somewhat disagree of which eight are baby boomers, five are

generation X and six are generation Y. 108 respondents agree of which 43 are baby boomers, 29 are generation X and 36 are generation Y. 42 respondents totally agree of which fourteen are baby boomers, 22 are generation X and six are generation Y. One respondent's feedback got lost in the system.

TABLE 4.6.18:   GENERATIONAL RATING FREQUENCY ON "AT WORK, PEOPLE INVOLVE ME IN SOCIAL ACTIVITIES" (QUESTION 18)

#	Generation	Totally disagree	Disagree	Somewhat agree/ somewhat disagree	Agree	Totally agree	**Total**
1	Baby boomers	2	6	21	22	13	**64**
2	Generation X		13	20	18	10	**61**
3	Generation Y		5	15	22	10	**52**
	Total	**2**	**24**	**56**	**62**	**33**	**177**
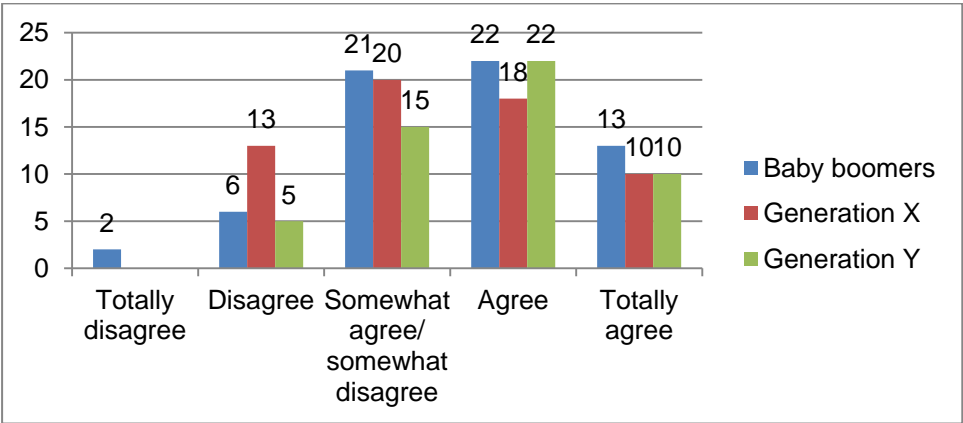
FIGURE 4.6.18:   GRAPHIC REPRESENTATION FOR "AT WORK, PEOPLE INVOLVE ME IN SOCIAL ACTIVITIES"

Out of 180 respondents, two respondents totally disagree that at work, people involve them in social activities of which all two respondents are baby boomers. 24 respondents

disagree with the statement of which six are baby boomers, thirteen are generation X and five are generation Y. 56 respondents somewhat agree/ somewhat disagree of which 21 are baby boomers, 20 are generation X and fifteen are generation Y. 62 respondents agree of which 22 are baby boomers, eighteen are generation X and 22 are generation Y. 33 respondents totally agree of which thirteen are baby boomers, ten are generation X and ten are generation Y. Three respondents' feedback got lost in the system.

TABLE 4.6.19: **GENERATIONAL RATING FREQUENCY ON "IN MY JOB, I FEEL FORCED TO DO THINGS I DO NOT WANT TO DO" (QUESTION 19)**

#	Generation	Totally disagree	Disagree	Somewhat agree/ somewhat disagree	Agree	Totally agree	**Total**
1	Baby boomers	13	34	15	1	2	**65**
2	Generation X	14	25	19	2	1	**61**
3	Generation Y	16	27	5	1	3	**52**
	Total	**43**	**86**	**39**	**4**	**6**	**178**
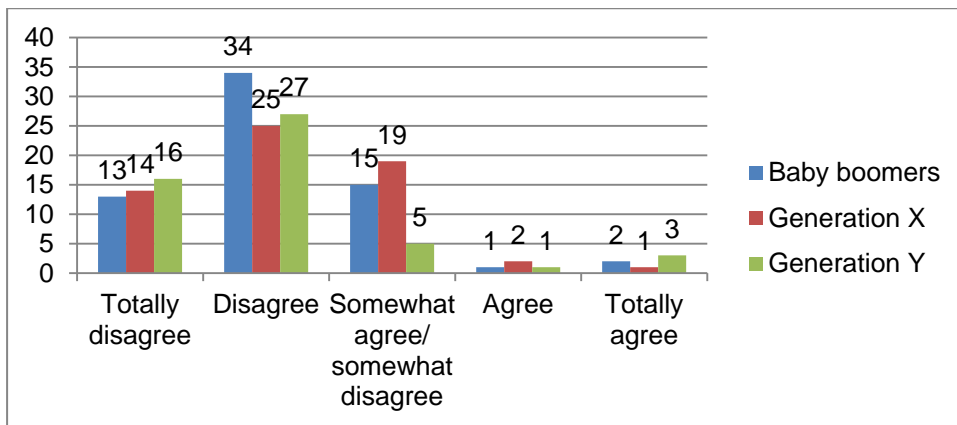
FIGURE 4.6.19:   **GRAPHIC REPRESENTATION FOR "IN MY JOB, I FEEL FORCED TO DO THINGS I DO NOT WANT TO DO"**

Out of 180 respondents, 43 respondents totally disagree that in their job, they feel forced to do things they do not want to do of which thirteen respondents are baby boomers, fourteen are generation X and sixteen are generation Y. 86 respondents disagree with the statement of which 34 are baby boomers, 25 are generation X and 27 are generation Y. 39 respondents somewhat agree/ somewhat disagree of which fifteen are baby boomers, nineteen are generation X and five are generation Y. Four respondents agree of which one is a baby boomer, two are generation X and one is generation Y. Six respondents totally agree of which two are baby boomers, one is generation X and three are generation Y. Two respondents' feedback got lost in the system.

TABLE 4.6.20: **GENERATIONAL RATING FREQUENCY ON "AT WORK, THERE ARE PEOPLE WHO REALLY UNDERSTAND ME" (QUESTION 20)**

#	Generation	Totally disagree	Disagree	Somewhat agree/ somewhat disagree	Agree	Totally agree	**Total**
1	Baby boomers	1	3	25	28	9	**66**
2	Generation X		4	22	28	7	**61**
3	Generation Y		3	15	23	11	**52**
	Total	**1**	**10**	**62**	**79**	**27**	**179**
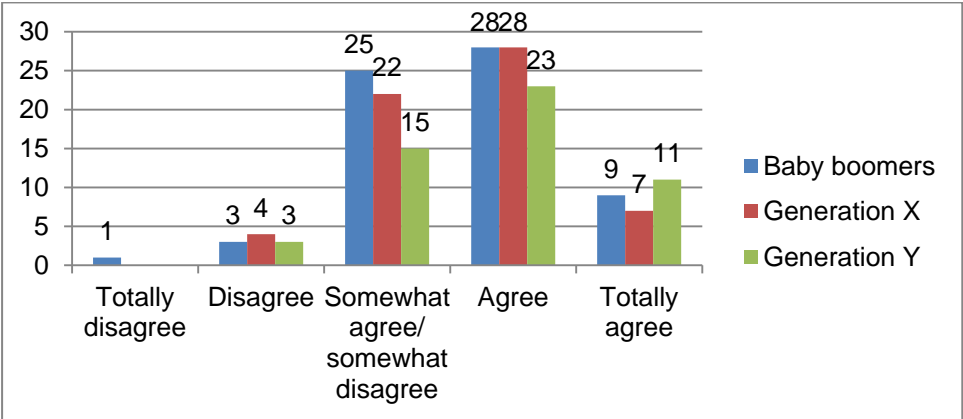
FIGURE 4.6.20: **GRAPHIC REPRESENTATION FOR "AT WORK, THERE ARE PEOPLE WHO REALLY UNDERSTAND ME"**

Out of 180 respondents, one respondent totally disagrees that at work, there are people who really understand him/ her of which the respondent is a baby boomer. Ten respondents disagree with the statement of which three are baby boomers, four are generation X and three are generation Y. 62 respondents somewhat agree/ somewhat disagree of which 25 are baby boomers, 22 are generation X and fifteen are generation Y. 79 respondents agree of which 28 are baby boomers, 28 are generation X and 23

are generation Y. 27 respondents totally agree of which nine are baby boomers, seven are generation X and eleven are generation Y. One respondent's feedback got lost in the system.

TABLE 4.6.21: **GENERATIONAL RATING FREQUENCY ON "SOME PEOPLE I WORK WITH ARE CLOSE FRIENDS OF MINE" (QUESTION 21)**

#	Generation	Totally disagree	Disagree	Somewhat agree/ somewhat disagree	Agree	Totally agree	**Total**
1	Baby boomers	6	13	11	29	8	**67**
2	Generation X	4	12	16	22	5	**59**
3	Generation Y	5	15	9	14	9	**52**
	Total	**15**	**40**	**36**	**65**	**22**	**178**
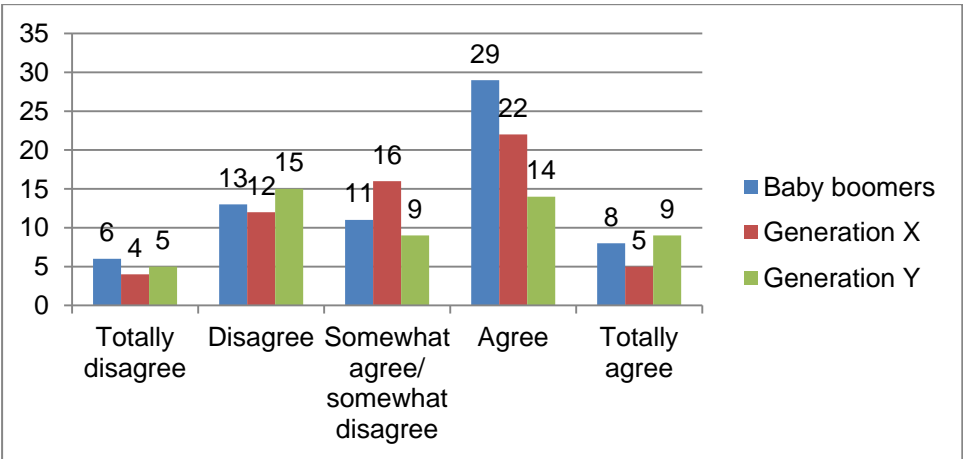
FIGURE 4.6.21: **GRAPHIC REPRESENTATION FOR "SOME PEOPLE I WORK WITH ARE CLOSE FRIENDS OF MINE"**

Out of 180 respondents, fifteen respondents totally disagree that some people they work with are close friends of theirs of which six respondents are baby boomers, four

are generation X and five are generation Y. 40 respondents disagree with the statement of which 13 are baby boomers, 12 are generation X while fifteen are generation Y. 36 respondents somewhat agree/ somewhat disagree of which eleven are baby boomers, sixteen are generation X and nine are generation Y. 65 respondents agree of which 29 are baby boomers, 22 are generation X and fourteen are generation Y. 22 respondents totally agree of which eight are baby boomers, five are generation X and nine are generation Y. Two respondents' feedback got lost in the system.

TABLE 4.6.22: **GENERATIONAL RATING FREQUENCY ON "AT WORK, NO ONE CARES ABOUT ME" (QUESTION 22)**

#	Generation	Totally disagree	Disagree	Somewhat agree/ somewhat disagree	Agree	Totally agree	**Total**
1	Baby boomers	33	16	13	4		**66**
2	Generation X	26	19	15	1		**61**
3	Generation Y	24	18	8		2	**52**
	Total	**83**	**53**	**36**	**5**	**2**	**179**
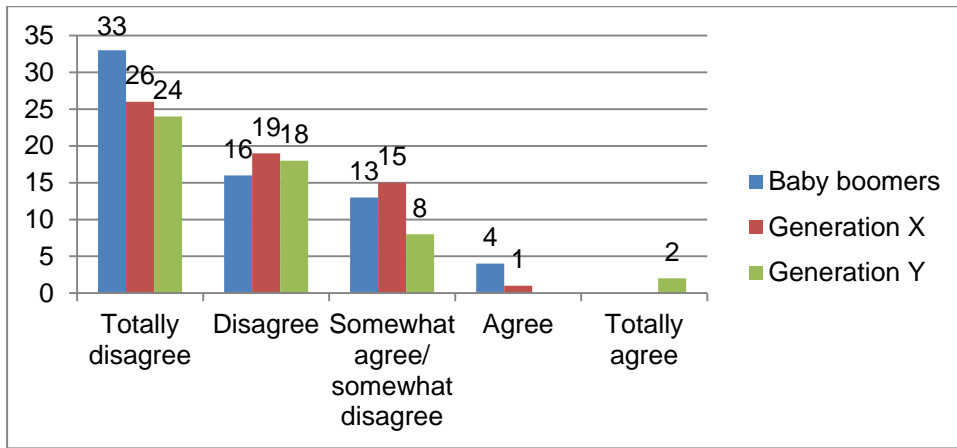
FIGURE 4.6.22: **GRAPHIC REPRESENTATION FOR "AT WORK, NO ONE CARES ABOUT ME"**

Out of 180 respondents, 83 respondents totally disagree that at work, no one cares about them of which 33 respondents are baby boomer, 26 are generation X and 24 are generation Y. 53 respondents disagree with the statement of which sixteen are baby boomers, nineteen are generation X and eighteen are generation Y. 36 respondents somewhat agree/ somewhat disagree of which thirteen are baby boomers, fifteen are generation X and eight are generation Y. Five respondents agree of which four are baby boomers and one is generation X. Two respondents totally agree of which both are generation Y. One respondent's feedback got lost in the system.

TABLE 4.6.23: **GENERATIONAL RATING FREQUENCY ON "THERE IS NOBODY I CAN SHARE MY THOUGHTS WITH IF I WOULD WANT TO DO SO" (QUESTION 23)**

#	Generation	Totally disagree	Disagree	Somewhat agree/ somewhat disagree	Agree	Totally agree	Total
1	Baby boomers	27	25	9	6		**67**
2	Generation X	24	21	10	6		**61**
3	Generation Y	21	26	2	1	2	**52**
	Total	**72**	**72**	**21**	**13**	**2**	**180**
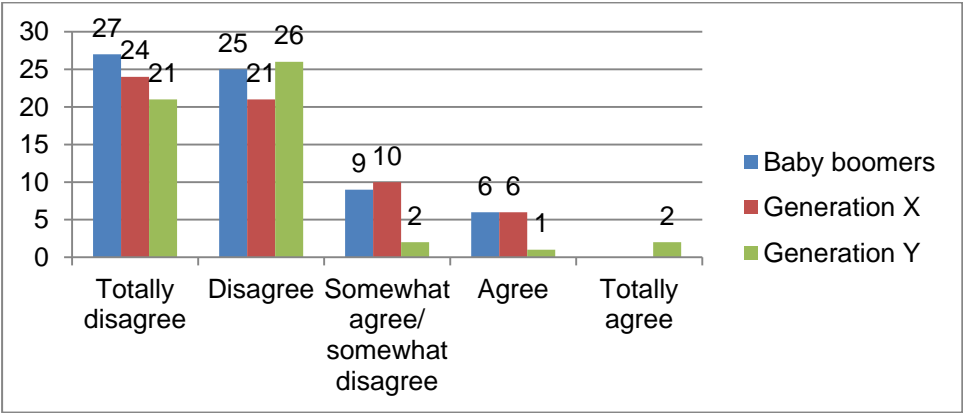
FIGURE 4.6.23: **GRAPHIC REPRESENTATION FOR "THERE IS NOBODY I CAN SHARE MY THOUGHTS WITH IF I WOULD WANT TO DO SO"**

Out of 180 respondents, 72 respondents totally disagree that there is nobody they can share their thoughts with if they would want to do so of which 27 respondents are baby boomers, 24 are generation X and 21 are generation Y. 72 respondents disagree with the statement of which 25 are baby boomers, 21 are generation X and 26 are generation Y. 21 respondents somewhat agree/ somewhat disagree of which nine are baby boomers, ten are generation X and two are generation Y. Thirteen respondents

agree of which six are baby boomers, six are generation X and one is generation Y. Two respondents totally agree, both of which are generation Y.

4.7 QUESTIONNAIRE RESPONDENTS' SUMMARY

The following table summarises response frequency in percentage terms for the statements in the questionnaire where respondents had to rate from 1 – 5 with 1 = totally disagree and 5 = totally agree, from question 1 to question 23.

TABLE 4.7.1: QUESTIONNAIRE SUMMARY

Question number	Totally disagree (%)	Disagree (%)	Somewhat agree, somewhat disagree (%)	Agree (%)	Totally agree (%)
1.	2.8	5.6	20.6	46.7	24.4
2.	46.7	41.1	6.1	4.4	1.7
3.	36.7	36.1	12.2	12.2	6
4.	1.1	8.3	17.8	52.8	18.9
5.	6	2.2	13.3	42.8	39.4
6.	1.7	6.1	18.9	43.3	25.6
7.	7.8	25.0	44.4	19.4	2.2
8.	0	1.1	12.2	48.9	37.2
9.	35.6	38.9	18.3	5.0	2.2
10.	7.8	31.7	30.6	22.2	7.2
11.	46.7	43.9	6.1	2.8	0

12.	3.9	13.3	29.4	40.0	13.3
13.	5.0	8.9	23.3	47.2	15.6
14.	0	1.7	7.2	57.8	33.3
15.	33.3	40.0	22.8	2.8	6
16.	2.8	3.9	25.6	49.4	18.3
17.	1.1	4.4	10.6	60.0	23.3
18.	1.1	13.3	31.1	34.4	18.3
19.	23.9	47.8	21.7	2.2	3.3
20.	6	5.6	34.4	43.9	15.0
21.	8.3	22.2	20.0	36.1	12.2
22.	46.1	29.4	20.0	2.8	1.1
23.	40.0	40.0	11.7	7.2	1.1

A more detailed graphic representation of the breakdown in Table 4.7.1 above can be found in Appendix D.

The table below summarises the statements from the questionnaire as grouped per main constructs, together with their corresponding mean, standard deviation and number of data entries. The questions with (R) show that they were asked in reverse.

TABLE 4.7.2: MEANS AND STANDARD DEVIATION

Autonomy			
Item	**Mean**	**Std. Deviation**	**N**
B1	3.8266	.96086	173
B4	3.7919	.88432	173
B7_R	3.1734	.91116	173
B10_R	3.1098	1.07539	173
B13	3.5954	1.02207	173
B16	3.7572	.90156	173
B19_R	3.8960	.92172	173
Competence			
Item	**Mean**	**Std. Deviation**	**N**
B2	1.73	.881	174
B5	4.20	.802	174
B8	4.22	.704	174
B11	1.66	.727	174
B14	4.24	.642	174
B17	4.01	.794	174
Relatedness			
Item	**Mean**	**Std. Deviation**	**N**
B3_R	4.0123	1.01220	163

B6	3.9018	.93765	163
B9_R	4.0184	.94590	163
B12	3.4233	1.01772	163
B15_R	4.0429	.80392	163
B18	3.6074	.96504	163
B20	3.6687	.84660	163
B21	3.2147	1.19020	163
B22_R	4.1411	.92881	163
B23_R	4.0675	.94365	163

The mean for statements relating to autonomy is generally higher than three and the standard deviation is generally closer to one. Only two statements addressing autonomy have a standard deviation that is above one, which shows a wider dispersion compared to similar statements. Other statements addressing autonomy have standard deviations that are below one, which shows that the respondents were generally in agreement with each other.

The mean for statements relating to competence is generally higher than four with the exception of two statements that were all less than two. The standard deviation for statements relating to competence is closer but less than 1, these shows that there is a wider dispersion of opinions.

The mean for statements relating to relatedness is between 3.2 and 4.1 with most of statements' standard deviation less than one and three statements' standard deviation more than one, which shows that the respondents were generally in agreement with each other.

4.8 RELIABILITY

The following table shows the reliability statistics through the calculation of Cronbach's alpha. A Cronbach's alpha of 0.7 and above is acceptable and can be regarded as reliable for this test as it shows the consistency of the responses on similar items.

TABLE 4.8.1: CRONBACH'S ALPHA TABLE

Autonomy		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.71	0.71	7
Competence		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.11	0.15	6
Relatedness		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.87	0.87	10

As can be seen from the above table, the Cronbach's alpha for autonomy is 0.71 which is reliable. The Cronbach's alpha for competence is 0.11 which is not reliable and cannot be used to conclude on the respondents. One of the factors that could have contributed to the low Cronbach's alpha could be that the respondents didn't understand the statements properly. The Cronbach's alpha for relatedness is 0.87 which is reliable.

The following table shows a summary of item statistics of the questions related to autonomy. The table shows the mean of the questions, mean and inter-item

correlations, minimum mean, maximum mean, range, maximum/ minimum, variance together with the total number of questions for autonomy.

TABLE 4.8.2: AUTONOMY SUMMARY ITEM STATISTICS TABLE

Autonomy							
	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	3.59	3.11	3.90	0.79	1.25	0.10	7
Inter-Item Correlations	0.26	0.04	0.47	0.43	11.12	0.01	7

The following table shows the summary item statistics of the questions related to relatedness. The table shows the mean of the questions, mean and inter-item correlations, minimum mean, maximum mean, range, maximum/ minimum, variance together with the total number of questions for relatedness.

TABLE 4.8.3: RELATEDNESS SUMMARY ITEM STATISTICS TABLE

Relatedness							
	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	3.81	3.22	4.14	0.93	1.29	0.10	10
Inter-Item Correlations	0.41	0.27	0.67	0.41	2.54	0.01	10

More details for item means, inter-item correlations, inter-item correlations matrix between the questions, scale mean if item deleted, scale variance if item deleted, corrected item-total correlation, squared multiple correlation and Cronbach's alpha if item deleted can be found in appendix E.

Only two of the main constructs, autonomy and relatedness, were measured in a reliable manner. This finding contradicts previous findings where previous research indicated that the entire questionnaire is reliable. For this reason, further analyses will only be performed on the constructs that showed acceptable reliability.

4.9   GENERATIONAL ANOVA

The following is an ANOVA (Analysis of Variance) table for different generations and the aspects of self-determination theory. The table shows the sum of squares between and within groups, degree of freedom, F statistic and significance value (p). The significance value (p) is calculated using the null hypothesis that there is no difference between different generations' requirements in terms of the self-determination theory aspects (autonomy and relatedness).

TABLE 4.9.1: ANOVA TABLE

		Sum of Squares	df	Mean Square	F	p (Sig.)
Autonomy	Between Groups	4.24	2	2.12	11.51	0.00
	Within Groups	32.63	177	0.18		
	Total	36.87	179			
Relatedness	Between Groups	0.21	2	0.11	0.25	0.78
	Within Groups	76.589	177	0.43		
	Total	76.80	179			

From the above table, the significance value for autonomy is 0.00 (p<0.05), hence the null hypothesis that there is no difference between the groups in terms of autonomy

requirements is rejected. There is a difference in terms of autonomy requirements by the different generations.

The significance value for relatedness is 0.78 (p>0.05), hence we accept the null hypothesis that there is no difference between the generations. There is no difference between the groups in terms of the relatedness requirement.

The table below shows post hoc tests for autonomy. The table shows the different generations, number of respondents together with the overall average mean from the participants.

TABLE 4.9.2: AUTONOMY POST HOC TESTS TABLE

Tukey B$_{a,b}$			
GEN1	N	Subset for alpha = 0.05	
		1	2
Baby boomers	67		3.54
Generation X	61	3.30	
Generation Y	52	3.16	

The table shows that the overall average mean on statements that address autonomy for generation X and generation Y is almost the same with overall average mean for generation Y = 3.16 and that of generation X = 3.30, the overall average mean for baby boomers = 3.54, hence baby boomers want more of autonomy that generation X and generation Y. Baby boomers were found to take ownership and stewardship in their tasks, they were also found to be interested in titles and authority, hence the need for autonomy as they will take their own decisions on the tasks that they are working on. Generation X also showed to value autonomy amongst other aspects, hence the greater need for autonomy than that of Generation Y.

The table below shows post hoc tests for relatedness. The table shows the different generations, number of respondents together with the overall average mean from the participants.

TABLE 4.9.3: RELATEDNESS POST HOC TESTS TABLE

Tukey B$_{a,b}$		
		Subset for alpha = 0.05
GEN1	N	1
Baby boomers	67	3.81
Generation X	61	3.78
Generation Y	52	3.86

The table shows that the overall average mean on statements that address relatedness for baby boomers, generation X and generation Y is almost the same with an overall average mean for baby boomers = 3.8067, generation X = 3.7761 and generation Y = 3.8626. These results show that the level of relatedness requirement is the same for all generations. All generations showed a need for relatedness, which is consistent with both generations' characteristics as they all have a need to relate better to each other.

4.10 SUMMARY

This chapter showed the sample demographic profile of the respondents and the respondent's race, gender, level of employment and highest qualification per generation. The response frequency of each generation's gender, race, level of education and employment level on the self-determination theory questionnaire was also shown graphically. Reliability measures and Cronbach's alpha results were discussed. The generational ANOVA results were shown together with the discussion of the results and the comparison with the literature study generational characteristics.

CHAPTER 5: CONCLUSION AND RECOMMENDATIONS

5.1   INTRODUCTION

The main aim of the study has been to compare the extent to which the needs for autonomy, relatedness and competence of baby boomers, generation X, Y and Z employees of Denel Dynamics are being satisfied and how this influences motivational strategies. Specific objectives of the study have been to:

- determine the level of need satisfaction with respect to autonomy, relatedness and competence of employees in Denel Dynamics;
- compare the different generations within Denel Dynamics regarding the extent to which their needs for autonomy, relatedness and competence are being satisfied; and
- make recommendations to management in view of the findings.

There is a difference between the generations with respect to a need for autonomy and relatedness according to the findings. Baby boomers want more autonomy - more than generation X and generation Y. The need for autonomy for generation X and generation Y is similar. The need for relatedness was similar for both generations.

A standard self-determination theory questionnaire was distributed to Denel Dynamics employees of different generations in order to establish which generation want more of one aspect than the other generations. The questionnaire had a set of questions with a rating scale that addresses each aspect of the self-determination theory.

5.2   CONCLUSION AND RECOMMENDATION

The measurement was unfortunately not found to be entirely reliable: the Cronbach's alpha for autonomy was found to be 0.71 which is reliable enough to make a conclusion on the questionnaire findings, but the Cronbach's alpha for competence was found to be 0.11 which is not reliable enough to make conclusion on the questionnaire findings of that aspect. The Cronbach's alpha for relatedness was found to be 0.87 which is reliable enough to make a conclusion on the questionnaire findings of the relatedness aspect. Consequently, only findings regarding autonomy and relatedness were used for further analysis.

Since baby boomers want more autonomy than other generations, the following should be offered to them in order to meet their autonomy requirement:

- Allow baby boomers to exercise their choices within limits that do not compromise the productivity or sustainability of the organisation.
- Allow them to choose what time to come to work or leave work by means of flexi-time in which they can decide for themselves how they want to spread their 40 hours throughout the week.
- Offer them a wide spectrum of responsibilities that will allow them to make long-term goals and choices on their own as compared to short-term tasks that will have them giving feedback after a short period of time without the option to make their own choices and decisions on the tasks.
- Provide them with democratic leadership and guidance that will support them to make right own choices compared to autocratic leadership that will be dictating to them as to how they must go about doing their tasks.

Even though all generations have a need for autonomy and should be afforded scope in this aspect, priority for autonomy needs should be given to the baby boomers.

All generations indicated similar needs for relatedness and the following is recommended in order to ensure this need is satisfied:

- Team-building activities should be conducted regularly so that employees can relate with each other from a non-work related platform and will be able to relate to each other more in work-related activities.
- The organisation should encourage social sport (e.g. soccer and table tennis) that can be played during lunch times and after work on specific days of the week in order to reinforce how employees will relate to each other.
- Forums such as youth and senior employees' forums should be encouraged by the organisation where they can also get together and exchange their views on specific matters that could be work related or non-work related.

- Employees should be utilised for the tasks that are related to what they have formally studied so that they will relate more to the tasks.

- Employees should be utilised for tasks that are of interest to them in order to enhance the relatedness to the task compared to those that are not of interest to them.
- Efforts should be made but not limited to employees who have similar characteristics and interests from different generations to be given similar tasks on those tasks that need to be done as a group.

5.3 WEAKNESS ACKNOWLEDGEMENT

The following were weaknesses for the study:

- There were no generation Z members who participated in the study due to under-representation of this grouping within the current workforce.
- Difficulty of getting all the questionnaires in time.
- Lack of understanding of some of the aspects in the questionnaire by the participants.
- Due to the convenience sampling technique used, findings cannot be generalised to the entire population

5.4 RECOMMENDATIONS FOR FUTURE RESEARCHERS

Due to challenges and weaknesses that were identified during the study, the following are recommendations for future researches on similar topic:

- Make sure the participants fully understand the statements on the questionnaire as the Cronbach's alpha for competence was very low and could not be used to conclude on the competence aspect, this could be due to lack of understanding by participants to statements relating to competence.
- Send out questionnaires when there is still enough time as some of the participants need help in filling out the questionnaire and they need explanations on certain aspects.
- Questionnaires must be sent to more than the required sample size as it is hard to get back enough questionnaires.

5.5 SUMMARY

Different generations differ in terms of their needs for self-determination theory aspects and for an organisation to satisfy these needs, therefore the needs of individual generations should be taken into consideration as a "one-size-fits-all" approach will not work. Different generations also differ in terms of certain preferences that fall under one aspect and an organisation must be careful not to treat them as a homogenous group when addressing these needs. Baby boomers want more autonomy that other generations and all generations have similar needs for relatedness.

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APPENDIX A

DENEL DYNAMICS EXECUTIVE COMMITTEE (EXCOM)
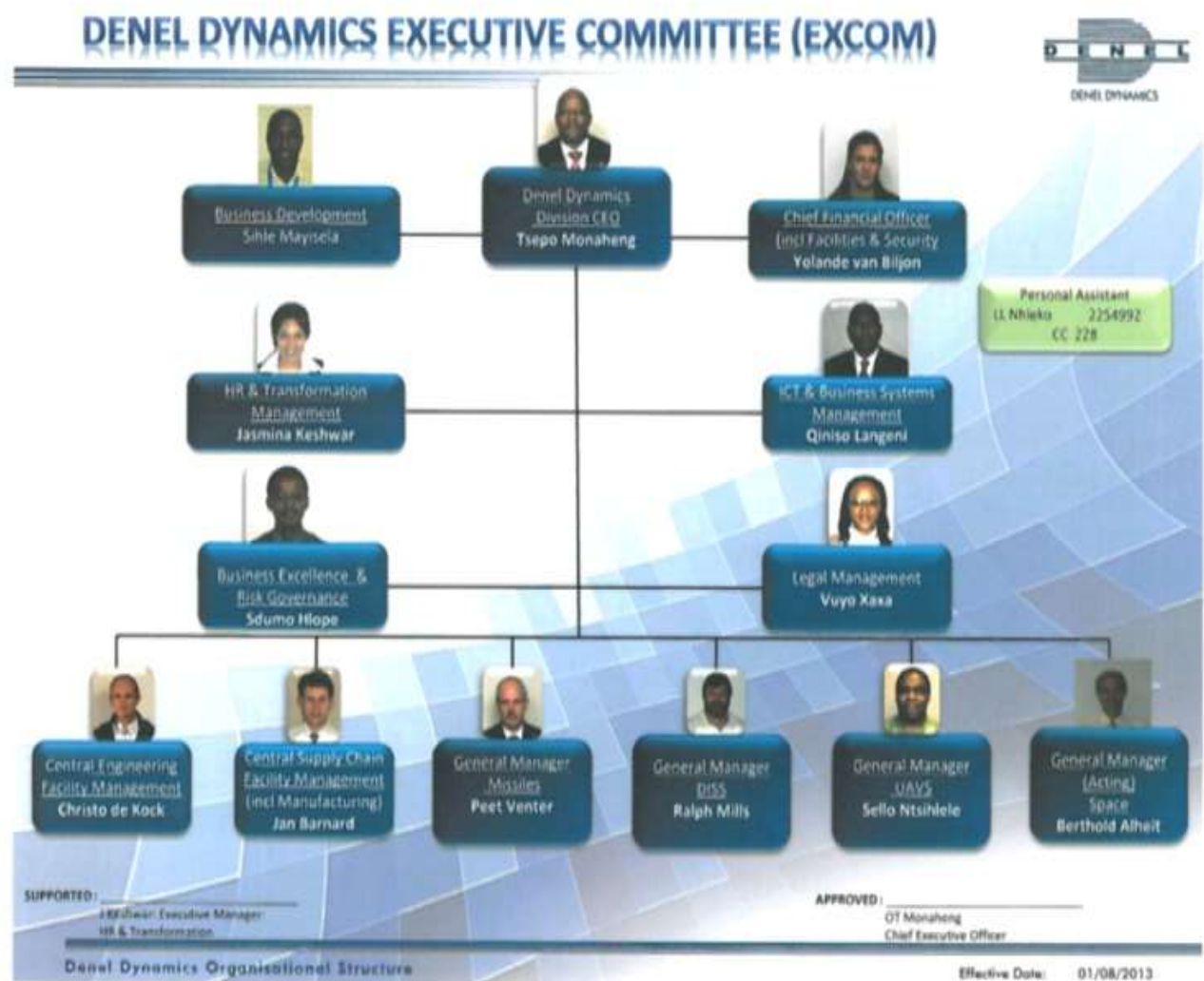
APPENDIX B

DENEL

DENEL DYNAMICS

27 February 2014

North-west University
Potchefstroom Business School

This is to certify that Ridovhona Tsanwani (Student No: 23971479) has been granted permission by Denel Dynamics to conduct a study that focuses on motivational needs of different generations of employees within Denel Dynamics using self-determination theory (Need for autonomy, relatedness and competence). The permission has been granted under the condition that the study is purely for academic purpose.

Denel Dynamics has also granted Ridovhona Tsanwani permission to distribute relevant questionnaires to the target population using hard copies or e-mails.

Jasmina Keshwar
Executive Manager: HR and Transformation

APPENDIX C

ORGANISATIONAL MOTIVATION QUESTIONNAIRE

May you please take time to complete the following questionnaires relating to motivation preference by different generations within Denel Dynamics? This is purely for academic purposes but may be used by HR to add value within Denel Dynamics.

The questionnaire consists of 23 questions and will only take you roughly five minutes to complete.

INTRODUCTION: These questions investigate motivational preference of different generations within Denel Dynamics based on self-determination theory. You are requested to construct a personal code by following the instructions given below. This code will ONLY be known to you. If there would be a follow-up data-gathering, you will be asked the same question, in order for you to reconstruct your code. This code will enable the researcher to study the measured concepts over time. The code is made up of the following:		
	Example	Your code
1.Give the first and last letter of the city or town in which you were born	Johannesburg = JG	
2. Give the first and last letter of your mother's maiden name (surname before she got married)	Mnisi = MI	
3. Give the first and last letter of your father's name	John = JN	

BIOGRAPHICAL INFORMATION:

Mark the applicable block with a cross (X). Complete all questions.

1	Gender:	1. Male		2. Female	

2	Generation	1. Born between 1946 & 1964		2. Born between 1965 & 1980		3. Born between 1981 & 1994		4.Born between 1995 & 2014	

3	Race:	1. Black		2. White		3. Coloured		4. Indian		5. Other	

4	Level of Employment:	1. Junior		2. Middle		3. Senior		4. Top	

5	Duration of employment in current position at current workplace:	1. 0–2 yrs		2. 3–5 yrs		3. 6–10 yrs		4. >10 yrs	

6	Highest Qualification:	1. Below Matric		2. Matric		3. Diploma / Degree		4. Postgraduate	

The following statements aim to tap your personal experiences at work. Would you please indicate to what extent you agree with these statements? You can indicate the most suitable number between 1 (totally disagree) and 5 (totally agree).

SCALE:

1 = Totally disagree	2 = Disagree	3 = Somewhat agree, somewhat disagree	4 = Agree	5 = Totally agree

1.	I feel free to express my ideas and opinions in this job.	1	2	3	4	5
2.	I don't really feel competent in my job.	1	2	3	4	5
3.	I don't really feel connected with other people at my job.	1	2	3	4	5
4.	I feel like I can be myself at my job.	1	2	3	4	5
5.	I really master my tasks at my job.	1	2	3	4	5
6.	At work, I feel part of a group.	1	2	3	4	5
7.	At work, I often feel like I have to follow other people's commands.	1	2	3	4	5
8.	I feel competent at my job.	1	2	3	4	5
9.	I don't really mix with other people at my job.	1	2	3	4	5
10.	If I could choose, I would do things at work differently.	1	2	3	4	5
11.	I doubt whether I am able to execute my job properly.	1	2	3	4	5
12.	At work, I can talk with people about things that really matter to me.	1	2	3	4	5
13.	The tasks I have to do at work are in line with what I really want to do.	1	2	3	4	5
14.	I am good at the things I do in my job.	1	2	3	4	5
15.	I often feel alone when I am with my colleagues.	1	2	3	4	5

16.	I feel free to do my job the way I think it could best be done.	1	2	3	4	5
17.	I have the feeling that I can even accomplish the most difficult tasks at work.	1	2	3	4	5
18.	At work, people involve me in social activities.	1	2	3	4	5
19.	In my job, I feel forced to do things I do not want to do.	1	2	3	4	5
20.	At work, there are people who really understand me.	1	2	3	4	5
21.	Some people I work with are close friends of mine	1	2	3	4	5
22.	At work, no one cares about me.	1	2	3	4	5
23.	There is nobody I can share my thoughts with if I would want to do so.	1	2	3	4	5

Thank you so much for taking your time to complete this questionnaire.

APPENDIX D

TABLE 1:   RESPONDENTS' RATING FREQUENCY ON "I FEEL FREE TO EXPRESS MY IDEAS AND OPINIONS IN THIS JOB" (QUESTION 1)

#	Answer	Response	%
1	Totally disagree	5	2.8
2	Disagree	10	5.6
3	Somewhat agree, somewhat disagree	37	20.6
4	Agree	84	46.7
5	Totally agree	44	24.4
	Total	**180**	**100.0**
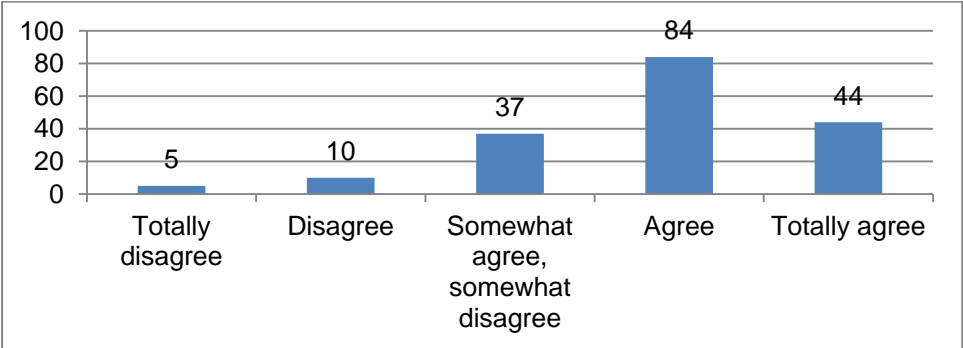
FIGURE 1:   GRAPHIC REPRESENTATION FOR "I FEEL FREE TO EXPRESS MY IDEAS AND OPINIONS IN THIS JOB"

From the 180 respondents, five (2.8%) totally disagree that they are free to express their ideas and opinions in their jobs, ten (5.6%) disagree, 37 (20.6%) somewhat agree/ somewhat disagree, 84 (46.7%) agree and 44 (24.4%) totally agree.

**TABLE 2:   RESPONDENTS' RATING FREQUENCY ON "I DON'T REALLY FEEL
COMPETENT IN MY JOB" (QUESTION 2)**

#	Answer	Response	%
1	Totally disagree	84	46.7
2	Disagree	74	41.1
3	Somewhat agree, somewhat disagree	11	6.1
4	Agree	8	4.4
5	Totally agree	3	1.7
	Total	**180**	**100.0**
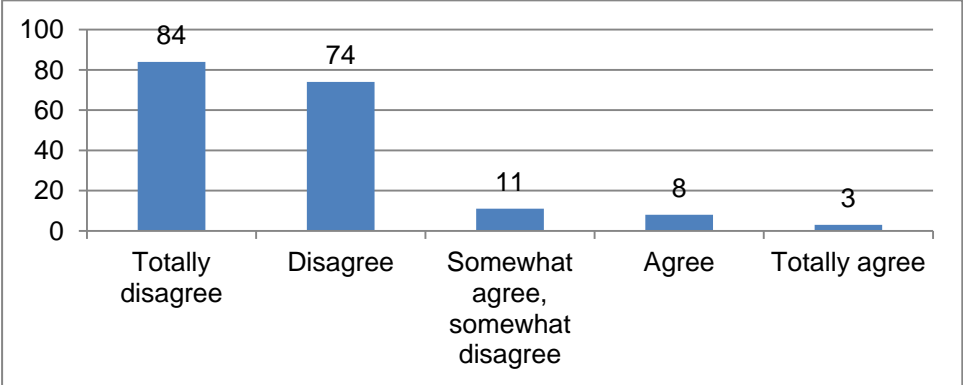
**FIGURE 2:   GRAPHIC REPRESENTATION FOR "I DON'T REALLY FEEL
COMPETENT IN MY JOB"**

From 180 respondents, 84 (46.7%) totally disagree that they don't really feel competent in their job, 74(41.1%) disagree, eleven (6.1%) somewhat agree/ somewhat disagree, eight (4.4%) agree that they don't feel competent in their job and three (1.7%) totally agree.

TABLE 3:   RESPONDENTS' RATING FREQUENCY ON "I DON'T REALLY FEEL CONNECTED WITH OTHER PEOPLE AT MY JOB" (QUESTION 3)

#	Answer	Response	%
1	Totally disagree	66	36.7
2	Disagree	65	36.1
3	Somewhat agree, somewhat disagree	22	12.2
4	Agree	22	12.2
5	Totally agree	1	.6
	Total	**176**	**97.8**
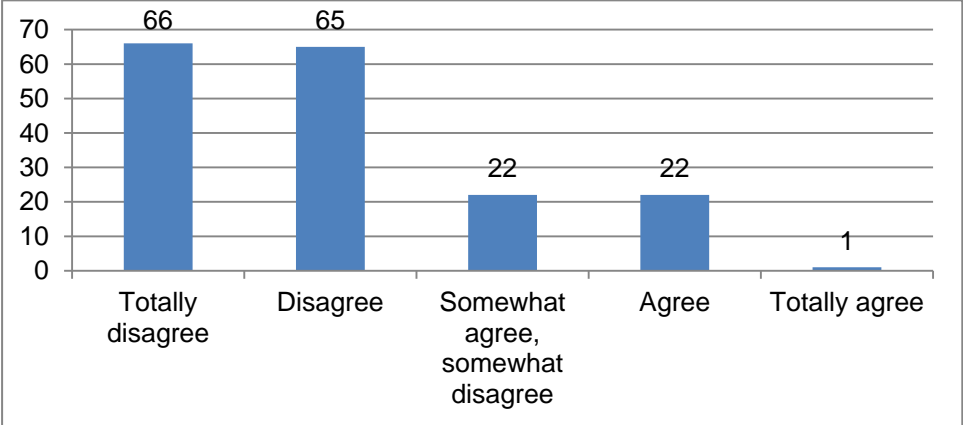
FIGURE 3:   GRAPHIC REPRESENTATION FOR "I DON'T REALLY FEEL CONNECTED WITH OTHER PEOPLE AT MY JOB"

66 (36.7%) of the respondents totally disagree that don't really feel connected with other people at their job, 65 (36.1%) disagree, 22 (12.2%) somewhat agree/ somewhat disagree, 22 (12.2%) agree and one (0.6%) totally agrees. Four respondents' feedback to the statement got lost in the system.

TABLE 4:   RESPONDENTS' RATING FREQUENCY ON "I FEEL LIKE I CAN BE MYSELF AT MY JOB" (QUESTION 4)

#	Answer	Response	%
1	Totally disagree	2	1.1
2	Disagree	15	8.3
3	Somewhat agree, somewhat disagree	32	17.8
4	Agree	95	52.8
5	Totally agree	34	18.9
	Total	**178**	**98.9**
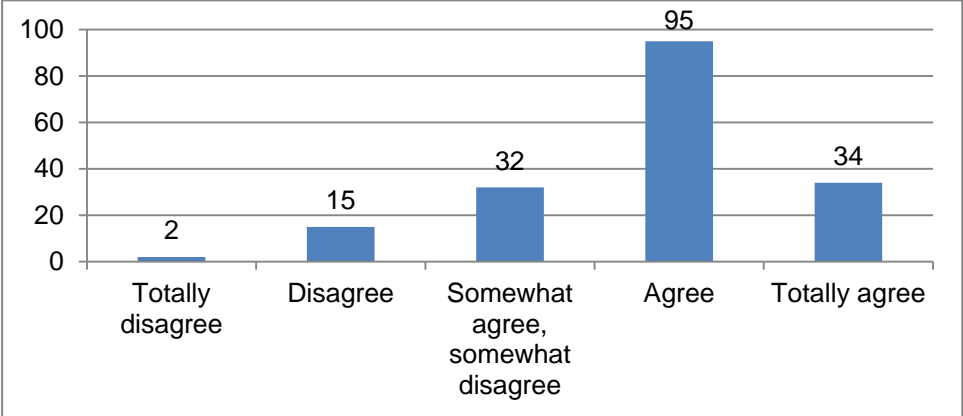
FIGURE 4:   GRAPHIC REPRESENTATION FOR "I FEEL LIKE I CAN BE MYSELF AT MY JOB"

Out of 180 respondents, two (1.1%) totally disagree that they feel like they can be themselves in their job, fifteen (8.3%) disagree, 32 (17.8%) somewhat agree/ somewhat disagree, 95 (52.8%) agree and 34 (18.9%) totally agree Two respondents' feedback to the statement got lost in the system.

TABLE 5:   RESPONDENTS' RATING FREQUENCY ON "I MASTER MY TASKS AT MY JOB" (QUESTION 5)

#	Answer	Response	%
1	Totally disagree	1	.6
2	Disagree	4	2.2
3	Somewhat agree, somewhat disagree	24	13.3
4	Agree	77	42.8
5	Totally agree	71	39.4
	Total	**177**	**98.3**
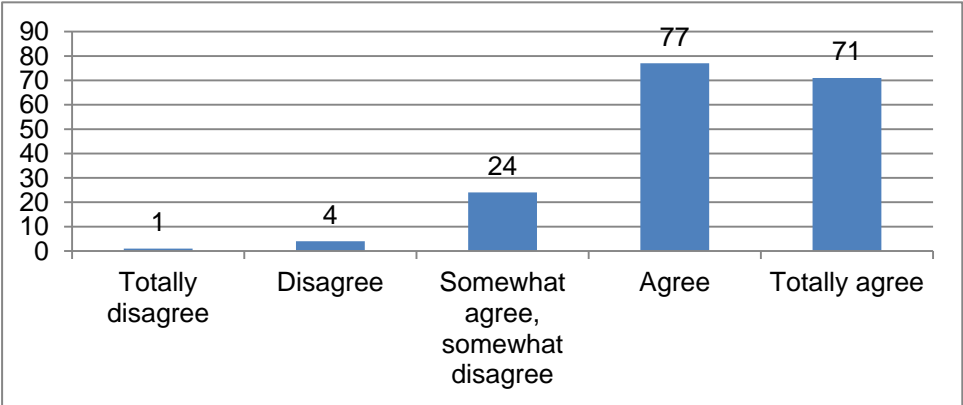
FIGURE 5:   GRAPHIC REPRESENTATION "I REALLY MASTER MY TASKS AT MY JOB"

Out of 180 respondents, one (0.6%) totally disagrees that they really master their tasks at their job, four (2.2%) disagree, 24 (13.3%) somewhat agree/ somewhat disagree, 77 (42.8%) agree and 71 (39.4%) totally agree. Three respondents' feedback to the statement got lost in the system.

**TABLE 6:   RESPONDENTS' RATING FREQUENCY ON "AT WORK, I FEEL PART
OF THE GROUP" (QUESTION 6)**

#	Answer	Response	%
1	Totally disagree	3	1.7
2	Disagree	11	6.1
3	Somewhat agree, somewhat disagree	34	18.9
4	Agree	78	43.3
5	Totally agree	46	25.6
	Total	**172**	**95.6**
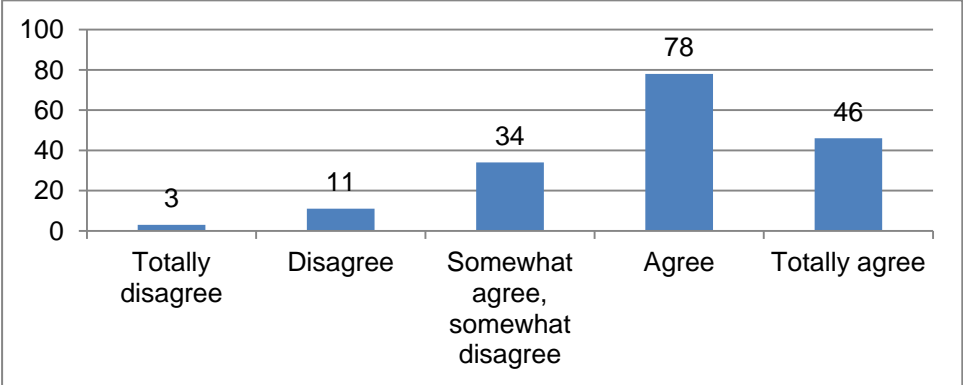
**FIGURE 6:   GRAPHIC REPRESENTATION FOR "AT WORK, I FEEL PART OF A
GROUP"**

Three (1.7%) of the respondents totally disagree that at work they feel part of the group, eleven (6.1%) disagree, 34 (18.9%) somewhat agree/ somewhat disagree, 78 (43.3%) agree and 46 (25.6%) totally agree. Eight respondents' feedback to the statement got lost in the system.

TABLE 7:   RESPONDENTS' RATING FREQUENCY ON "AT WORK, I OFTEN FEEL LIKE I HAVE TO FOLLOW OTHER PEOPLE'S COMMANDS" (QUESTION 7)

#	Answer	Response	%
1	Totally disagree	14	7.8
2	Disagree	45	25.0
3	Somewhat agree, somewhat disagree	80	44.4
4	Agree	35	19.4
5	Totally agree	4	2.2
	Total	**178**	**98.9**
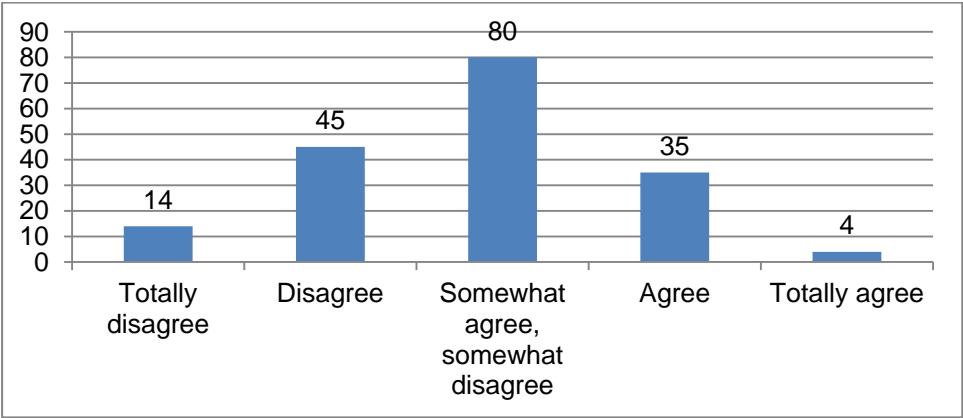
FIGURE 7:   GRAPHIC REPRESENTATION FOR "AT WORK, I OFTEN FEEL LIKE I HAVE TO FOLLOW OTHER PEOPLE'S COMMANDS"

Fourteen (7.8%) of the respondents totally disagree that at work they often feel like they have to follow other people's commands, 45 (25%) disagree, 80 (44.4%) somewhat agree/ somewhat disagree, 35 (19.4%) agree and four (2.2%) totally agree. Two respondents' feedback to the statement got lost in the system.

TABLE 8: **RESPONDENTS' RATING FREQUENCY ON "I FEEL COMPETENT AT MY JOB" (QUESTION 8)**

#	Answer	Response	%
1	Totally disagree	0	0
2	Disagree	2	1.1
3	Somewhat agree, somewhat disagree	22	12.2
4	Agree	88	48.9
5	Totally agree	67	37.2
	Total	**179**	**99.4**
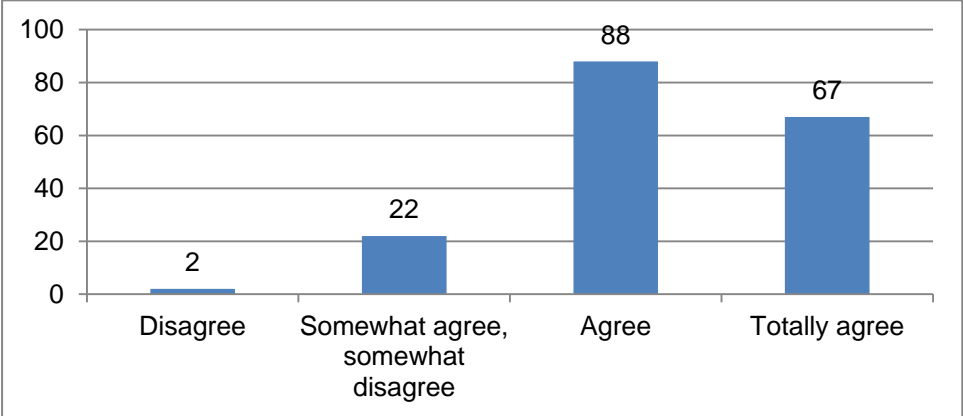
FIGURE 8: GRAPHIC REPRESENTATION FOR "I FEEL COMPETENT AT MY JOB"

There were no respondents who totally disagreed that they feel competent at their job, two (1.1%) disagree that they feel competent in their job, 22 (12.2%) somewhat agree/ somewhat disagree, 88 (48.9%) agree and 67 (37.2%) totally agree. One respondent's feedback to the statement got lost in the system.

TABLE 9:   RESPONDENTS' RATING FREQUENCY ON "I DON'T REALLY MIX WITH OTHER PEOPLE AT MY JOB" (QUESTION 9)

#	Answer	Response	%
1	Totally disagree	64	35.6
2	Disagree	70	38.9
3	Somewhat agree, somewhat disagree	33	18.3
4	Agree	9	5.0
5	Totally agree	4	2.2
	Total	**180**	**100.0**
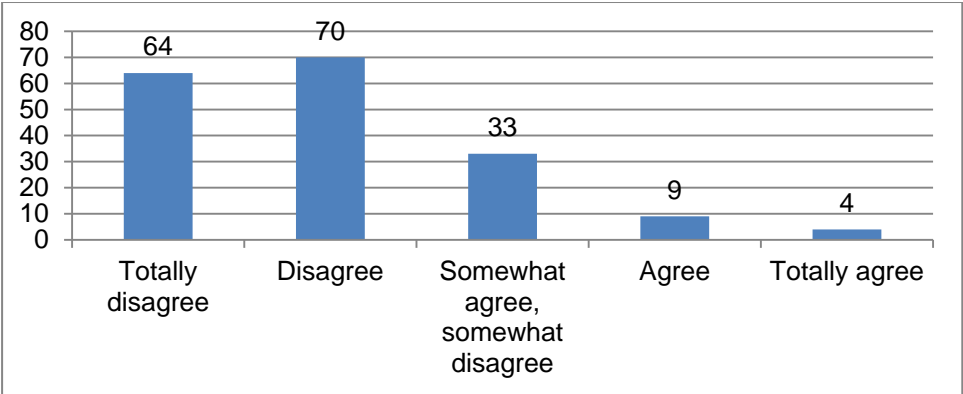
FIGURE 9:   GRAPHIC REPRESENTATION FOR "I DON'T REALLY MIX WITH OTHER PEOPLE AT MY JOB"

64 (35.6%) of the respondents totally disagree that at they don't really mix with other people at their job, 70 (38.9%) disagree, 33 (18.3%) somewhat agree/ somewhat disagree, nine (5%) agree and four (2.2%) totally agree.

TABLE 10:   RESPONDENTS' RATING FREQUENCY ON "IF I COULD CHOOSE, I WOULD DO THINGS AT WORK DIFFERENTLY" (QUESTION 10)

#	Answer	Response	%
1	Totally disagree	14	7.8
2	Disagree	57	31.7
3	Somewhat agree, somewhat disagree	55	30.6
4	Agree	40	22.2
5	Totally agree	13	7.2
	Total	**179**	**99.4**
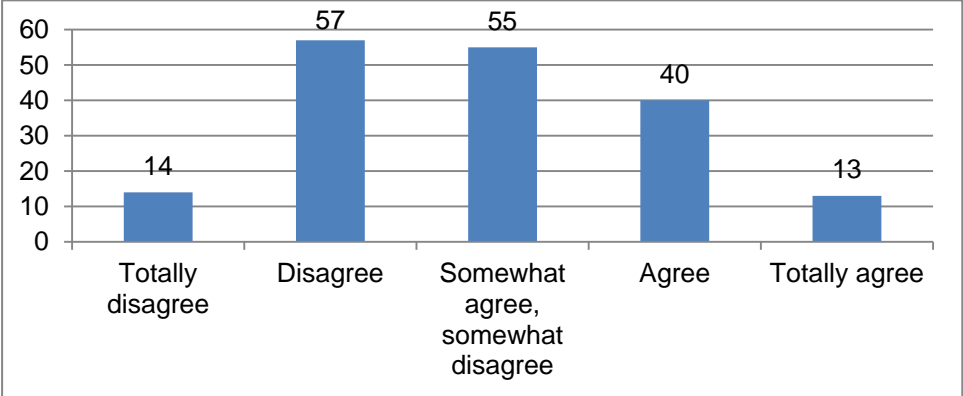
FIGURE 10: GRAPHIC REPRESENTATION FOR "IF I COULD CHOOSE, I WOULD DO THINGS AT WORK DIFFERENTLY"

Fourteen (7.8%) of the respondents totally disagree that if they could choose, they would do things at work differently, 57 (31.7%) disagree, 55 (30.6%) somewhat agree/ somewhat disagree, 40 (22.2%) agree and thirteen (7.2%) totally agree. One respondent's feedback to the statement got lost in the system.

**TABLE 11:   RESPONDENTS' RATING FREQUENCY ON "I DOUBT WHETHER I AM
ABLE TO EXECUTE MY JOB PROPERLY" (QUESTION 11)**

#	Answer	Response	%
1	Totally disagree	84	46.7
2	Disagree	79	43.9
3	Somewhat agree, somewhat disagree	11	6.1
4	Agree	5	2.8
5	Totally agree	0	0
	Total	**179**	**99.4**
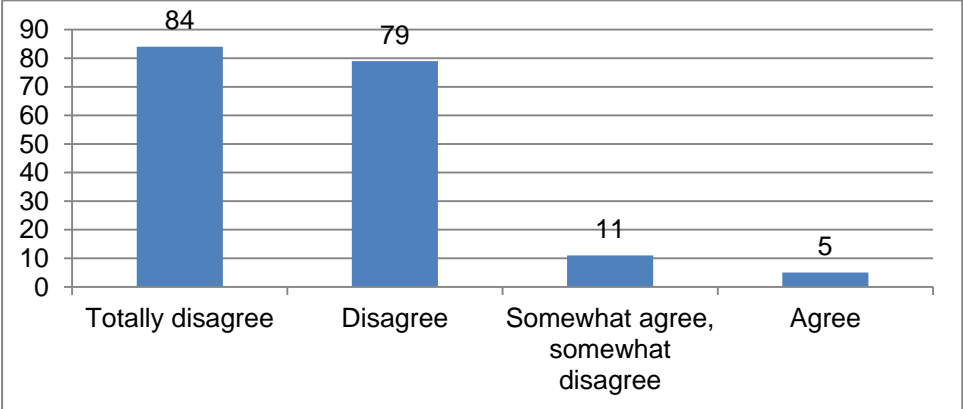
**FIGURE 11: GRAPHIC REPRESENTATION FOR "I DOUBT WHETHER I AM ABLE
TO EXECUTE MY JOB PROPERLY"**

84 (46.7%) of the respondents totally disagree that they doubt whether they are able to execute their job properly, 79 (43.9%) disagree, eleven (6.1%) somewhat agree/ somewhat disagree, five (2.8%) agree and no one totally agrees with the statement. One respondent's feedback to the statement got lost in the system.

TABLE 12: RESPONDENTS' RATING FREQUENCY ON "AT WORK, I CAN TALK WITH PEOPLE ABOUT THINGS THAT REALLY MATTER TO ME" (QUESTION 12)

#	Answer	Response	%
1	Totally disagree	7	3.9
2	Disagree	24	13.3
3	Somewhat agree, somewhat disagree	53	29.4
4	Agree	72	40.0
5	Totally agree	24	13.3
	Total	**180**	**100.0**
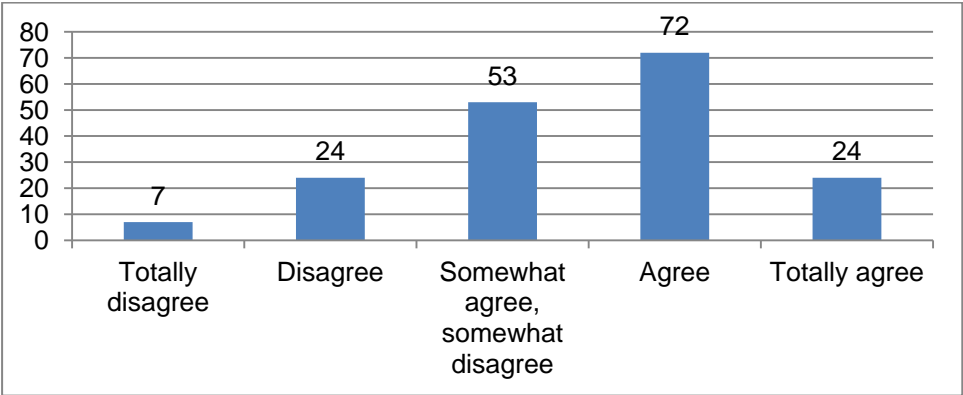
FIGURE 12: GRAPHIC REPRESENTATION FOR "AT WORK, I CAN TALK WITH PEOPLE ABOUT THINGS THAT REALLY MATTER TO ME"

Seven (3.9%) of the respondents totally disagree that at work, they can talk to people about things that really matter to them, 24 (13.3%) disagree, 53 (29.4%) somewhat agree/ somewhat disagree, 72 (40%) agree and 24 (13.3%) totally agree with the statement.

TABLE 13: RESPONDENTS' RATING FREQUENCY ON "THE TASK I HAVE TO DO AT WORK ARE IN LINE WITH WHAT I REALLY WANT TO DO" (QUESTION 13)

#	Answer	Response	%
1	Totally disagree	9	5.0
2	Disagree	16	8.9
3	Somewhat agree, somewhat disagree	42	23.3
4	Agree	85	47.2
5	Totally agree	28	15.6
	Total	**180**	**100.0**
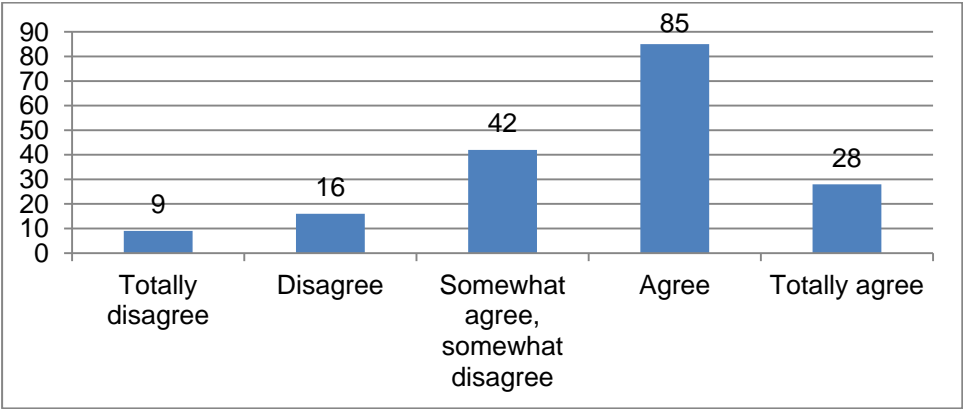
FIGURE 13: GRAPHIC REPRESENTATION FOR "THE TASKS I HAVE TO DO AT WORK ARE IN LINE WITH WHAT I REALLY WANT TO DO"

Out of 180 respondents, nine (5%) of the respondents totally disagree that the tasks they have to do at work are in line with what they really want to do, sixteen (8.9%) disagree, 42 (23.3%) somewhat agree/ somewhat disagree, 85 (47.2%) agree and 28 (15.6%) totally agree with the statement.

TABLE 14:   RESPONDENTS' RATING FREQUENCY ON "I AM GOOD AT THE THINGS I DO IN MY JOB" (QUESTION 14)

#	Answer	Response	%
1	Totally disagree	0	0
2	Disagree	3	1.7
3	Somewhat agree, somewhat disagree	13	7.2
4	Agree	104	57.8
5	Totally agree	60	33.3
	Total	**180**	**100.0**
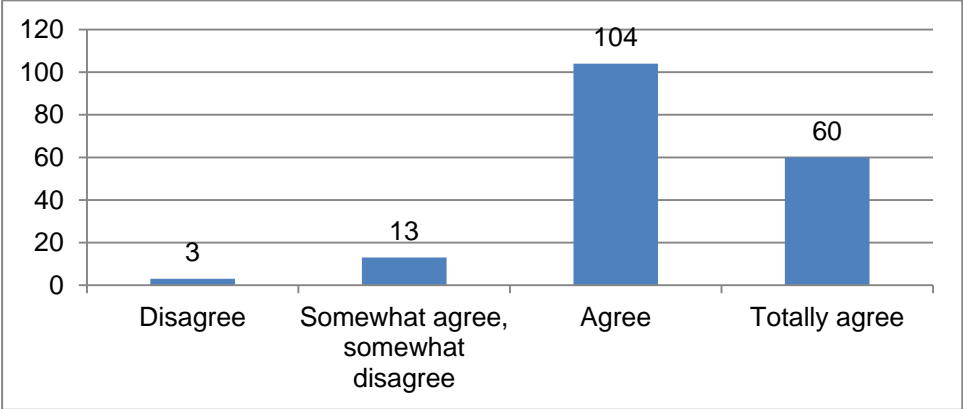
FIGURE 14: GRAPHIC REPRESENTATION FOR "I AM GOOD AT THE THINGS I DO IN MY JOB"

There are no respondents who totally disagree that they are good at the things they do in their job, three (1.7%) disagree, thirteen (7.2%) somewhat agree/ somewhat disagree, 104 (57.8%) agree and 60 (33.3%) totally agree with the statement.

TABLE 15:   RESPONDENTS' RATING FREQUENCY ON "I OFTEN FEEL ALONE WHEN I AM WITH MY COLLEAGUES" (QUESTION 15)

#	Answer	Response	%
1	Totally disagree	60	33.3
2	Disagree	72	40.0
3	Somewhat agree, somewhat disagree	41	22.8
4	Agree	5	2.8
5	Totally agree	1	.6
	Total	**179**	**99.4**
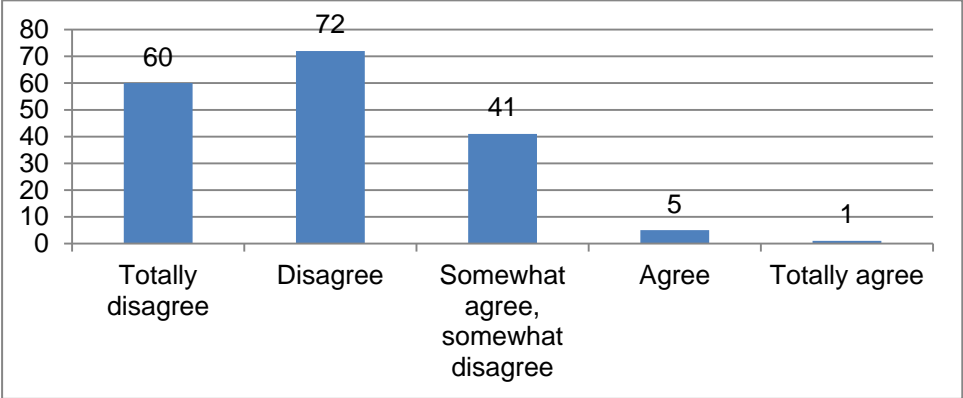
FIGURE 15: GRAPHIC REPRESENTATION FOR "I OFTEN FEEL ALONE WHEN I AM WITH MY COLLEAGUES"

60 (33.3%) of the respondents totally disagree that they often feel alone when they are with their colleagues, 72 (40%) disagree, 41 (22.8%) somewhat agree/ somewhat disagree, five (2.8%) agree and one (0.6%) totally agrees to the statement. One respondent's feedback of the statement got lost in the system.

TABLE 16:   RESPONDENTS' RATING FREQUENCY ON "I FEEL FREE TO DO MY JOB THE WAY I THINK IT COULD BEST BE DONE" (QUESTION 16)

#	Answer	Response	%
1	Totally disagree	5	2.8
2	Disagree	7	3.9
3	Somewhat agree, somewhat disagree	46	25.6
4	Agree	89	49.4
5	Totally agree	33	18.3
	Total	**180**	**100.0**
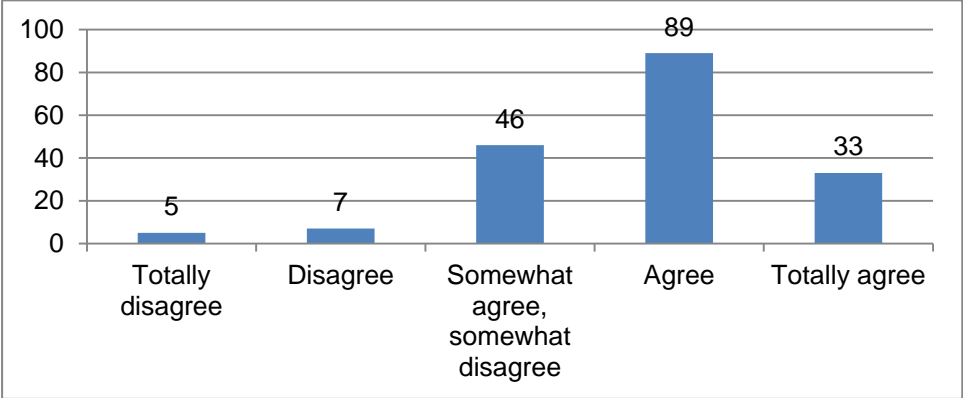
FIGURE 16: GRAPHIC REPRESENTATION FOR "I FEEL FREE TO DO MY JOB THE WAY I THINK IT COULD BEST BE DONE"

Five (2.8%) of the respondents totally disagree that they feel free to do their job the way they think it could best be done, seven (3.9%) disagree, 46 (25.6%) somewhat agree/ somewhat disagree, 89 (49.4%) agree and 33 (18.3%) totally agree to the statement.

TABLE 17: RESPONDENTS' RATING FREQUENCY ON "I HAVE THE FEELING THAT I CAN EVEN ACCOMPLISH THE MOST DIFFICULT TASKS AT WORK" (QUESTION 17)

#	Answer	Response	%
1	Totally disagree	2	1.1
2	Disagree	8	4.4
3	Somewhat agree, somewhat disagree	19	10.6
4	Agree	108	60.0
5	Totally agree	42	23.3
	Total	**179**	**99.4**
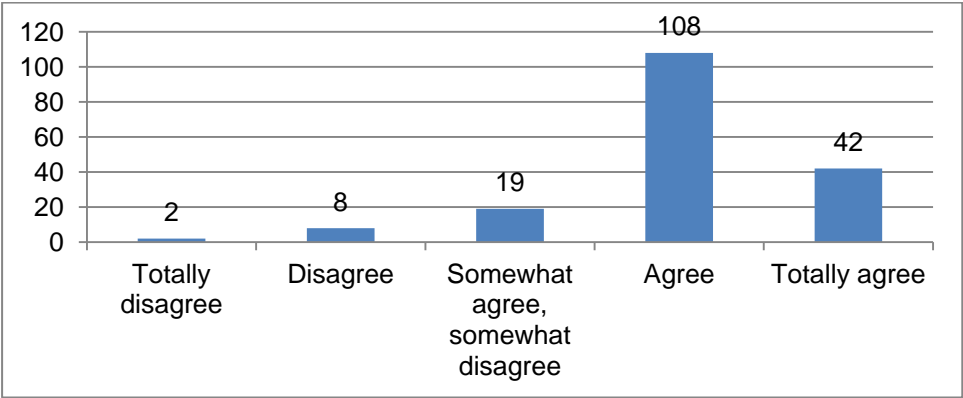
FIGURE 17: GRAPHIC REPRESENTATION FOR "I HAVE THE FEELING THAT I CAN EVEN ACCOMPLISH THE MOST DIFFICULT TASKS AT WORK"

Two (1.1%) of the respondents totally disagree that they have the feeling that they can even accomplish the most difficult tasks at work, eight (4.4%) disagree, nineteen (10.6%) somewhat agree/ somewhat disagree, 108 (60%) agree and 42 (23.3%) totally agree to the statement. One respondent's feedback of the statement got lost in the system.

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TABLE 18:   RESPONDENTS' RATING FREQUENCY ON "AT WORK, PEOPLE INVOLVE ME IN SOCIAL ACTIVITIES" (QUESTION 18)

#	Answer	Response	%
1	Totally disagree	2	1.1
2	Disagree	24	13.3
3	Somewhat agree, somewhat disagree	56	31.1
4	Agree	62	34.4
5	Totally agree	33	18.3
	Total	**177**	**98.3**
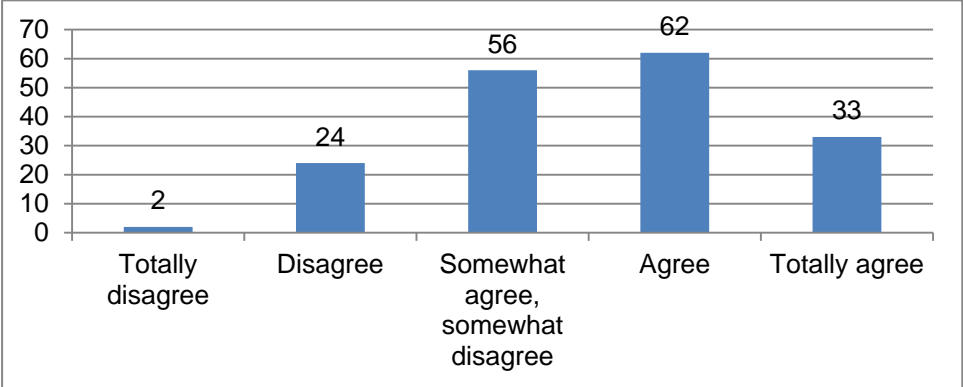
FIGURE 18: GRAPHIC REPRESENTATION FOR "AT WORK, PEOPLE INVOLVE ME IN SOCIAL ACTIVITIES"

Two (1.1%) of the respondents totally disagree that at work, people involve them in social activities, 24 (13.3%) disagree, 56 (31.1%) somewhat agree/ somewhat disagree, 62 (34.4%) agree and 33 (18.3%) totally agree to the statement. Three respondents' feedback of the statement got lost in the system.

TABLE 19:   RESPONDENTS' RATING FREQUENCY ON "IN MY JOB, I FEEL FORCED TO DO THINGS I DO NOT WANT TO DO" (QUESTION 19)

#	Answer	Response	%
1	Totally disagree	43	23.9
2	Disagree	86	47.8
3	Somewhat agree, somewhat disagree	39	21.7
4	Agree	4	2.2
5	Totally agree	6	3.3
	Total	**178**	**98.9**
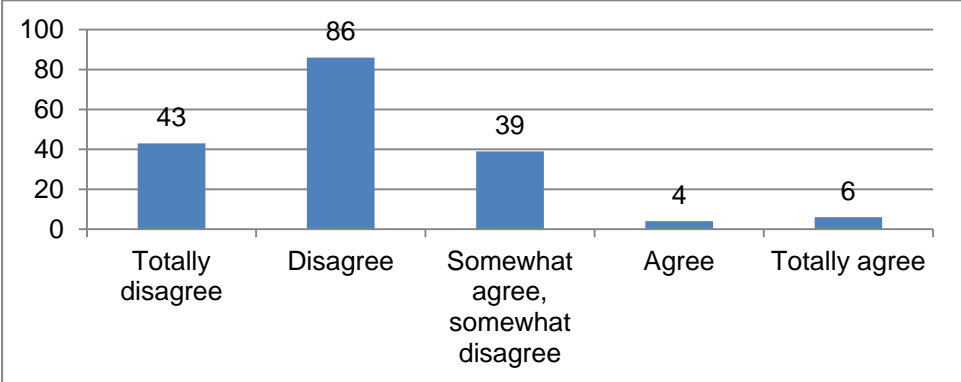
FIGURE 19: GRAPHIC REPRESENTATION FOR "IN MY JOB, I FEEL FORCED TO DO THINGS I DO NOT WANT TO DO"

43 (23.9%) of the respondents totally disagree that in their job, they feel forced to do things they don't want to do, 86 (47.8%) disagree, 39 (21.7%) somewhat agree/ somewhat disagree, 4 (2.2%) agree and 6 (3.3%) totally agree to the statement. Two respondents' feedback of the statement got lost in the system.

TABLE 20:   RESPONDENTS' RATING FREQUENCY ON "AT WORK, THERE ARE PEOPLE WHO REALLY UNDERSTAND ME" (QUESTION 20)

#	Answer	Response	%
1	Totally disagree	1	.6
2	Disagree	10	5.6
3	Somewhat agree, somewhat disagree	62	34.4
4	Agree	79	43.9
5	Totally agree	27	15.0
	Total	**179**	**99.4**
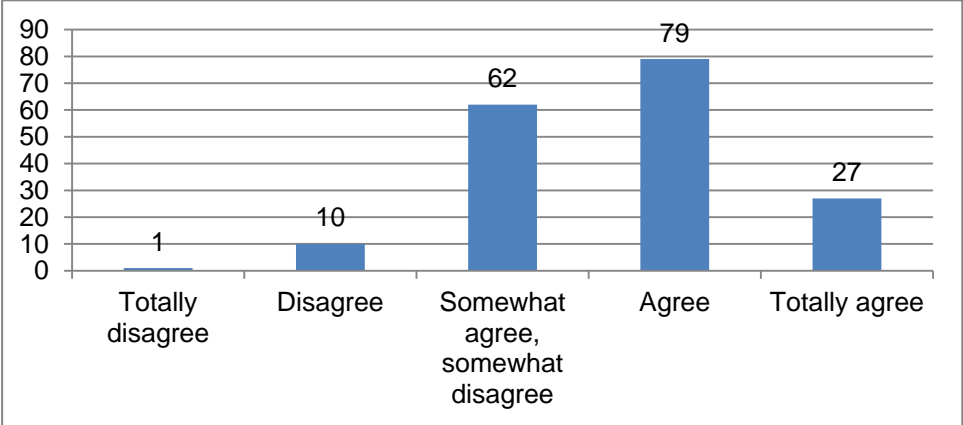
FIGURE 20: GRAPHIC REPRESENTATION FOR "AT WORK, THERE ARE PEOPLE WHO REALLY UNDERSTAND ME"

One (0.6%) of the respondents totally disagrees that at work, there are people who really understand them, ten (5.6%) disagree, 62 (34.4%) somewhat agree/ somewhat disagree, 79 (43.9%) agree and 27 (15%) totally agree to the statement. One respondent's feedback of the statement got lost in the system.

TABLE 21:   RESPONDENTS' RATING FREQUENCY ON "SOME PEOPLE I WORK WITH ARE CLOSE FRIENDS OF MINE" (QUESTION 21)

#	Answer	Response	%
1	Totally disagree	15	8.3
2	Disagree	40	22.2
3	Somewhat agree, somewhat disagree	36	20.0
4	Agree	65	36.1
5	Totally agree	22	12.2
	Total	**178**	**98.9**
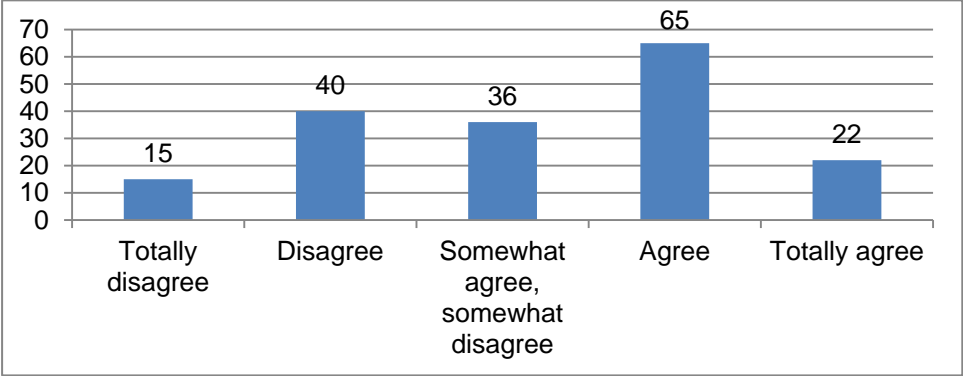
FIGURE 21: GRAPHIC REPRESENTATION FOR "SOME PEOPLE I WORK WITH ARE CLOSE FRIENDS OF MINE"

Fifteen (8.3%) of the respondents totally disagree that some people they work with are close friends of theirs, 40 (22.2%) disagree, 36 (20%) somewhat agree/ somewhat disagree, 65 (36.1%) agree and 22 (12.2%) totally agree to the statement. Two respondents' feedback in terms of the statement got lost in the system.

TABLE 22:   RESPONDENTS' RATING FREQUENCY ON "AT WORK, NO ONE CARES ABOUT ME" (QUESTION 22)

#	Answer	Response	%
1	Totally disagree	83	46.1
2	Disagree	53	29.4
3	Somewhat agree, somewhat disagree	36	20.0
4	Agree	5	2.8
5	Totally agree	2	1.1
	Total	**179**	**99.4**
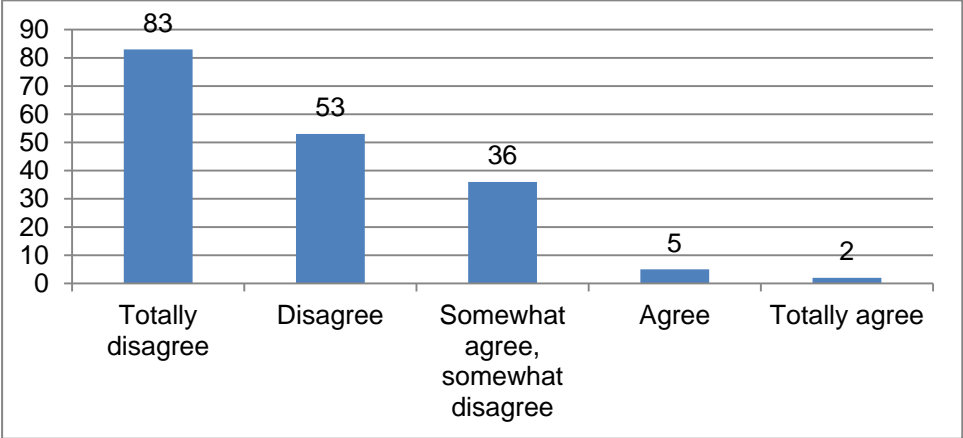
FIGURE 22: GRAPHIC REPRESENTATION FOR "AT WORK, NO ONE CARES ABOUT ME"

83 (46.1%) of the respondents totally disagree that at work no one cares about them, 53 (29.4%) disagree, 36 (20%) somewhat agree/ somewhat disagree, 5 (2.8%) agree and 2 (1.1%) totally agree to the statement. One respondent's feedback of the statement got lost in the system.

TABLE 23:   RESPONDENTS' RATING FREQUENCY ON "THERE IS NOBODY I CAN SHARE MY THOUGHTS WITH IF I SHOULD WANT TO DO SO" (QUESTION 23)

#	Answer	Response	%
1	Totally disagree	72	40.0
2	Disagree	72	40.0
3	Somewhat agree, somewhat disagree	21	11.7
4	Agree	13	7.2
5	Totally agree	2	1.1
	Total	**180**	**100.0**
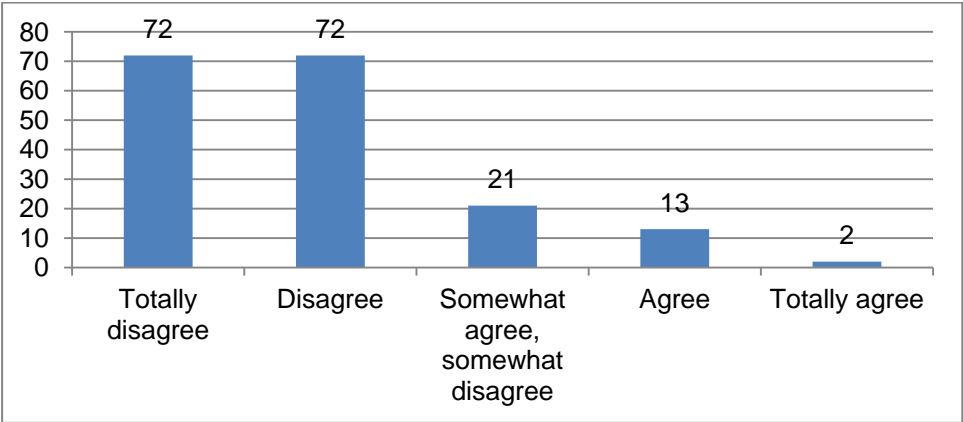
FIGURE 23: GRAPHIC REPRESENTATION FOR "THERE IS NOBODY I CAN SHARE MY THOUGHTS WITH IF I WOULD WANT TO DO SO"

72 (40%) of the respondents totally disagree that there is nobody they can share their thoughts with if they should want to do so, 72 (40%) disagree, 21 (11.7%) somewhat agree/ somewhat disagree, 13 (7.2%) agree and 2 (1.1%) totally agree with the statement.

APPENDIX E

The following table shows the inter-item correlation matrix between all the questions that address autonomy, competence and relatedness. The questions with (R) show that they were asked in reverse.

14.1 TABLE 1

Autonomy							
	B1	**B4**	**B7_R**	**B10_R**	**B13**	**B16**	**B19_R**
B1	1.00	0.33	0.31	0.12	0.47	0.28	0.30
B4	0.33	1.00	0.23	0.04	0.32	0.21	0.22
B7_R	0.31	0.23	1.00	0.26	0.26	0.21	0.36
B10_R	0.12	0.04	0.26	1.00	0.32	0.05	0.28
B13	0.47	0.32	0.26	0.32	1.00	0.18	0.39
B16	0.28	0.21	0.21	0.05	0.18	1.00	0.23
B19_R	0.30	0.22	0.36	0.28	0.39	0.23	1.00
Competence							
	B2	**B5**	**B8**	**B11**	**B14**	**B17**	
B2	1.00	-0.17	-0.39	0.31	-0.31	-0.25	
B5	-0.17	1.00	0.35	-0.32	0.62	0.43	
B8	-0.39	0.35	1.00	-0.42	0.45	0.41	
B11	0.31	-0.32	-0.42	1.00	-0.42	-0.36	
B14	-0.31	0.62	0.45	-0.42	1.00	0.50	

B17	-0.25	0.43	0.41	-0.36	0.50	1.00

Relatedness

	B3_R	B6	B9_R	B12	B15_R	B18	B20	B21	B22_R	B23_R
B3_R	1.00	0.37	0.57	0.30	0.41	0.27	0.33	0.39	0.29	0.36
B6	0.37	1.00	0.41	0.44	0.46	0.35	0.50	0.42	0.42	0.43
B9_R	0.57	0.41	1.00	0.35	0.56	0.39	0.35	0.36	0.43	0.49
B12	0.30	0.44	0.35	1.00	0.32	0.27	0.48	0.41	0.35	0.44
B15_R	0.41	0.46	0.56	0.32	1.00	0.38	0.38	0.30	0.38	0.35
B18	0.27	0.35	0.39	0.27	0.38	1.00	0.46	0.43	0.39	0.46
B20	0.33	0.50	0.35	0.48	0.38	0.46	1.00	0.56	0.35	0.39
B21	0.39	0.42	0.36	0.41	0.30	0.43	0.56	1.00	0.39	0.54
B22_R	0.29	0.42	0.43	0.35	0.38	0.39	0.35	0.39	1.00	0.67
B23_R	0.36	0.43	0.49	0.44	0.35	0.46	0.39	0.54	0.67	1.00

The following table shows the summary item statistics for relatedness. The table shows the mean of the questions mean and inter-item correlations, minimum mean, maximum mean, range, maximum/ minimum, variance together with the total number of questions for all aspects.

14.2 TABLE 2

Relatedness							
	Mean	**Minimum**	**Maximum**	**Range**	**Maximum / Minimum**	**Variance**	**N of Items**
Item Means	3.81	3.22	4.14	0.93	1.29	0.10	10
Inter-Item Correlations	0.41	0.27	0.67	0.41	2.54	0.01	10

The following table shows items total statistics for questions relating to autonomy, competence and relatedness if a specific item/ question is deleted. The table shows scale mean if item is deleted, scale variance if item is deleted, corrected item-total correlation, squared multiple correlation and Cronbach's alpha if item is deleted.

14.3 TABLE 3

Autonomy					
	Scale Mean if Item Deleted	**Scale Variance if Item Deleted**	**Corrected Item-Total Correlation**	**Squared Multiple Correlation**	**Cronbach's Alpha if Item Deleted**
B1	21.32	11.95	0.50	0.31	0.65
B4	21.36	13.09	0.36	0.17	0.69
B7_R	22.00	12.49	0.44	0.21	0.67
B10_R	22.04	12.82	0.28	0.16	0.71
B13	21.55	11.35	0.55	0.36	0.63
B16	21.39	13.38	0.30	0.12	0.70

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
B19_R	21.25	12.13	0.50	0.26	0.65

Competence

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
B2	18.31	4.07	-0.29	0.20	0.42
B5	15.84	2.20	0.41	0.41	-0.36[a]
B8	15.82	2.97	0.15	0.34	-0.01[a]
B11	18.39	4.49	-0.39	0.27	0.43
B14	15.80	2.60	0.39	0.50	-0.23[a]
B17	16.03	2.44	0.30	0.32	-0.21[a]

Relatedness

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
B3_R	34.089	35.59	0.53	0.38	0.86
B6	34.20	35.26	0.61	0.41	0.86
B9_R	34.08	35.02	0.63	0.51	0.86
B12	34.68	35.43	0.54	0.34	0.86
B15_R	34.06	36.79	0.57	0.41	0.86
B18	34.50	35.75	0.54	0.35	0.86

B20	34.43	36.00	0.62	0.47	0.86
B21	34.88	33.12	0.62	0.46	0.86
B22_R	33.96	35.51	0.59	0.50	0.86
B23_R	34.03	34.51	0.68	0.59	0.85