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*Full Length Research Paper*

# Herzberg! Can we trust you in Africa?

**Carl Marnewick**

Department of Business Information Technology, University of Johannesburg, South Africa. P. O. Box 524, Auckland Park, 2006, Johannesburg, South Africa. E-mail: cmarnewick@uj.ac.za. Tel: 011 559 1216. Fax: 011 559 1239.

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**Information technology (IT) projects are implemented through individual team members. These projects are fairly long in duration, especially enterprise resource planning projects. The problem that IT project managers face is how to motivate the team members, particularly in an African context where a team consists of various cultures and races. This paper presents results of a quantitative research study in which team members were asked to rank their motivating factors on a scale of 1 to 12 based on Herzberg's two-factor theory. The reason for using this theory is that, it was found to still be applicable after 50 years of its establishment. The purpose was to determine whether Herzberg's two-factor theory is applicable in an African context and if so, what unique factors could motivate IT team members in Africa. The research indicates that race, age and gender are not indicators and that there is a general tendency that the motivating factors of Herzberg can be used to motivate team members. The implication is that IT project managers can use Herzberg's two-factor theory to motivate individual team members. The research also adds to the current body of knowledge that Africans are not motivated by hygiene factors.**

**Key words:** Herzberg, African, information technology, project management, motivation

## INTRODUCTION

There is a notion amongst Westerners to differentiate between Africans and people of the West (Wiredu, 1997). This notion was around as early as the late 1960s when Horton (1967) questioned the assumptions made regar-ding Africans and people of the West. This prompts the question whether after 40 years information technology (IT) project managers can apply Western thought regarding motivating project team members in South African IT projects. This quest to Africanise the way South Africans go about in the workplace was initiated by former South African President Thabo Mbeki, when he delivered the African Renaissance speech (Vale and Maseko, 1998). The implication is that South Africans are seen as Africans at large. The purpose of the African Renaissance is to encourage cultural exchange and this article addresses this notion of interchanging Western and African culture to find the —best mixll for IT project managers with reference to motivating team members.

The problem addressed by this article is to determine whether Herzberg's two-factor motivation theory can be applied to IT project teams within a South African context. IT project team members are diverse in race, culture, sex and religion. This diversity highlights the concern that IT project managers face regarding the motivation of the various team members irrespective of race, culture, sex and religion.

This research was designed to find the significance of Herzberg's two-factor motivation theory, based on an assumption that, IT project managers could incorporate the results in their own working environments whether the results support or refute the theory. If the research con-cluded that Herzberg's two-factor motivation theory can be utilised, then IT project managers would have nothing to lose but if the research indicated otherwise, then a mind and paradigm shift would be needed to motivate team members.

The current problem is that research addresses various concepts regarding motivation in an African-American context. It focuses on various fields and disciplines such as the social and education disciplines. Research is done regarding motivation in project management (Bernhard and Jonathan, 2008; Mansfield and Odeh, 1991; Peterson, 2007) but not within an African context. Current research addresses motivation from a Western perspective and is not necessarily wrong as the locus of control is from a Western perspective. It does not address the issue of whether this is also applicable to diverse South African project teams and thus results in a gap in the current research.

Bassett-Jones and Lloyd (2005) questioned the issue

of whether Herzberg's two-factor motivation theory still resonates nearly 50 years after it was first posited. This study was done in 32 large organisations in the United Kingdom and the conclusion was that, Herzberg's two-factor motivation theory is still applicable. The significance of the research done by Bassett-Jones and Lloyd is that IT project managers can still apply Herzberg's motivational factors, as this is in line with the relevant textbooks or what training providers teach. But is this theory relevant in a South African context or a larger African context? Are the results of Bassett-Jones and Lloyd‘s study applicable to South African IT teams? Team motivation can be heavily influenced by the project manager, especially during the early stages of the project (Bernhard and Jonathan, 2008).

It appears that project managers have the ability to create a subculture within an overarching organisation in which team dynamics can lead to higher levels of motivation than in the encompassing organisation. To achieve a project environment in which the majority of the members involved are motivated about the project, project managers have to be sensitive during the early stages of a project. This implies that, they must be able to determine what motivates team members and how this can be exploited for the good of the project itself. Because motivation can inspire, encourage and stimulate individuals to achieve common goals through teamwork, it is in the project manager's best interest to drive towards project success through the creation and maintenance of a motivating environment for all members of the team (Peterson, 2007).

This article addresses the identified gap by exploring whether Herzberg's two-factor motivation theory can be applied to diverse project teams. IT project managers deal with a wide variety of team members and need to know whether the old school of thought regarding motivation is still applicable. The benefit of understanding the impact of Herzberg‘s two-factor motivation theory on diverse project teams is that project managers will be able to critically determine which motivational strategy to follow. This ensures that each team member feels valued and performs at an optimum level within the team. The goal of this article is to determine whether Herzberg's two-factor motivation theory is applicable to South African team members and therefore to the wider African continent. This goal is achieved through the following three objectives: The first objective is to understand Herzberg‘s two-factor motivation theory. The second is to determine whether there is a difference between African and Western cultures with regard to motivation. The last objective is to analyse the data based on the literature review and present it so that IT project managers can internalise the information.

A quantitative research approach was used to determine the ranking of the motivational factors of the respondents. The respondents were all IT professionals working on projects. They were asked to complete a questionnaire providing some biographical as well as motivational information. The questionnaires were completed anonymously.

## LITERATURE REVIEW

The first objective of this article is to determine what motivation is. Motivation is an inner force that causes an individual to do something, but what makes one individual do something is not necessarily the same for another individual (Burke, 2007). Another definition is that, motivation may be defined as the characteristic of an individual willing to expend effort towards a particular set of behaviours (Tabassi and Bakar, 2009). Motivation is also defined as a person‘s intensity, direction and persistence of effort to attain a specific objective (Fuller et al., 2008). Intensity refers to how hard an individual tries to attain the specific objective, whereas direction needs to channel the intensity towards the correct objective. Persistence refers to how long someone maintains an effort to attain the specific objective. These definitions provide a much generalised definition of motivation but motivating in a ―project environment involves the creation of an environment that meets the project objectives while offering maximum self-satisfaction related to what people value the most‖ (Project Management Institute, 2008).

Motivation is therefore a personal choice and project managers can only create the environment or opportunity for team members to become motivated but they cannot make the decision on behalf of a team member (Portny et al., 2008). Project managers need to identify the needs of each team member as well as define the organisational objectives. Once this has been done, the next step is to determine rewards and link these to behaviours that both serve the organisational objectives and also satisfy employee needs (Bassett-Jones and Lloyd, 2005). If these are well aligned, high motivation will result; if poorly aligned, then low motivation will be the outcome. Project team members are motivated by the challenge of reaching the project and organisation‘s objectives but at the same time, tight completion dates puts pressure on them (Gällstedt, 2003).

Motivation can inspire, encourage and stimulate individuals and project teams towards great accomplish-ments. Motivation can also create an environment that fosters teamwork and collective initiatives to reach common goals or objectives. The level of motivation an individual and/or team applies to project efforts can affect all aspects of project results, including a direct impact on the quadruple constraint project success factors (that is on time, within budget, high quality, met scope/customer expectations). It is in the project manager‘s best interest to understand the reason for demotivation, in order to achieve project success through the creation and maintenance of a motivating environment for all members of the team (Peterson, 2007). Project teams comprise

team members with diverse backgrounds, expectations and individual objectives. The overall success of the project depends on the project team's commitment which is directly related to their level of motivation (Project Management Institute, 2008).

The personal choice on motivation is addressed by Schwalbe (2010), who makes a distinction between two types of motivation that is intrinsic and extrinsic motivation. The focus of intrinsic motivation is that a person is performing an activity because the person wants to do it (Bassett-Jones and Lloyd, 2005). Extrinsic motivation, on the other hand, causes a person to perform an activity to receive a reward or to avoid a penalty. Throughout the application of motivation, the project manager must realise the importance of individuality. Knowing what motivates each team member gives the project manager the ability to connect team members to environments, assignments, responsibilities and objectives that foster personal motivation (Bourgault et al., 2008). The encouraging impact of a human needs analysis provides the project manager with the ability to understand what teams and individuals desire most from their work and make it possible to track personal work drivers to uncover the variety of basic human needs and motivators that exist within your project team (Peterson, 2007).

According to Schwalbe (2010), psychologists and managers still do not understand what motivates people or —why they do what they doǁ. This statement poses a serious issue for project managers because if there is no consensus on what motivation is, then how would a project manager motivate the team members? The only tools or techniques that a project manager then can revert to are, to apply one or more of the available motivational theories and frameworks.

## MOTIVATIONAL FRAMEWORKS AND THEORIES

This section focuses on some of the main motivational theories. The aim is to provide a holistic overview of the motivational theories available to a project manager and not to discuss each theory in detail.

### McGregor's Theories X and Y

McGregor's Theories X and Y motivational approach, identifies polar differences in team members (Peterson, 2007). Theory X team members require constant attention, do not want to work, need punishment to achieve the desired outcome and avoid added responsibilities. In contrast, Theory Y team members want to work, find the job satisfying, are willing to participate, do not require a controlling environment and seek constant improvement or opportunity. This motivational theory creates challenges for a project manager as an environment must be created to motivate and stimulate Theory X team members but the same environment demotivates Theory Y team members. It is also fairly naïve to think that team members are only Theory X or Y depending on the situation.

### McClelland's theory of needs

The focus of this motivational theory is that, specific needs are acquired or learned over time and shaped by life experiences (Burke, 2007). There are three types of motivational needs, which vary in team members:

1. Achievement motivation: Team members are driven by a need to succeed. Accomplishment, personal ambition and a need to be good at what they do are additional attributes that are common. Team members who are driven by achievement are more likely to define clear goals as well as a course to goal attainment (Peterson, 2007).
2. Affiliation motivation: Team members are driven by relationships and a need to work well with others. Team members who are motivated through affiliation are drawn towards a friendly work atmosphere and strive for team unity, team success and commonality of team norms. Motivation through affiliation steers a team member to assist others while promoting a collective team effort.
3. Power motivation: Team members are driven by the ability to dominate and manipulate goals, direction, or decisions. Team members who are motivated by power are drawn towards the ability to offer input and access into a variety of situations, from risk review and competition to a general need for appreciation or personal acknowledgment (Peterson, 2007). Motivation through power naturally steers an individual towards leadership opportunities. Most individuals driven by power will gravitate towards positions that include a level of control. This motivational theory is the best for predicting work productivity, whereas other motivational theories are better in explaining job satisfaction (Fuller et al., 2008).

### Maslow's hierarchy of needs

This theory consists of a hierarchy of needs in which a team member must first satisfy, the lower level needs before proceeding to the next level (Burke, 2007; Maslow, 1943). This hierarchy is dynamic and team members are constantly moving up and down the hierarchy. It consists of the following five levels:

1. Physiological needs: These refer to the needs of the body for survival and self-preservation. Once these basic needs have been fulfilled, a team member moves up the hierarchy.
2. Security and safety needs: This level refers to the immediate concern for job security, income and physical protection and also the fear of disapproval, comments

against the team member and risk of failure (Burke, 2007).
3. Social needs: These needs refer to the team member's need to associate with other team members and the need to be accepted by others in the project team (Fuller et al., 2008).
4. Self-esteem needs: These are also called the team member's ego needs (Burke, 2007). The team member is driven by a need for recognition, respect, prestige and status. These are higher order needs and focus on the team member's active desire for recognition and self-respect (Schwalbe, 2010).
5. Self-actualisation needs: Maslow (1943) summarised this need as ―What a man can be, he must be‖. Self-actualisation refers to the desire for self-fulfilment, namely to the tendency for a team member to become actualised in what he or she is potentially.

According to Fuller et al. (2008), this hierarchy of needs does not consistently explain motivation. Unsatisfied needs do not necessarily motivate a team member and satisfying a need does not necessarily imply that a team member will move to the next level.

## Herzberg's KITA motivation

Herzberg's KITA motivation or ―kick-in-the-pants‖ approach, is based on the idea that there are both positive and negative external motivators. This motivational theory is also better known as Herzberg's two-factor motivation theory. Herzberg and his collaborators published the motivation to work in 1959 (Bassett-Jones and Lloyd, 2005). It was proposed that two factors influence motivation at work, (i) hygiene factors which are considered maintenance factors that are necessary to avoid dissatisfaction but that by themselves do not provide motivation and (ii) motivators that sustain effort (Schwalbe, 2010). This theory catalysed one of the most strenuously contested areas of management theory, largely because of the assertion that there was a weak correlation between financial reward and job satisfaction. At the crudest level, Herzberg's results have been translated into the axiom that while certain rewards such as money and status might not be directly motivating to all team members, the lack of them can be demotivating (Burke, 2007).

There are various other motivational theories such as Theory Z by William Ouchi, goal-setting theory, equity theory, reinforcement theory, expectancy theory and Thamhain and Wilemon's influence and power theory (Fuller et al., 2008; Schwalbe, 2010; Tietjen and Myers, 1998; Meredith and Mantel, 2010). These various motivational theories are not elaborated on in this article. The literature review raises two questions: (i) are these motivational theories applicable in the twenty-first century and (ii) since these motivational theories originated either from Western or Eastern philosophy, are they applicable to African project team members?

The focus of this article is Herzberg's two-factor motivation theory as it is included in the curriculum of all the major IT project management courses, as well as, the textbooks available to prospective IT project managers. Bassett-Jones and Lloyd (2005) addressed the issue of Herzberg's relevance in a study amongst 3200 respondents and concluded that, Herzberg is still applicable in today's economic environment. The research did, however, comment that the Anglo-American context did influence the results of the study. It further concluded that, intrinsic motivators outweigh the importance of the extrinsic motivators. Tietjen and Myers (1998) concluded as early as the late twentieth century that, ―a kick in the pants‖ as Herzberg put it, gets the job done but has no lasting positive change within the worker. The implication is that managers need to have a refreshed outlook on incentive schemes and what really motivates team members. Ifinedo(2005) addressed motivation in IT from the perspective of Finland, Nigeria and Estonia. He also realised the research gaps and included these three countries in the research based on either the current role they play in IT or their intention to embrace IT on a large scale. The research concluded that team members from the different nations have different viewpoints on motivation.

However, there was a correlation between the response from Finland and Estonia, suggesting that socio-economic background is a distinguishing factor (Ifinedo, 2005). The following research questions were formulated to test the claims with regard to the foregoing literature review:

1. RQ1: Does the age of an IT project team member determine the motivational factors? The rationale is that younger team members are still in the process of acquiring homes and cars and are motivated by salary and status.
2. RQ2: Does the race of an IT project team member determine the motivational factors? The rationale is that Herzberg's two-factor motivational theory is based on Western philosophy and that African team members are motivated differently. This hypothesis is in line with the research of Ifinedo (2005).
3. RQ3: Does the gender of an IT project team member determine the motivational factors? Gender was not addressed in any of the studies presented in the literature review. Women are joining the workforce more and more, especially in Africa where a paternalistic culture exists. It is important to determine what motivates women from an African background. The research methodology is described and discussed subsequently.

## MATERIALS AND METHODS

The research approach selected was quantitative as motivational aspects were investigated in a large population using predetermined categories so that broad and generalisable comparisons

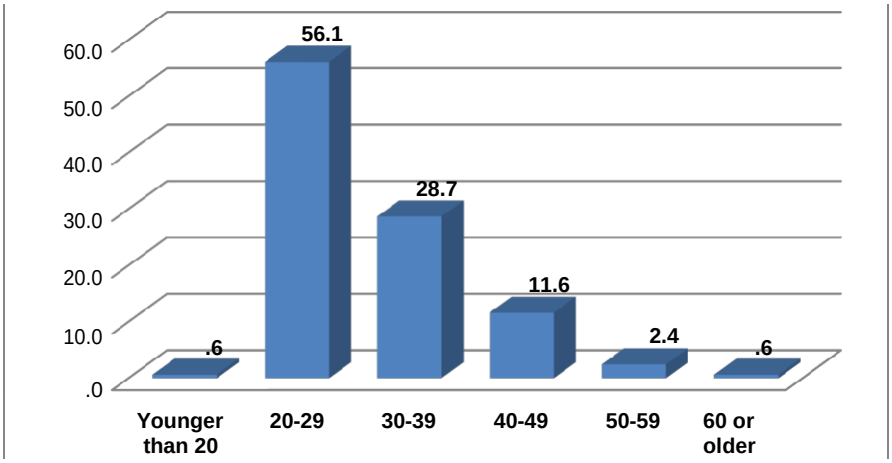


**Figure 1.** Age distribution.

comparisons could be made (Patton, 2002; Creswell, 2003; Blanche and Durrheim, 2004). Another reason is that numbers can be analysed using descriptive and inferential statistics (Bless and Higson-Smith, 2004; So and Leung, 2004).

**Profile of the respondents and setting**

One hundred and sixty-five respondents, representing different types of industries in South Africa, participated in the survey. These respondents were all involved in an IT project, either as a team member or a project manager. There were 105 males, 56 females and 4 respondents who did not indicate their gender. The age of the respondents varied from younger than 20 up to 60 years and older. The age distribution was important to the research as Hypothesis 1 ($H_1$) states that the motivational factors change as team members become older and more mature. The age distribution is illustrated in Figure 1.

The majority (84.8%) of the respondents were between the ages of 21 and 40 years, 11.6% were between 41 and 49 and the remainder were either older than 50 or did not indicate their age. Hypothesis 2 states that, ethnicity plays a role in determining the motivational factors. Figure 2 is a graphical representation of the data indicating that 44.8% of the respondents were African, 41.8% were White and the remainder of the respondents were either Asian or Coloured. Within the context of this article, African refers to Black South Africans and not Africans at large. The distribution of the respondents between African and White respondents provides an ideal situation to analyse the data as there is no skewness towards a specific ethnic group. Participants from the various organisations presented a random sample which was important to ensure they were representative (Page and Meyer, 2000; Blanche and Durrheim, 2004).

**Data collecting methods**

Data was collected using a structured questionnaire with 41 items placed under 4 questions. The questionnaire was distributed to IT project team members and project managers and a total of 165 usable responses were received from 10 industry sectors. The respondents were asked to rank the 12 factors of Herzberg's two-factor theory as presented in Table 1 according to priority. The questionnaire was distributed to people who were involved in IT projects and invitations to participate were distributed via e-mail, personal invitation and a South African project management magazine.

**Analysis of data**

The data collected through the questionnaire was processed and analysed using SPSS (Huizingh, 2007; Abu-Musa, 2009) a statistical analysis software package. Descriptive statistics of the collected data were analysed for the purpose of understanding the main characteristics of the research variables. The following types of analysis and statistical tests were performed on the data (Leeper, n.d.):

1. Reliability analysis: This allows the researcher to study the properties of measurement scales and the items that comprise the scales.
2. One-way ANOVA: This is used to test the hypothesis that several means are equal, frequent and descriptive.
3. T-test: This tests the difference of means between two groups defined by a missing indicator variable for each of the other variables.

The mean, variance and standard deviation were derived from the data as it formed the basis for inferential statistical procedures (Blanche and Durrheim, 2004).

## RESULTS AND ANALYSIS

Figure 3 shows the factors that motivated respondents the most. The list is sorted by motivational factor, for example Motivational Factor 1, is the factor that motivated the respondent the most. It is obvious from this distribution that the six motivating factors of Herzberg played a more important role in motivating the respondents than the hygiene factors. This is evident in that 50% or more of the respondents included these factors up to Motivational Factor 8. This means that the hygiene factors only came into play from Motivational Factors 9 to 12. Motivational Factors 9 to 12 focuses on security, status, working conditions and the policies of the company. This is in accordance with the literature which states that hygiene factors do not motivate team members

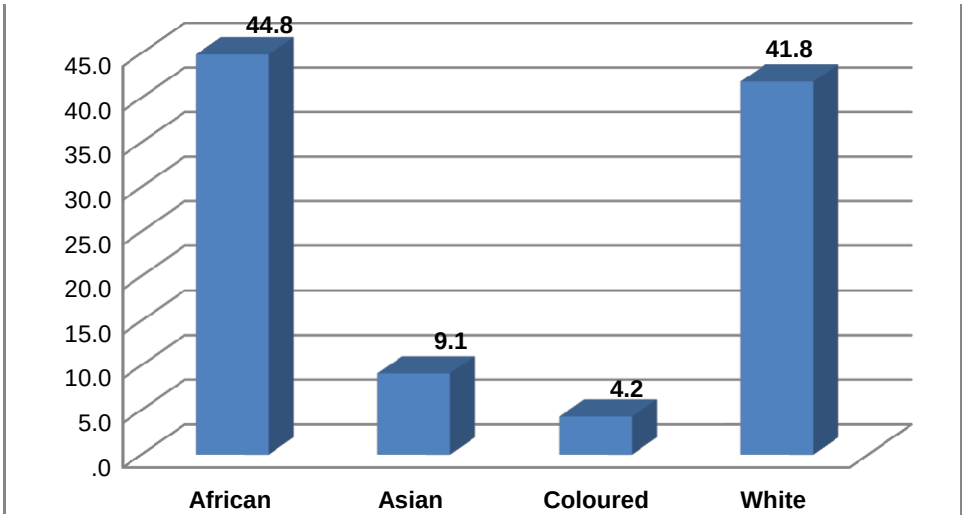


**Figure 2.** Ethnic group distribution.

**Table 1.** Presents the six hygiene factors and the six motivation factors (Fuller et al., 2008).

| Hygiene factors: Leading to dissatisfaction | Motivation factors: Leading to satisfaction |
|---|---|
| Company policy and administration: Covers adequacy or inadequacy of company organization and management. Also covers harmfulness or beneficial effects of company policies, usually personnel policies. | Achievement: Successful completion of a job, solutions to problems, seeing the results of one's work. Includes its opposite, failure, and the absence of achievement. |
| Security: Objective signs of the presence or absence of security, such as tenure and company stability or instability. | Recognition: Recognition could be from anyone – a superior, another individual in management, a peer, the general public. Could be either positive or negative recognition. |
| Status: Having a secretary in a new position, flying first class while on company work, being assigned a —prestigell parking spot, and so forth, or the deprivation of such status items. | Work itself: The actual doing of the job or task as a source of good or bad feelings, whether it is routine, creative, and so forth. |
| Work conditions: Physical conditions for work, the facilities available for doing work. Adequacy or inadequacy of ventilation, lighting, tools, space, and other environmental factors. | Responsibility: Factors relating to the assignment of responsibility and authority or the lack thereof. |
| Salary: Events in which compensation plays the dominant role. Could be increases or unfulfilled expectations or increases. | Advancement: An actual change in status or position within the company. |
| Interpersonal relations: Events in which interaction with a superior, subordinates or peers is the major factor. | Possibility of growth: The potential of moving up in the organization or enlarging skills and responsibilities. Objective evidence that the possibilities for personal growth are increased or decreased. |

Herzberg's two-factor motivation theory.

but act as dissatisfactory factors.

The only hygiene factor that was important to the respondents is salary. Twenty percent of the respondents on average listed ‗Salary' as a motivational factor amongst the top five motivational factors. The importance of salaries declines towards the end of the motivational

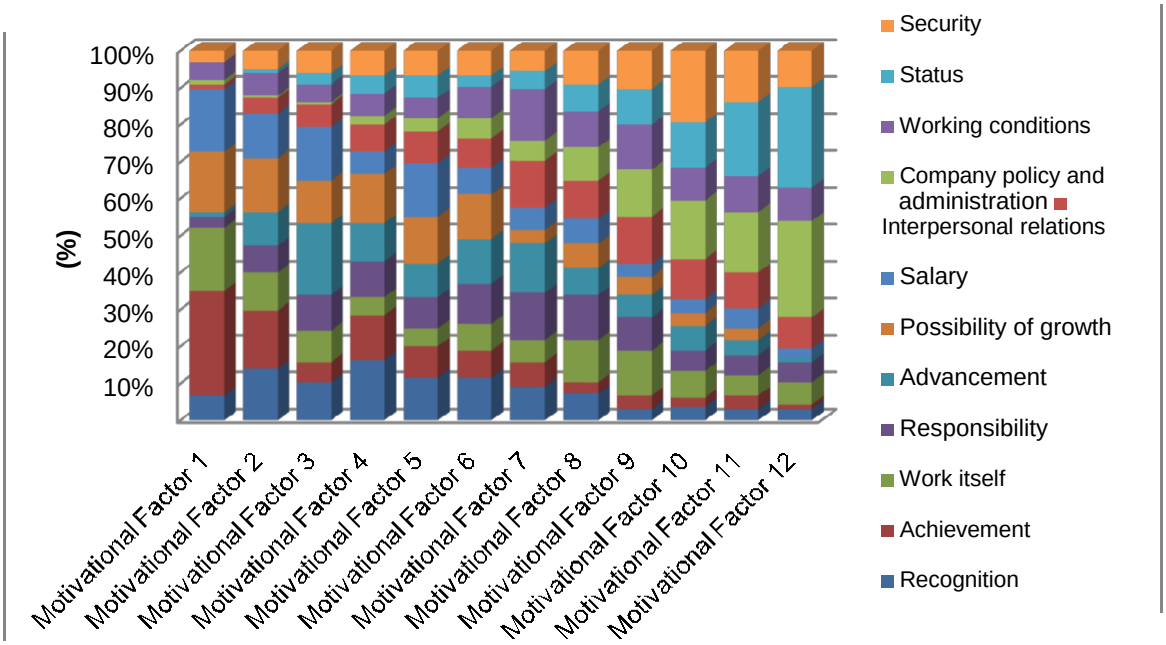


**Figure 3.** Motivational factors of all respondents.

**Table 2.** Top five motivating factors per age group.

| Motivating factor | 21–29 | 30–39 | 40–49 |
|---|---|---|---|
| Achievement | | 2 | 1 |
| Recognition | 4 | 4 | |
| Work itself | 5 | | |
| Advancement | 2 | 3 | |
| Possibility of growth | 3 | 5 | |
| | | | |
| **Hygiene factor** | | | |
| Company policy and administration | 1 | | |
| Security | | | 2 |
| Status | | 1 | 3 |
| Work conditions | | | 5 |
| Salary | | | 4 |

factors. Research question 1: Does the age of an IT project team member determine the motivational factors? Research question 1 asks whether the age of the team member determines the motivational factors. The rationale is that younger team members are still in the process of setting up a domestic life. They are focused on buying a house, cars and starting a family. This can only be achieved with money and through promotion at work. Older team members, on the other hand, should have settled in already and the motivating factors should play a significant role. Table 2 shows the top five motive-ting factors per age group. The age groups of younger than 20, 50 to 59 and older than 60 were not analysed, since the number of respondents who fell within these categories was significantly small.

The respondents that were in the age group of 21 to 29 indicated that company policy and administration was the top factor. None of the other hygiene factors played a role in motivating the respondents. Factors 2 to 5 were all motivating factors with advancement and possibility of growth placed in positions 2 and 3. The respondents in the age group 30 to 39 chose status as the factor that motivated them the most. The rest of the top five grou-pings were all motivating factors with achievement and advancement ranked 2 and 3. The number 1 motivation factor for the respondents of the age group 40 to 49 was achievement. The rest of the factors were all listed as hygiene factors, with security and status listed at 2 and 3

**Table 3.** Top five motivating factors per race group.

| Motivating factor | African | Coloured | Indian | White |
|---|---|---|---|---|
| Achievement | | 1 | 4 | 1 |
| Recognition | | 3 | | |
| Work itself | | 3 | | |
| Responsibility | | 4 | | 5 |
| Advancement | 1 | | 2 | |
| Possibility of growth | 3 | 3 | | |
| **Hygiene factor** | | | | |
| Company policy and administration | | 5 | 5 | 2 |
| Security | 5 | 5 | | 4 |
| Status | 2 | 3 | 1 | |
| Interpersonal relations | | 3 | 3 | |
| Work conditions | | 2 | | |
| Salary | 4 | 3 | | 3 |

and 3. Salary also acted as a major motivator for this age group. The age groups 20 to 29 and 30 to 39 were motivated by the motivational factors as described by Herzberg. More surprisingly is that the more mature group 40 to 49 was motivated by hygiene factors and not motivational factors. None of the literature reviewed indicated whether there is a preference towards the motivational factors as the age of an individual increases. This opens the door for more in-depth research as to what is the root cause of this phenomenon. Two factors, that is responsibility and interpersonal relations, were not represented on the Table. None of the age groups selected these two, as factors that would motivate them. Based on the information provided, it can be concluded that the answer to research question 1 is No, and that age does not play a role in motivating team members.

The second research question asks whether the race of the team member determines the motivational factors. Four major race categories have been identified, that is African, Coloured, Indian and White. The Indian race group includes Asian team members. Research question 2: Does the race of an IT project team member determine the motivational factors? The motivational factors for the four different race groups are presented in Table 3. The African group had two motivating factors and three hygiene factors. The top motivator was advancement and the other motivating factor was possibility of growth. Status, salary and security were the three hygiene factors for this race group. The Coloured race group is quite interesting, as six of the Herzberg factors were rated at number 3. Three were motivating factors, that is recognition, work itself and possibility of growth. The three hygiene factors were status, interpersonal relations and salary. The number 1 motivator amongst the Coloured race group was achievement, with work conditions in second place.

For the Indian race group, status was the top motivator. Advancement and achievement were ranked 2 and 4, respectively, and were the only motivating factors. The other hygiene factors, together with status, were interpersonal relations and company policy and administration. The top motivator amongst the White race group was achievement. Positions 2 to 4 were hygiene factors and are company policy and administration in position 2, followed by salary and security. The other motivating factor was responsibility. Figure 4 is a graphical representation of the factors that motivate the four race groups. Based on the information provided, it can be concluded that the answer to research question 2 is No, and that race does not play a role in motivating team members. There are no distinct motivating factors for each of the race groups and there is an overlap of some of the motivating factors.

The third and last research question investigates the relationship between gender and the motivational factors. RQ3: Does the gender of an IT project team member determine the motivational factors? Figure 5 is a graphical representation of the factors that motivate the different genders. Figure 5 clearly shows that only five of the twelve factors were substantially different where the difference between female and male respondents was more than 5%. These five factors were recognition, responsibility, security, salary and interpersonal relations. The other four motivating factors were more or less on par between the two genders. The three remaining hygiene factors were also more or less on par. The conclusion is that gender does not play a role in determining the motivational factors either. The data and its analysis have been presented and in the next section the impact of the results for organisations and in particular IT project managers is discussed.

## DISCUSSION

The analysis of what motivates team members clearly

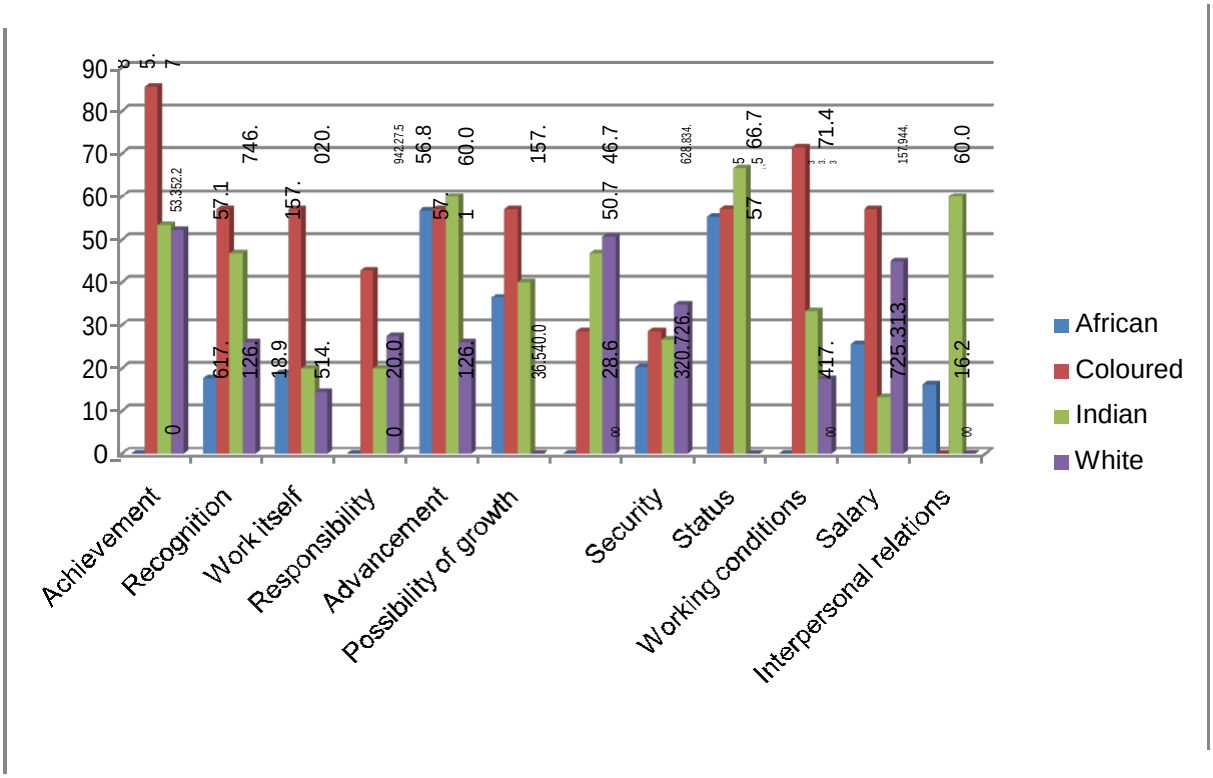


**Figure 4.** Top five motivating factors per race group.

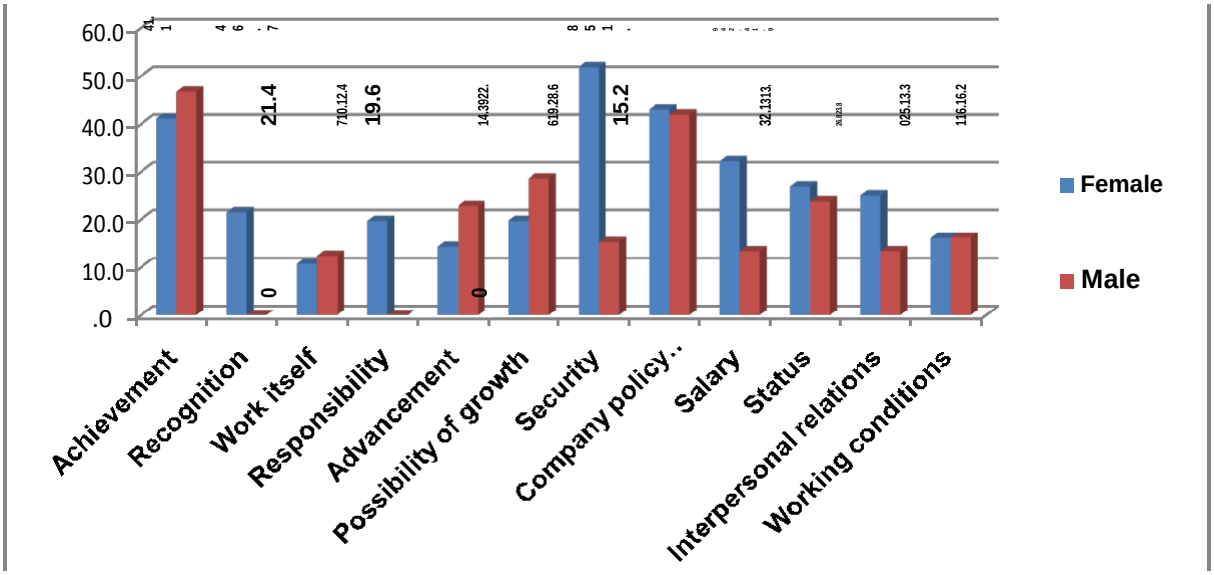


**Figure 5.** Motivating factors per gender.

indicates that Herzberg's studies and results are also applicable to the respondents of this study. The factors that motivate the respondents are Herzberg's motivating factors and not the hygiene factors. Such findings indicate that IT project managers can make the general assumption that team members are motivated by the motivating factors of Herzberg and that, the hygiene factors cause dissatisfaction, if they are absent. Research question 1 focuses on the role that age plays. The analysis of the data indicates that younger respon-dents focused on motivating factors. Although there is no correlation between the motivating factors of age groups 21 to 29 and 31 to 39 as per Table 2, four of the top five factors that motivated respondents in these age groups are

**Table 4.** Summary of answers to research questions.

| No. | Research question | Finding (Mostly yes/Partly yes/No) |
|---|---|---|
| 1 | Does the age of an IT project team member determine the motivational factors? | Partly yes |
| 2 | Does the race of an IT project team member determine the motivational factors? | No |
| 3 | Does the gender of an IT project team member determine the motivational factors? | No |

age groups are motivating factors and not hygiene factors. IT project managers can once again use Herzberg's motivating factors to motivate team members within these age groups. The surprise is that the age group of 40 to 49 was motivated by hygiene factors and not motivating factors. This contradicts the other age groups and needs further analysis. The assumption is that the respondents in this age group are White and male. In the South African industry this group is currently facing job insecurity due to black economic empowerment and affirmative action (The Economist, 2010). The analysis of the data indicates that 74% of the respondents were indeed White but that only 53% of them were male. The implication is that IT project managers must understand that older White male team members are feeling insecure and that hygiene factors play a much more motivating role than motivating factors.

The second research question focuses on the role of race as a determinant. The results of Table 3 and Figure 4 clearly show that there is no correlation between the different race groups. All four race groups are motivated by both motivating and hygiene factors. The only race group that listed most of the factors is the Coloured race group. This might be due to the number of respondents that formed part of this race group. The overall conclusion can be made that race is not a determinant in motivating team members.

The last research question ponders the role that gender plays. Figure 5 shows the difference between the two genders and there are five factors that show a significant difference between the two genders. The results show that IT project managers must not have preconceived ideas regarding gender and assume that gender is a determinant for the motivating factors. Based on the above findings, Table 4 summarises the answers to the research questions: The final conclusion is that the motivating factors of Herzberg play a more important role than the hygiene factors and that IT project managers must treat each team member as an individual and understand what specifically motivates each and every team member irrespective of race, gender or age.

## Conclusions

The article is based on exploratory research with the purpose of developing an understanding of what motivates team members in the IT industry. Based on the findings, further research will be conducted in the field of motivation. There are various motivational theories as suggested by the literature. These motivational theories are all different in their approaches but the common factor amongst them is that they try to understand what motivates people to do certain things. Another commonality is that apart from one or two theories, most of these theories were developed from a Western perspective and not an African one. The motivational theory that seems to be referred to constantly is Herzberg's two-factor theory. This theory has been scrutinised and even after 50 years, it is found to still be applicable.

The fundamental question to this research was whether Herzberg's two-factor theory is applicable to an African context. The findings are based on three research questions that investigated the role race, gender and age play. It can be concluded that age does not play a role and that all ages are motivated by the motivating factors except for the White male respondents within the 40 to 49 age group, who are currently threatened by legislation in South Africa. The results also indicate that race and gender do not play a major role. Based on the results, it can be concluded that the motivating factors of Herzberg play a more dominant role than the hygiene factors.

It can be concluded that although Herzberg is a Western philosophy, it is applicable in an African context and that Africans associate with the factors that Herzberg described. It must be highlighted once again that although this research indicates the bias towards the motivating factors, the onus still rests on the IT project manager to determine each individual's motivating factors. This research focused on IT team members and did not investigate other team members, for instance in construction or civil engineering. Future research could include all sectors and expand to include other countries

and cultures. This could then be used to determine whether there is a difference between the various cultures and races of the world. The research could include an in-depth analysis of the reasons why team members choose the various motivating factors. Finally, for the time being IT project managers can trust Herzberg‘s two-factor theory, as a guide to determine what motivates team members in the IT sector.

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