Drivers of the Professional Accountants’ Satisfaction in Tunisian Context

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Abstract
This study examines the drivers of job satisfaction of the professional accountants who work in public accounting firms. 240 professionals participated in this study. The data were collected through a questionnaire survey. The results showed that intrinsic and extrinsic factors have a positive and significant impact on job satisfaction, excepting recognition, which has a positive but no significant effect.

Key words
Drivers, Intrinsic, Extrinsic, Job Satisfaction, Professional Accountants

1. Introduction
Job satisfaction, which is relatively a new term, is considered to be the measure of an employees’ contentment or contention with his work. Until not so long ago, jobs offered to a person were often compatible only with his parents’ profession.

Job satisfaction is the match between an individual’s expectations and the perceived reality of the job as a whole (Wang and Tran, 2015). It is defined as “the fulfillment acquired by experiencing various job activities and rewards”. This implies that job satisfaction can be understood as an emotional state of the human being that reflects the positive and agreeable feeling of a person when he or she values his or her own job properly (Johnson and Sohi, 2014).

The drivers of satisfaction at work have been a controversial topic in the previous literature (Raza et al., 2015). In fact, several research studies have dealt with them, but the results were mixed. Most of these studies conducted their investigation on teachers (Raza et al., 2015), students (Tessema et al., 2013), doctors (Akansel, 2011), nurses (Abbas et al., 2013) and employees in general (Pule et al. (2014). However, the results of these studies cannot be applied to the accounting profession, in which very few research studies were conducted. Therefore, the objective of our study was to fill this gap by studying the professional accountants’ satisfaction at work in the Tunisian context. The satisfaction determinants studied in the theory of Herzberg are: the achievement, promotion, the job itself, growth, company policies, relationship with supervisor and colleagues, working conditions and salary.

This paper is organized as follows: first of all, we present a literature review in order to outline the hypotheses to be tested. We then present the research methodology. Subsequently, the results are discussed. We finally finish with a conclusion in which we try to highlight the implications of the academic and managerial implications as well as the limits of our research.
2. Literature review and research hypotheses

Herzberg et al. (1959) formulated the two-factor theory of job satisfaction and assumed that satisfaction and dissatisfaction are two separate and sometimes even unrelated phenomena. The intrinsic factors, which are inherent to the nature and experience to do the job, called "motivators", include accomplishment, recognition, the work itself and responsibility. However, the extrinsic factors, called hygiene factors include the company policy, safety at work, supervision, salary, interpersonal relations and working conditions.

Maslow (1954) classified the needs in a hierarchy where the lowest placed needs are more essential to survival. The needs are physiological (resting, drinking, eating, etc.), social (environment of cooperation, friendship, etc.), related to security (insurance illness, pension, etc.), related to self-esteem (importance, self-confidence, recognition, etc.), and finally those of self-actualization (capacity development etc.), hence the following assumptions.

Hypothesis 1: There is a positive and significant relationship between the intrinsic factors and the professional accountants' job satisfaction

Hypothesis 2: there is a positive and significant relationship between the extrinsic factors and the professional accountants' job satisfaction

Some hypotheses are stated for each variable of these factors

2.1. Achievement

Herzberg et al. (1959); Herzberg (1966) associated achievement with the feelings of success in performing a task or solving a problem. There is a significant relationship between extrinsic factors and satisfaction in the work of professional accountants. Employees who show a strong achievement orientation tend to work for long hours by accepting difficult tasks and demonstrating an ongoing commitment to doing whatever is needed to reach maximum results (Scott et al., 1997; Raza et al., 2015).

At the same time, Raza et al. (2015) studied the impact of intrinsic motivators on employees' satisfaction. The sample on which they worked included 182 employees. Their results showed that safety at work, accomplishment, responsibility for employment and work itself have a significant and positive effect on job satisfaction.

Furthermore, in a survey carried out on Mekelle University at Adi-Haqi campus, Hagos and Abrha (2015) tried to find out what affects the satisfaction of the academic staff as explained by Herzberg's theory. Sixty employees of the Mekelle University were chosen as a statistical sample. The data collection was made through a questionnaire. The campus members were generally satisfied with their jobs. However, female teachers were less satisfied than male ones. The "achievement" factor was the most motivating aspect for teachers, whereas "salary" was the least motivating one. The demographic characteristics related to the overall job satisfaction were negligible.

In this context, the following hypothesis is stated:

Hypothesis 1-1: there is a positive and significant relationship between achievement and job satisfaction of professional accountants.

2.2. Promotion

Malik et al. (2012) examined the impact of pay and promotion on job satisfaction in the colleges of Pakistan. Their results showed that the salary has a significant influence on the job satisfaction, whereas promotion has a low and partially significant impact. Actually, Naveed et al. (2011) explored the indicators of job satisfaction by conducting a study on the glass industry in Lahore (Pakistan). 200 questionnaires were administered to human resource managers. The analysis showed that promotion has a moderate positive effect on satisfaction at work. Moreover, Noor et al. (2015) revealed the impact of promotion and work promotion on job satisfaction in the Pakistani universities. In fact, this study focused on both public and private universities. The sample included 94 faculties of 10 universities, equally divided between the private and the public sector. The results regarding job satisfaction showed that there are big differences between the public and private sectors. The study also found that academic staff of public higher education
institutions was relatively more satisfied than those working in private ones. Moreover, employment promotion and job promotion have positive and meaningful correlations.

Similarly, Mustapha and Zakaria (2013) studied the impact of promotional opportunities on job satisfaction in public institutions in Malaysia. The results showed that there is a positive significant relationship between promotion opportunities and job satisfaction. Khan and Mishra (2013) also studied the impact of promotion on job satisfaction. They administered 180 questionnaires to higher education teachers. The analysis showed that promotion has a modest positive impact on teachers’ satisfaction at work. According to the study of Akansel et al. (2011), women doctors were more satisfied with promotion opportunities in their hospital. Similarly, Khalid et al. (2012) concluded that promotion opportunities are significantly correlated with the overall satisfaction. Moreover, Shields and Ward (2001) studied the impact of job satisfaction on the intention to leave the National Health Service in England using a sample of 91 employees. Their results showed that the employees dissatisfied with the available promotional opportunities in their organization generally show a greater intention to quit.

Hence, the following hypothesis:

**Hypothesis 1.2.: There is a positive and significant relationship between promotion opportunities and professional accountants’ job satisfaction.**

### 2.3. The work itself

Work plays an important role in people's lives. Therefore, the choice of work should contribute to job satisfaction. People choose the type of work that allows them to show and use their technical skills, enjoy freedom at work, take on a variety of tasks and responsibilities and give feedback on performance. Actually, too much challenge produces dissatisfaction and a feeling of failure; however, less difficult tasks create trouble. Therefore, in moderate challenging conditions, most employees may feel satisfied (Khan et al., 2009; Khan and Jan, 2015).

Furthermore, Wong and Heng (2009) studied the factors the affect job satisfaction in two Malaysian universities. The sample consisted of 100 members from two universities who were randomly selected from the university staff files. This study showed that the main sources of job satisfaction are the administrative policy and the salary, whereas the sources of dissatisfaction are personal achievement, personal development, relationships, recognition, responsibility, supervision, the work itself and the general working conditions.

Smerek and Peterson (2007) conducted a study about the Herzberg theory. Their sample consisted of 2700 employees attached to a large public research university. Their results showed that the work itself is the best predictor of job satisfaction. For their part, Robbins et al. (2003) referred to the work itself, as the measure to which work provides the individual with challenging tasks, learning and growth opportunities and the chance to be responsible and realize results. Moreover, Oshagbemi (2000) found a statistically significant positive relationship between job satisfaction and work itself. Moreover, Oshagbemi (1997) studied the ranking impact of the members of the organization on job satisfaction. The sample consisted of 1102 questionnaires administered to potential respondents selected from 23 universities in the UK. The results showed that work itself can reflect either satisfaction or job dissatisfaction.

Let us admit the following assumption:

**Hypothèse1-3: There is a positive and significant relationship between the work itself and job satisfaction of professional accountants.**

### 2.4. Recognition

Tessema et al. (2013) showed the effects of recognition, salaries and benefits on job satisfaction. Their sample consisted of a group of students from different universities: the United States (n=457), Malaysia (n=347) and Vietnam (n=391). The results showed that employees` recognition, pay and benefits have a significant impact on job satisfaction.

In this regard, Danish and Usman (2010) studied the impact of reward and recognition on job satisfaction in the Pakistani context. Their sample consisted of 250 employees. The statistical analysis showed that the different factors of work motivation and satisfaction were significantly correlated. Similarly, the reward and recognition have a high impact on employees’ motivation.
Similarly, through 184 bank employees in Tirunelveli city, Vijayakumar and Subha (2013) concluded that there is a significant relationship between reward and recognition on both motivation and job satisfaction. Imran et al. (2014) studied the relationship between rewards and recognition on the employees’ job satisfaction in libraries in Pakistan. Their sample consisted of 120 questionnaires. Participants were randomly selected from 12 different libraries in Lahore. The results showed that rewards and recognition are positively correlated with the employees’ job satisfaction. This study shows that the adoption of efficient reward and recognition programs is a relevant factor of employees’ motivation.

Furthermore, through 500 questionnaires distributed to members of universities located in Sri Lanka, Amarasena et al. (2015) revealed that the "social recognition" factor has a positive and significant impact on job satisfaction.

Let us propose the following hypothesis:

**Hypothesis 1-4:** There is a positive and significant relationship between recognition and job satisfaction of professional accountants.

### 2.5. Growth

On his part, Smith (2015) studied the impact of salary growth on job satisfaction. His results showed a positive and significant relationship between growth and job satisfaction. On the other hand, Fenwick (2003) confirmed that growth and development activities meet the employees’ interests and needs.

Moreover, Cong and Van (2013) explored motivation and job satisfaction impact on the employees' performance in Petrovietnam Nghe (an unnamed construction company (PVNC)). Their sample consisted of 70 employees from this company. Their results showed that compensation is the most important motivating factor followed by the working conditions. This work revealed that these two factors are not the only necessary factors that motivate the PVNC employees. Other factors, such as promotion and growth, are also important and have a significant positive effect on job satisfaction.

Employees, who consider that there are a fewer growth and promotion opportunities within the organization, develop negative attitudes towards their jobs. This affects job satisfaction levels (Waskiewicz 1999). Lee and Bruvold (2003) conducted a study on 400 assistant managers who were members of the national association of directors. 291 managers responded to the survey. They identified three groups. According to the first, employees can consider the company by providing development programs for long-term growth. In the second, growth and development give employees a greater sense of autonomy on their career because of the opportunities to improve their skills. Finally, the third considers that the availability of employee growth and development opportunities enhance the employees perception of the employer and have a positive impact on job satisfaction.

Hence the following hypothesis:

**Hypotheses 1-5:** There is a positive and significant relationship between growth and job satisfaction of professional accountants.

### 2.6. Salary

Saqib Usman (2013) studied the effect of salary on job satisfaction of teachers in the Sialkot district of Pakistan. The sample consisted of 100 teachers. The results showed that the salary has a significant effect on the teachers’ job satisfaction. Kabir et al. (2011) studied the employees’ job satisfaction in the pharmaceutical sector of Bangladesh taking into account the effect of the type of drugs, experience, age, gender and attitudes on professional satisfaction. The results of this study showed that relations with colleagues, work efficiency, supervision and salary significantly affect the level of employees’ satisfaction.

Young et al. (2014) explored the relationship between salary and satisfaction. The data were collected using an online survey targeting a sample of adults. The final sample consisted of 79 participants. The results showed that salary increases are directly connected to satisfaction decrease. As reported by Anin et al. (2015), the salary can have a powerful effect on job satisfaction. People have many needs that can be satisfied with money (Ting, 1997).

Therefore, compensation has a significant impact on job satisfaction among the government employees. In another study by Kebriaei and Motaghedi (2009), employees in the public sector attributed their job dissatisfaction to their low salaries and benefits. In this context, Kalleberg (1977) and Voydanoff
revealed that the monetary compensation is one of the most relevant variables of job satisfaction. Regarding the relationship between job satisfaction and salary, it was found that the salary was found to be the key element for the training and job satisfaction of employees in the automotive industry (Kathawala et al., 1990; Kumar, 2013).

Let us therefore set the following hypothesis:

**Hypothesis 2-1:** There is a positive and significant relationship between the salary and job satisfaction of professional accountants.

### 2.7. Relationship with the supervisor and colleagues

Okpara (2004) studied personal characteristics as predictors of job satisfaction of the information technology responsible in a developing economy. The sample consisted of 360 IT managers chosen among Nigerian companies. The results showed that these managers were satisfied with their work, co-workers, and supervisors, but dissatisfied with their salary and promotion system.

Then, Muhammad and Akhter (2011) explored supervision, salary and promotion opportunities related to satisfaction. 300 workers were randomly selected from different clothing factories in different areas of Dhaka, among whom 200 were men and 100 women. The results indicated that job satisfaction is positively correlated with salary, supervision and promotion opportunities.

On the other hand, Sowmya and Panchanathan (2011) studied job satisfaction for 120 employees of several government agencies and private sector banks in India through a factor analysis using the principal components method on a large number of variables that affect job satisfaction. The five predominant factors are: salary and promotion, organizational aspects, relationship with supervisors, the work itself, the working conditions and the relationship with colleagues. Obviously, the relationship with colleagues is a key factor of employees’ satisfaction. This determines how an employee performs duties with the collaboration and support of his colleagues. Khan (2015) and James (1996) concluded that teamwork has a significant impact on employees’ satisfaction as it affects their performance.

To this extent, a number of authors believe that having nice colleagues and support contributes to improving job satisfaction (Kreitner and Kinicki, 2001). According to Madison (2000), participants who lacked their colleagues’ support at work were more likely to have job dissatisfaction. Another survey found that positive relationships with colleagues improved job satisfaction (Berta, 2005). Empirical evidence suggested that co-workers’ relationships have consistently given significant effects on job satisfaction (Ting, 1997). A study by Viswesvaran et al. (1998) concluded that there is a very positive correlation between job satisfaction and relationship with colleagues. Naeem et al. (2011) also found a positive and significant correlation between job satisfaction and relationship with colleagues and supervisors among officials of the Maldives Republic.

According to Ghazzawi (2008), co-workers of an employee, the groups to which he belongs and the culture to which he is exposed, are all factors that have the potential to positively affect job satisfaction. Abbas et al. (2013) showed that in Pakistani organizations, rewards, age, education and experience, working environment, relationship with colleagues, managers’ support and the work itself all affect employees’ satisfaction.

From what has been previously mentioned, the following hypothesis can be set:

**Hypothesis 2-2:** There is a positive and significant between relationship with the supervisor and co-workers and job satisfaction of professional accountants.

### 2.8. The working conditions

Sajuyigbe et al. (2013) reported that the working conditions are not likely to have a significant impact on job satisfaction and performance. Bakotic and Babic (2013) studied the relationship between the working conditions and job satisfaction in the ship building organization in Croatia. The research was conducted using a sample of 60 workers, 30 of whom were working under normal conditions (in the administration) and 30 in difficult conditions. The results showed that the former were more satisfied than the latter. Similarly, Brunetto and Farr-Wharton (2002) studied job satisfaction with 178 employees of the public sector (police). They concluded that these employees were not satisfied with their jobs.
Saeed *et al.* (2014) stated that the key factors contributing to employees’ job satisfaction are promotion, compensation, fairness and working conditions.

**Hypothesis 2-3:** There is a positive and significant relationship between working conditions and job satisfaction of professional accountants.

### 2.9. Audit firm policy

Policies are organizing guidelines on how resources should be managed and how members should behave. Policies give a description of philosophies and values how people should be treated (Armstrong 2003). According to Samson and Daft (2003), the company’s policies must define the limits within which organizations take decisions regarding the tasks that must be performed repeatedly. According to Bendix (2010) and Squires *et al.* (2007), every company should formulate policies reflecting its objectives and prepare proposals taking into account relations with employee. When employees have the opportunity to have a stake in policy development, job satisfaction levels increase (Ahmed *et al.*, 2010).

From his part, Pule *et al.* (2014) revealed through 138 respondents among indigenous and expatriate personnel from Kampala International University (KIU) that there is a slight difference between HR policies for the indigenous KIU teaching staff and expatriates. This study recommends that the university management should rationalize their reward policy to create a sense of fairness between the educational staff. This would increase job satisfaction for educational personnel, and therefore increase productivity in the whole university. Similarly, Agwu (2013) and Chepkwony (2014) showed that a reward policy can be detrimental to an organization if it is wrongly understood. Indeed, it would act as a demoralizing tool that affects the employees’ job satisfaction and thus reduce the productivity of the organization.

Hence, the following hypothesis

**Hypothesis 2-4:** There is a positive and significant relationship between the firm’s policy and job satisfaction of accounting professionals

Our research model is as follows:

![Figure 1. The research model](image)

### 3. Methodology of research

We will first present the measurement tools used then the description of the sample and the adopted data analysis method.

#### 3.1. Data collection method

The sample consisted of 240 respondents, mainly professionals working in accounting offices. This research was entirely based on the replies received from a selected population of professional accountants working in accounting offices in Tunisia. The responses were measured using a 5 point scale (1 = strongly disagree, 2...
= unsure, 3= disagree, 4= OK and 5 = strongly agree). All the questions used in the survey regarding the
drivers of job satisfaction were derived from (Klassen et al., 2010; Hong and Waheed, 2011).

### 3.2. Data analysis method

To present the results of the validation of the measurement scales in this research, the study of
dimensionality by the factor analysis was chosen and. Cronbach’s alpha (α) coefficient was used to assess
reliability. The principal component analysis (PCA) is a method to analyze the relationship between
quantitative data. This is the most used method among the descriptive methods for cleansing and
validation of scales (Evrard et al., 2000; Igalens and Roussel, 1998). The PCA is done on mean centered
data. The variables then have the same variability and have the same influence in the calculation of the
distance between the individuals. It reveals a factorial structure through which the components identified
are clearly related to items. If the variable is one-dimensional, so all of the items relate to the same factor
(i.e. at the same factorial axis), and then a scale forming these items only measures one dimension of the
studied variable. Otherwise, the factor structure is two-factor or more and the variable is therefore
considered to be bi or multidimensional. Several theoretical criteria have been proposed to choose the
number of axes to retain and the items to remove. The criteria for the elimination of items are based on
the degree of contribution to the axes.

It may be prescribed to remove items that have factorial contributions above 0.30 on several factors
or have no contributions reaching that score on one of the main identified factors. It is recommended also
to eliminate items having no contributions greater than or equal to 0.50 on the same factors. In fact, three
criteria are often considered: firstly, the Kaiser criterion whereby the retained axes are those which have
values greater than 1. Secondly, the diagram of values, i.e. the presence of an "elbow" in the diagram, is
used to determine the number of axes to be studied. Thirdly, the rate of the explained variance, that is the
number of the selected axes, should explain at least 50% of the total variance percentage. More generally,
it is advisable to retain the axes that can be interpreted. This interpretation is made using the contributions
of individuals and variables.

Regarding the deleted items that have a factor contribution less than 0.30, we conducted rotations of
the orthogonal axes of the initial PCA. The purpose was to adjust the proposed structure by increasing the
value of the correlation coefficients of some items with the new representation axes. Several rotation
methods were suggested (the orthogonal type or oblique type). For this reason, we retained the Varimax
rotation, which is based on the maximization of the correlation coefficients of the correlated variables, i.e.
the proportion of the variance explained by the first principal components.

More concretely, in the factor analysis, a number of factors (those which have a value greater than 1)
are extracted to represent the inter-correlations between the observed variables. The goal of the factor
analysis is to reduce the information available to a limited number of variables by turning the factors in
such a way that the items will be saturated on the least possible factors.

Moreover, regarding the acceptance threshold of the Cronbach coefficient, as specified in this paper
given the exploratory nature of the research, we identified the value of 0.55 as the minimum significant
threshold. It should be noted that this coefficient is ordinarily used in metric proportion or interval scales;
however, some ordinal or Likert scales, as is the case in this research, are of a metric type.

When an Alpha scale is lower than the selected threshold, we should check the contribution of each
item to the total score of the scale. For example, some items may be deleted if their elimination
contributes to the improvement of the coherence of the whole scale.

Our empirical analysis was conducted on the overall sample (two groups). Indeed, the comparative
perspective of our research, as well as the size of the reference sample enabled us to retain the same
number of factors and items for both groups.

It should be recalled that for the study of the validation of the research hypotheses, we chose the
methods appropriate to the reference samples. We resorted to nonparametric and Multiple Regression
tests. On the basis of these results, it is worth mobilizing the appropriate statistical tests (parametric and
non-parametric tests). The chart below outlines the procedure followed in this empirical part (Figure 2).
4. Results and discussions

4.1. Univariate approach (Nonparametric tests)

We conducted a principal components analysis and found that all the intrinsic variables (achievement, promotion, work itself, recognition and growth) and extrinsic factors (the company policy, relationship with supervisors and colleagues, salary and the working conditions) show that the variable is a one-dimensional single factor. The analysis in this research was based on two components. The first was about checking the change of intrinsic and extrinsic variables depending on the degree of job satisfaction (1=satisfaction, 0=dissatisfaction). In this analysis stage, the sample was divided into two groups and non-parametric tests were applied to study the appreciation of both intrinsic and extrinsic determinants formulated in the research hypotheses on job satisfaction.

In order to test the hypothesis on the variability of the different determinants based on the degree of job satisfaction, the Wilcoxon Mann-Whitney (WMW) test was conducted on two sample groups to see to what extent these determinants change from a low degree to a moderately high degree of job satisfaction. We built synthetic indicators on which we conducted tests on the ranking scores. Actually, the study of the application conditions was subject of a pre-analysis review. Table1 specifies the characteristics of the scales used for the study of the major determinants of job satisfaction.

➢ Assessment of the intrinsic determinants effect on job satisfaction

We built five intrinsic determinants on which tests were applied on ranking scores. Regarding the "achievement" variable, the ranking test showed that the average satisfaction score was 5.19, whereas that of dissatisfaction was 4.1. We took over the scores of condensed items after the results of the factor analysis. The Wilcoxon Mann-Whitney test is significant at 1% threshold (p<0.000), which confirms the hypothesis that the "achievement" determinant differs depending on the degree of satisfaction of both groups of professional accountants.

Therefore, the Kruskal-Wallis test is significant at 1% threshold (p=0.001) reflecting that achievement is significant on the level of job satisfaction at threshold of 1%. This result is consistent with that found by Raza and al. (2015), who found a positive and significant effect on job satisfaction.

The results of the WMW test on the equality of the scores obtained from both items showed that the degree of job satisfaction changes in terms of promotion. The probability of making a mistake by rejecting the hypothesis was below a threshold of 1%. Moreover, the Kruskal-Wallis test illustrates a Chi-square with a value of 88.65 and a probability of p=0.001. In other words, the difference observed regarding promotion in both groups can be generalizable at a 1% risk.

Therefore, it can be concluded that promotion has a different significant appreciation of job satisfaction of professional accountants. This result conforms with that of Mustapha and Zakaria (2013) who showed that there is a significant positive relationship between the promotion opportunity and job satisfaction. To check the variability of the 'work itself' variable, we conducted a ranking score test. The result revealed a score of an average rank of 9.72 for professional accountants who are satisfied at work.
and 7.97 for the accounting professionals who are totally satisfied. The test of the average score difference between the two samples is significant at 1% (p 0.0000) risk.

Moreover, the Kruskal-Wallis test is significant with the threshold of 1% (p<0.0021) and therefore the hypothesis according to which work itself acts significantly on the job satisfaction level is empirically validated. This result is in line with that of Smerek and Peterson (2007) who showed that work itself is the best predictor of job satisfaction which has a positive and significant effect.

The use of the same test on the growth variable, given the three items retained after the factor analysis, shows that growth significantly acts on the job satisfaction of professional accountants. This result seems to be consistent with that of Cong (2013) who explored the effects of motivation and job satisfaction on the employees’ performance in Petrovietnam Nghe. The results of their work showed that remuneration is the most important factor of motivation followed by the working conditions. The study revealed that these two factors are not the only ones necessary to motivate the employees of the PVNC. Other factors, such as promotion and growth in the organization, are also important and have a positive and significant effect on job satisfaction.

Finally, the ranking score test added with the three items of recognition measurement, positively gives an average of 10.61 for satisfied accountants and 8.8 for the unsatisfied accountant. The result of Kruskal-Wallis test is not significant. Actually, the probability of being mistaken by rejecting the null hypothesis is 21.4% and thus recognition has no impact on the degree of job satisfaction. This result is contradictory with that of Tessema et al. (2013).

The table below shows the descriptive statistics of the intrinsic determinants.

<table>
<thead>
<tr>
<th>Variables/Test</th>
<th>Achievement</th>
<th>Progress</th>
<th>the work itself</th>
<th>Growth</th>
<th>Recognition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wilcoxon test</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Statistics(S)</td>
<td>240</td>
<td>240</td>
<td>240</td>
<td>240</td>
<td>240</td>
</tr>
<tr>
<td>Normal approximation Z*</td>
<td>13.49</td>
<td>13.53</td>
<td>18.24</td>
<td>13.49</td>
<td>15.32</td>
</tr>
<tr>
<td>PrzZ(unilateral)</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
</tr>
<tr>
<td>Kruskal-Wallis test</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chi-square test</td>
<td>95.109</td>
<td>88.65</td>
<td>80.32</td>
<td>80.47</td>
<td>17.58</td>
</tr>
<tr>
<td>DL</td>
<td>14</td>
<td>14</td>
<td>14</td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td>Chi-square test</td>
<td>0.0001</td>
<td>0.0001</td>
<td>0.0021</td>
<td>0.0001</td>
<td>0.2141</td>
</tr>
<tr>
<td>Number of items</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>The item extent</td>
<td>1-5</td>
<td>1-5</td>
<td>1-5</td>
<td>1-5</td>
<td>1-5</td>
</tr>
<tr>
<td>Sum of the scores *** (Satisfaction)</td>
<td>5.19</td>
<td>4.3</td>
<td>9.72</td>
<td>11.49</td>
<td>10.61</td>
</tr>
<tr>
<td>Sum of the scores *** (dissatisfaction)</td>
<td>4.104</td>
<td>3.59</td>
<td>7.97</td>
<td>9.73</td>
<td>8.83</td>
</tr>
</tbody>
</table>

* Number of items mobilized for the calculation of the score

** Extension of the item over the scores obtained by the construction of synthetic indicators

*** Average of the score sum for each group of the sample (Age<40 and Age ≥40)

**** Variable taken into account after the factorial analysis, that is by construction of synthetic indicators on the items having the highest contributions to the main factorial axes.

➢ Assessment of the extrinsic determinants on job satisfaction

Regarding the extrinsic determinants, four indicators were considered.

The table below shows the descriptive of the extrinsic determinants. The results revealed a significant relation between salary and job satisfaction. The Kruskal-Wallis test shows a chi2 of 93.84, which is significant at a threshold of 1%. The test of difference on the average score between these two samples is significant with a risk of 1% (p<0.0000). This result is consistent with that of Saqib Usman (2013). The use of the same test on the variable of the relationship of the professional accountants with their colleagues and their supervisor shows that there is a significant difference between the two groups (satisfied and unsatisfied) (p 0.001).
Table 2. Summary of results of non-parametric tests on the extrinsic determinants

<table>
<thead>
<tr>
<th>Variables/Test</th>
<th>Salary ****</th>
<th>Relationship with colleagues and supervisors ****</th>
<th>Policy****</th>
<th>Working conditions ***</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wilcoxon test</td>
<td>Statistics(S)</td>
<td>240</td>
<td>240</td>
<td>240</td>
</tr>
<tr>
<td>Normal approximation Z*</td>
<td>13.46</td>
<td>13.43</td>
<td>13.45</td>
<td>13.44</td>
</tr>
<tr>
<td>Pr≥Z(unilateral)</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
</tr>
<tr>
<td>Kruskal-Wallis test</td>
<td>Chi-square test</td>
<td>93.84</td>
<td>81.88</td>
<td>82.80</td>
</tr>
<tr>
<td>DL</td>
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<td>14</td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td>Chi-square test</td>
<td>0.0001</td>
<td>0.0001</td>
<td>0.0021</td>
<td>0.0001</td>
</tr>
<tr>
<td>Number of items</td>
<td>2</td>
<td>6</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>The item extent</td>
<td>1-5</td>
<td>1-5</td>
<td>1-5</td>
<td>1-5</td>
</tr>
<tr>
<td>Sum of the scores *** (Satisfaction)</td>
<td>4.67</td>
<td>18.9</td>
<td>10.61</td>
<td>9.58</td>
</tr>
<tr>
<td>Sum of the scores *** (dissatisfaction)</td>
<td>3.27</td>
<td>15.6</td>
<td>8.83</td>
<td>8.32</td>
</tr>
</tbody>
</table>

* Number of items mobilized for the calculation of the scores

** Extent of item over the scores obtained by constructing synthetic indicators

*** Average sum of the scores for each sample group (Age 40 and Age ≥40

Therefore, the results of WMW test on the equality of the scores obtained from the 6 items showed that this relationship with colleagues and the supervisor changes according to the level of job satisfaction. This confirms the hypothesis according to which the salary and a close relationship with colleagues and the supervisor are two relevant determinants of job satisfaction. This result is in agreement with that found by Okpara (2004).

This is also true for the test about the relationship between the audit firm policy and job satisfaction. The result of this test showed an average ranking score of 10.61 for those who are largely satisfied at work and 8.83 for those who are moderately and strongly dissatisfied. The difference test on the average score between the two samples is significant at 1% threshold (p 0.0000). This result is consistent with those of Agwu (2013) and Chepkwony (2014), who revealed that a reward policy can be detrimental to an organization if it is wrongly understood.

Finally, the hypothesis about the potential effect of the working conditions on the degree of job satisfaction was tested. The Wilcoxon Mann-Whitney test gave in this context a significant result that enables us to confirm the importance of the working conditions in the prediction of job satisfaction of professional accountants. This assessment was carried out by a Chi2 46.1, with a probability of p<0.001. This result is in agreement with that of Saeed et al. (2014) who concluded that the key factors that contribute to the employees’ satisfaction are promotion, compensation, equity and the working condition.

4.2. Multivariate Analysis (Multiple regression)

➢ The concomitant impacts of intrinsic and extrinsic determinants on job satisfaction.

The simultaneous effect of all the metric explanatory variables on job satisfaction can be tested using the multiple regression analysis, which is an extension of the simple linear regression involving several independent variables. Moreover, to be fully operative; multiple regression analysis should be accompanied by a significant independence between the explanatory variables between which no significant correlations should exist.

First, this is about explaining the changes of the dependent variable on the basis of those of several independent variables thought to be behind these variations.

Regarding the reference sample, the quantitative variables that are supposed to explain and predict the job satisfaction ("SATIS") are the intrinsic determinants (achievement, promotion, the job itself, growth...
and recognition) and the extrinsic determinants (company’s policy, relationship with colleagues and supervisors, salary and working condition).

To estimate the joint effect of the extrinsic variables, we used a multiple regression analysis of the econometric results which are presented in Table 2. These results show a good multiple correlation ($R^2=35.6\%$) between "SATIS" and the "Company’s policy", the "Relationship with colleagues and the supervisor", the "salary", and the "working conditions". The $R^2$ adjusted linear determination coefficient shows a very acceptable score equal to 0.343.

The model is of a satisfactory quality since four independent variables explain half of the variance of the dependent variable in the input data.

The estimation of the model adjustment quality is confirmed by the $F$ FISHER-SNEDECOR coefficient as being equal to 20.22 ($\text{sig.}=0.002$), which is much higher than the critical value given by the statistical table ($F=1.96$ for $\alpha=0.05$ and 4 and 235 degrees of freedom). Therefore, it can be concluded that the adjustment quality obtained through the multiple regression analysis is significant (Table 3).

### Table 3. Multiple Regression of Job Satisfaction with Extrinsic Variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>Unstandardized Coefficient</th>
<th>Standard error</th>
<th>Standardized Coefficients</th>
<th>T-value</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant $\beta_0$</td>
<td>2.381</td>
<td>1.202</td>
<td>1.981</td>
<td>.049</td>
<td></td>
</tr>
<tr>
<td>Company Policy</td>
<td>.404</td>
<td>.127</td>
<td>.226</td>
<td>3.182</td>
<td>.002</td>
</tr>
<tr>
<td>Relationship with colleagues and supervisor</td>
<td>.157</td>
<td>.089</td>
<td>1.57</td>
<td>1.767</td>
<td>.079</td>
</tr>
<tr>
<td>Salary</td>
<td>.573</td>
<td>.195</td>
<td>.554</td>
<td>2.935</td>
<td>.004</td>
</tr>
<tr>
<td>Working conditions</td>
<td>.285</td>
<td>.074</td>
<td>.080</td>
<td>1.948</td>
<td>.002</td>
</tr>
</tbody>
</table>

Statistic model: $R^2=0.356$, $\text{Adj } R^2=0.343$, $F=20.221$; $\text{p}<0.000$.

The statistical results that have just been outlined are indicators of the overall relationship between job satisfaction and the extrinsic determinants. To assess the contributions of each of these determinants to the global explanation of the model, the values of the partial regression coefficient Beta was calculated. This one represents the expected change of the variable to be explained when an explanatory variable changes by one unit and the other explanatory variables are maintained constant or controlled. It is the standardized regression coefficient which is important. It is calculated on the same basis as the non-standardized coefficient. However, it is assumed that all the variables included in the analysis are standard distributions, in other words, they are reduced to a zero average and to a standard deviation equal to 1.

An examination of the values of this coefficient indicates that the salary is the variable that best explains job satisfaction (0.554). The variables pertaining to the company policy and the relationship with colleagues and with the supervisor, all contribute to the model overall explanation with scores between 0.226 and 0.157. On the other hand, the variables related to the working conditions contribute with a regression coefficient equal to 0.08.

### Table 4. Multiple Regression of Job Satisfaction with Intrinsic Variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>Unstandardized Coefficient</th>
<th>Standard error</th>
<th>Standardized Coefficients</th>
<th>T-value</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant $\beta_0$</td>
<td>.635</td>
<td>1.241</td>
<td>.126</td>
<td>2.512</td>
<td>.000</td>
</tr>
<tr>
<td>Achievement</td>
<td>.363</td>
<td>.269</td>
<td>.126</td>
<td>1.747</td>
<td>.079</td>
</tr>
<tr>
<td>Avancement</td>
<td>1.415</td>
<td>.387</td>
<td>.324</td>
<td>3.655</td>
<td>.000</td>
</tr>
<tr>
<td>Work itself</td>
<td>.015</td>
<td>.193</td>
<td>.008</td>
<td>1.782</td>
<td>.068</td>
</tr>
<tr>
<td>Growth</td>
<td>.186</td>
<td>.162</td>
<td>.104</td>
<td>1.948</td>
<td>.002</td>
</tr>
<tr>
<td>Recognition</td>
<td>.050</td>
<td>.174</td>
<td>.027</td>
<td>.288</td>
<td>.774</td>
</tr>
</tbody>
</table>

Statistic model: $R^2=0.270$, $\text{Adj } R^2=0.255$, $F=17.350$; $\text{p}<0.000$.

To find out the variables that significantly affect job satisfaction, a Student’s $t$-test was conducted on each regression coefficient. Therefore, the values displayed by $T$, such as "the company policy", "the relationship with colleagues and the supervisor", "the salary ", and "the working conditions" variables, all
contribute significantly to the explanation of job satisfaction with a maximum error of 0.079 for each of them. To find out the intrinsic determinants that significantly affect job satisfaction, a Student's t-test was also conducted on each regression coefficient. This test makes it possible, if required, to eliminate the explanatory variables which have a non-significant contribution to the regression model. Therefore, the Student’s t-test leads to a “more parsimonious model”.

The statistical results showed an acceptable correlation ($R^2 = 27\%$) between "SATIS" and, "Achievement", "Promotion", "work itself ", 'Growth' and 'Recognition'. The quality estimation of the adjustment model gave an $F$ value of 17.35 (sig. = 0.000). This figure is higher than the critical value presented in the statistical table ($F=3.18$, for $\alpha=0.05$ and 5 and 234 degrees of freedom). The quality obtained through multiple regression analysis is significant.

From the results of the econometric tests stated above, we can conclude, in the light of the data collected in the reference sample, that "promotion" is the variable that best explains satisfaction at work (0.324). The variables referring to "Growth" and "Achievement", show successive contributions equal to 0.104 and 0.126, which are significant at a threshold of respectively 1% and 10%, whereas the contribution of the 'Recognition' variable shows a low value equal to 0.027 for the Beta coefficient, therefore, this variable is not significant (Table 4). Consequently, multiple regression validates and rejects the same hypotheses as the nonparametric tests.

5. Conclusions

This research study underlines the participation of several variables to enhance job satisfaction. Based on the predictive results, it appears that four intrinsic factors, namely achievement, promotion, work itself, growth and four extrinsic ones, that is salary, relationship with supervisor and colleagues, working conditions and the audit firm policies) significantly affect job satisfaction.

Our results show the absence of a significant but a positive relationship between recognition and job satisfaction which is essentially caused by the selected items and consequently other items would improve the measure of recognition.

Nevertheless, our research study presents some limitations. The first is related to the small size of our sample. The second is about the results which are contextual and cannot be generalized given the specificity of our Tunisian context. The third limitation concerns the imbalance at the level of the composition of our sample and of the selection of the accounting professionals, which implies that the effect of this imbalance should be neutralized.

Finally, new research avenues can be developed, not only through the extension of our research findings and the comparisons between the results found in this research and those of similar works in other contexts but also by limiting the analysis to a particular category of firms (to avoid the professional selection effect) and draw more reliable conclusions.

References


