

Professional selection in employment as a factor for economic benefit in conditions of energy crisis in the Republic of North Macedonia

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Abstract

The global energy crisis has increased the importance of human resources as a key factor for the success and competitive advantage of companies in times of crisis. In this context, investments in recruiting and selecting adequate human resources that possess human capital are especially important, which will contribute to better production and economic results in companies. A professional selection that enables the selection of high-performance human resources is among the most important activities in the strategy of any organization. This paper is focused on modern models of professional selection based on psychological tests in the energy companies in North Macedonia. The paper provided evidence that professional selection with the help of psychological tests of ability and personality has practical applicability in the selection of adequate staff, which is a short-term opportunity to invest in human capital. The research part examined the relationship between intellectual abilities and personality traits with work performance, using a sample of 112 respondents employed in a large electricity company in North Macedonia. The obtained results showed a significant correlation between the successful performance of the employees and the obtained results with tests of skills and personality ($R = 0.824$; $p < 0.01$). These findings provide evidence of the benefits of effective human resource selection practices with the help of psychological tests, which reflect organizational results through increased quality of applicants, but also through reduced opportunities for selection of candidates that can have an extremely negative impact on the company development. Concluding recommendations of the paper are that it is necessary to invest in modern methods of professional selection with psychological tests, in order to hire high-performance human resources.

Keywords: professional selection, psychological tests, human capital.

Introduction

The global energy crisis has increased the importance of human resources to the point that they are considered the most important link for economic success, in addition to market strategy and the quality of the products. In order for an organization to implement strategic goals in these conditions of crisis, it is necessary to be up to date with the modern knowledge-based economy, where the key element is the concept of intellectual capital (Weil, 2009). Great interest is focused on issues related

to the concept of intellectual capital as a key point on how to be economically better and how to succeed in a crisis. In this context, investments in planning, recruiting, and selection of adequate human resources, which have intellectual capital and production skills and will contribute to better production and economic results in companies, are especially significant. For the effective selection of human resources, with high intellectual capital and abilities, it is necessary to improve the methods for professional selection. To this end, numerous researches and effective programs have been designed for the selection of new employees based on scientific evidence, where professional selection with the help of psychological tests is considered among the best, most objective, and most valid practices (Guest et al. 2003).

This paper is dedicated to examining selection in employment with the help of psychological tests in energy companies in North Macedonia. The paper presents the basic theories for professional selection in the employment process, with a focus on psychological tests as a means of providing quality potential applicants and selecting those who best suit the job positions. The practical part of the paper examines the possibility of creating a model for professional selection, based on psychological tests of intelligence and personality, which can be practically applied as a scientifically validated model for hiring quality staff, which will invest in human capital and will contribute to the economic benefit of companies in North Macedonia.

Theoretical background

Professional selection as a method of investing in human capital

The human capital theory identifies and explains the ways in which individuals translate their capabilities, knowledge, and skills into economically valuable results for companies (Weil, 2009). This theory argues that investment decisions in human resources have high rates of return and can increase productivity (Strober, 1990). It is important to recognize that investing in human resources is essential to the theory of human capital. Effective professional selection of human resources is a short-term investment in intellectual capital, which provides economic savings due to increased selection of quality applicants, as well as avoiding acceptance of inadequate candidates, which is a common mistake when choosing staff (Bangerter et al., 2012). According to human capital theories, the costs associated with accumulating human capital are as important as the costs of investing in existing accumulated human capital, the greater the investment and costs involved in developing human capital, the greater should be the economic benefits of the organization (Connelly et al., 2011). Professional selection of staff is a process of selecting among a large number of candidates those who best meet the requirements of a particular job, and is a subtle form of prediction (Terpstra & Rozell 1993). There are different selective practices that are applied depending on the goals and personnel policy of the companies. The most common models for professional selection are those that are based on certain instruments such as interviews, job applications, recommendations from previous employment, based on completing knowledge tests, and of course based on psychological tests. Professional staff selection based on psychological testing is one

of the most effective modern practices because it enables economically viable short-term investment in human capital (Guest et al. 2003).

Psychological tests in professional selection

Professional staff selection based on psychological testing is considered an integral part of best selection practices, and psychological testing plays a vital role in selection processes in the modern era (Guest et al. 2003). The use of psychological tests in the professional selection process has increased in recent years, as a result of the abundant evidence for the predictive validity and reliability of certain tests (Cascio and Aguinis 2005). According to some findings, tests in the recruitment process are used by over 80% of Fortune 500 companies in the United States and over 75% of the Times Top 100 companies in the UK (Unknown, 2013). These techniques are mainly used by employers to find the most efficient and capable candidates. They test personality traits, intelligence, knowledge, social skills, and the ability to work with other people. In fact, the benefits of effective human resource selection practices through psychological testing are reflected in organizational outcomes through increased quality of applicants, increased human capital, and reduced opportunities for candidate selection errors (Harris, Dworkin and Park 1990). Mistakes in selecting candidates are related to the predictability of future success, which is not a simple task and can often be unsuccessful. According to some research findings, about 60% of applicants do not meet the requirements of the job, and 43% of employees do not have the necessary job skills (Kaplan & Saccuzzo, 1988). These weaknesses lead to significant economic losses and can be overcome by using standardized psychological tests to identify the candidate's abilities and other characteristics. In addition to avoiding economic losses from the selection of low-quality staff, standardized psychological tests are used to select staff to contribute to the improvement of human capital. In the context of the stated benefits of the effective selection of staff, there is a need to apply this scientific knowledge in the energy companies in North Macedonia. Creating effective selective practices can lead to numerous benefits, that will reflect the success of companies. For these reasons, the research question arises: *Is professional selection with the help of psychological tests a successful investment in human capital in energy companies in North Macedonia?*

Procedures for successful professional selection with psychological tests

The application of psychological tests in professional selection is a very complex process, many professional psychologists express concern and appeal to the application of scientific principles in the process of employment testing (Dunnnett and Hoff, 1992). Experts point to the need to comply with professional law and guidelines on general assessment questions when using psychological tests for human resource selection such as reliability, validity, results, and test feedback (Cascio & Aguinis, 2005).

The validity of selection measures, to the extent that ratings can be used to infer one or more measures of individual performance, is fundamental to a useful staff selection

practice (Cascio & Aguinis, 2005). This process involves collecting test results data from job applicants - predictable validity, or current employees - simultaneously validating and calculating the correlation between those grades and a performance measure or criterion measure. The greater validity is confirmed by a greater degree of correlation between the results of the tests called predictors and the measure of the success of the work, ie. criterion. The basis for checking the prognostic validity of the tests is the adequate criterion for measuring the success of the work. Monitoring the success of workers at work is one of the indicators of the correctness or irregularity of the whole procedure in the selection of people. Job success data suggests what knowledge, skills, abilities, and personality traits an executor needs to possess to successfully perform a particular job. Research and analysis of phenomena such as accidents, absences, shift work, etc., sometimes presuppose the measurement of work success.

Professional selection of staff based on psychological testing is considered an integral part of the best selection practices, provided that the basic principles underlying objectivity and fairness are observed (Guest et al. 2003). All this suggests that professional selection with the help of psychological tests in the energy companies in North Macedonia can be a successful practice for hiring quality staff. For that purpose, we set the following hypothesis:

Hypothesis 1: If there is a significant correlation between the results of intelligence tests and personality tests with success in job achievement, then professional selection based on psychological tests is successful.

Validity of tests for intellectual abilities

Success at work largely depends on intellectual abilities, which is seen in more complex work tasks that include planning, solving various complex problems, and forecasting (Guzina, 1980). Scientific knowledge of the intellectual abilities of man is at a much higher level compared to other aspects of the human personality. During the research of intelligence, psychologists discovered a series of intellectual processes such as abstraction, reasoning, memory, learning, recognition, and others, for the examination of which they developed a whole series of measuring instruments. The best-measuring instruments for intellectual abilities are those based on sound scientific theories of intelligence. Psychologists have created a number of valid measuring instruments, ie psychological tests, based on sound theoretical foundations, which have high validity and prognostic value. The validity of cognitive tests has been confirmed in numerous studies and ranges from 0.74 for professional and managerial jobs to 0.39 for unskilled jobs (Schmidt & Hunter, 1998). It has been proven that employees with general intellectual abilities who are one standard deviation above the average value of skills are converted into economic values by as much as 40 percent more than the average employee (Schmidt & Hunter, 1998). Numerous scientific evidence for the predictive characteristics of intelligence tests has wide practical application in the processes of professional staff selection. Due to these possibilities of cognitive tests, it was assumed that they can be applied in the selection of staff in the energy companies in North Macedonia.

Hypothesis 2: The intellectual abilities, determined by a test measurement of general intellectual abilities, are a valid predictor of the successful performance of the applicants for managerial positions in AD ESM.

Validity of psychological tests for personality

Studies of a large number of employees in various industries have shown that personality factors have been the cause of job failure or an obstacle to further career advancement more than lack of work skills (Tomekovic, 1980). However, personality tests are less commonly used as a stand-alone tool for staff selection. The reason for this is the many different personality instruments and their inappropriate use, the lack of agreement regarding the components of the personality, but also the validity of the personality tests, which largely depends on the sincerity of the answers given by the respondent (Tomekovic, 1980). However, modern personality instruments, which have good predictive validity, have renewed interest in the use of personality tests in the professional selection process (Schmidt, Ones & Hunter, 1992). Personality tests help assess candidates' personality compatibility and job positions. Every profession has an employee with an optimal psychological profile who will perform best. Some studies suggest that the personality trait that best predicts future performance is conscientiousness, as well as organization, accuracy, precision, and confidentiality (Schmitt et. al., 1992). Other research is needed, especially those tests that we intend to use in professional selection to determine their validity in predicting job success for any success criterion. For this purpose, the following hypothesis was set.

Hypothesis 3: Personality traits, determined by a test measurement of general intellectual abilities, are a valid predictor of successful work performance of applicants for management positions in AD ESM.

Design and implementation of effective batteries for psychological tests

In the context of staff selection with psychological tests, designing and implementing effective batteries for psychological tests leads to the highest gain and the lowest consumption (Rawson & Dunlosky, 2011). Given the differences in costs, it is important to investigate which psychological tests provide proportionate increases in candidate quality and may be valuable to the organization for the benefit of human capital gains. In a number of studies, a battery is selected from tests that cover different areas of the personality and abilities characteristic of a particular job. The best way is to use multiple tests that are properly combined (Cronbach, 1970).

Different jobs show significant correlations with different tests, so it is necessary to carefully choose the tests to match the respondents, their educational, social, and cultural levels. A combination of aptitude tests and personality tests are usually chosen because they enable the selection of the best applicants, but also the elimination of weak candidates (Hose, 2014). Due to the greater possibilities of the battery of psychological tests combined with aptitude and personality tests, the following hypothesis was set.

Hypothesis 4. Professional selection with the help of psychological aptitude and personality

tests is a valid predictor of the job performance of applicants for managers in energy companies North Macedonia.

Methodology

The subject of research of this paper is to determine the impact of professional selection with the help of psychological tests on the selection of quality human resources that will successfully perform their work in energy companies in North Macedonia. To this end, the relationship between the personal structure of the person, represented by the cognitive ability and personality traits with the success of the work of managers is examined. To examine this relationship it is necessary to test the relationship of success in work with the personal structure of the person.

Success in the work of managers, as a dependent variable, is represented by a performance appraisal that is the result of several key indicators: efficiency and effectiveness, career advancement, rewards and punishments, absenteeism, work-related injuries, and fluctuations. Independent variables are represented by the personal structure of the person: intellectual abilities and the emotional profile of the person represented by the six dimensions of the person. Each of the independent variables is presented with adequate indicators that are a measurable category with the help of adequate standardized psychological tests.

Sample

The research used a sample of 112 respondents from the largest energy company in North Macedonia - REK Bitola. The sample includes employees who are leading staff in the plant and includes highly qualified employees from the following occupations: male engineer, electrical engineer, and mining engineer. The current respondents are employed in the following positions: engineer, chief engineer, shift engineer, preparation engineer, shift manager, head of a department, head of a branch, and top management. All jobs are managerial, but with different levels in the hierarchical structure, from low and middle to top management, according to the job. In terms of age structure, respondents are aged 28 to 62 years. In terms of gender, the majority, 70% are male and 30% are female. This gender disproportion is explained by the nature of the jobs and the specificity of the work organization. This plant is large, but not the only employer for the examined group of managerial occupations. The examined management professions do not include the scope of all jobs that make up the plant, but those that are considered as leading and most important in terms of production activity.

Procedure

In order to examine the impact of professional selection with the help of psychological tests of abilities and personality, it is necessary to examine the relationship between the intellectual abilities and personality traits of the respondents - with the success in performing the tasks. For that purpose, the course of the research process is

conceptualized in several steps.

In the first step, a managerial job analysis was performed, in order to identify the main elements of the job and to specify the necessary abilities and characteristics of a person for successful performance of the job. Information from several sources is used which is summarized in a form that gives a complete picture of the job: job description, quantification of duties, responsibilities, characteristics, and rhythm of work, work activities, and working conditions.

The second step is to determine the psychological profile of the manager to be successful in the job, which uses information from job analysis, interviews with several independent assessors of the necessary personality traits, abilities, knowledge, and skills to perform the job successfully. Based on these data, a psychological profile is specified with the following characteristics important for successful performance of managerial positions: high intellectual abilities, organization, conscientiousness in work, extraversion, friendliness, cooperation and empathy, peace or low aggression, optimism, and optimism. Psychological tests are prescribed to measure these psychological traits.

In the third step, the success in performing the work is determined, which is represented by a performance assessment, which is determined as a weighted value of the success of the 5 performance indicators: quality of work performance, rewards and penalties, absenteeism, work injuries and fluctuation. The final assessment is as follows: 70% of the performance assessment, 10% for the rewards and punishments, ie promotion or setback, and 5% for work-related injuries, ie absenteeism. The weighted value of the respondent's success (X_s) is calculated according to the following equation:

$$X_s = (0.7X_1 + 0.1X_2 + 0.1X_5 + 0.05X_3 + 0.05X_4) / (0.7 + 0.1 + 0.1 + 0.05 + 0.05)$$

In the above equation, X_1 denotes the quality of work performance, X_2 denotes the assessment of rewards and punishments, X_3 denotes absenteeism, X_4 denotes injuries at work, and X_5 denotes fluctuation. The height of the performance rating X_s determines the level of failure of the manager. If the total performance score (X_s) is greater than or equal to the arithmetic mean of the weighted values from X_1 to X_5 , it will determine the respondent as successful or unsuccessful worker.

Measuring instruments

Several techniques and measuring instruments have been used in this research.

- Test of Series (Test nizov, TN-20-A – Pogačnik, 1983) was used for measuring fluid intelligence. It consists of 45 series of tasks with progression in difficulty. The participant is given a task to select one out of five suggested characters to continue the series of characters correctly. The time for the test accomplishment is 20 minutes.
- The Emotion Profile Index questionnaire (PIE) (Plutcihk and Kellerman, 1986) is a well known and still widely used personality inventory that gives a person's emotional profile. The test provides data on the properties required for a particular type of job and is used in choosing to establish an employment relationship, in deciding on conditioning for managerial functions, and in various personnel analyzes. The test gives an emotional person profile of 8 dimensions of a person or an individual view of each of them.

The following techniques were used to measure the variable work performance success:

- Documentation analysis - includes analysis of job descriptions and inventory, personal and personnel information on rewards and penalties of workers, their fluctuation, absenteeism, and injuries at work.
- Scale for assessing the quality of work performance and efficiency in performing work tasks. The scale was created by the researchers with an assessment of the success of the quality of performance in the following areas: expertise and knowledge at work, initiative, inventiveness, confidentiality, and cooperation with other employees, desire to improve, with an interval of 1 to 5 for each of the above performances.

Results

Table 1 shows the results of multiple correlation between the criterion for success in the work with the results of the tests for general intellectual abilities and the personality profile test, considered together. The correlation is positive and statistically significant ($R = 0.824$; $p < 0.01$). It can be concluded that between the performance at work, represented by the assessment of successful work performance, and the results of the tests of intellectual abilities measured by the Test of Series (TN-20-A) and the profile of the person measured by the Profile Index of Emotions (PIE) there is a significant positive correlation, when it is considered together for both tests ($F = 12,006$, $p < 0.01$).

Table 1: Multiple correlation of the criterion of successful performance with the two tests together, the intelligence test and the personality test

| Variables | Multiple R | R ² | % | F |
|---|------------|----------------|--------|--------|
| Intelligence test and personality tests | 0,824** | 0.6789 | 67,89% | 12,006 |

significant at the level ** 0,01; significant at the level 0,05*

Table 2 presents the results of multiple correlation between the results of the intelligence test and the result of the personality test presented through the overall profile of the person with the criterion of success at work. Both correlations are positive and statistically significant, amounting to 0.752 ($R = 0.752$, $p < 0.01$) for intellectual ability and 0.544 ($R = 0.544$, $p < 0.01$) for personality traits. These findings support hypothesis 1: If there is a significant correlation between the results of intelligence tests and personality tests with success in job achievement, then professional selection based on psychological tests is successful.

Table 2: Multiple correlation of the criterion of successful work performance with the results of an intelligence and personality test

| Variables | R | R ² | Variance | F |
|-------------------|-------|----------------|----------|--------|
| Intelligence test | 0,752 | 0.565 | 56,5% | 11,005 |

| | | | | |
|--------------------------|-------|-------|-------|-------|
| Personality tests | 0,544 | 0,295 | 29,5% | 3,880 |
|--------------------------|-------|-------|-------|-------|

significant at the level ** 0,01; significant at the level 0,05*

The intelligence test has the highest correlation with successful performance ($R = 0.752$, $p < 0.01$). In order to make the forecast of the expected success based on the intellectual abilities, the predictive validity of the intellectual abilities measured by the Test of Series (TN-20-A is determined. The test has significant predictive validity for determining job performance, which is ($t = 6.676$, $p < 0.01$) for coefficient a, and for coefficient b, ($t = 10.321$, $p < 0.01$). The equation where the weight of the regression direction test is determined based on the results of the intelligence test: $Y = 1.223 + 0.061TN-20$ (where Y represents the performance score, and TN-20 represents the result obtained on the test for measuring intellectual ability).

The margins of errors in predicting success with the help of intellectual abilities are reduced by 36%, ie the accuracy of prediction increases by that much. This confirms hypothesis 2: The intellectual abilities determined by the test measurement of general intellectual abilities are a valid predictor of the successful work performance of the applicants for managerial positions in AD ESM.

Correlation between the results of the personality test presented through the overall profile with the criterion of success at work is positive and statistically significant ($R = 0.544$, $p < 0.01$). The question that arises is - which are the personality traits that influence success the most? For this purpose, combinations of correlations were made on each of the six dimensions of the personality measured with the Profile Index of Emotion (PIE). Dimensions that are assessed as important for successful performance of managerial positions are work organization (exploration), extraversion (reproduction), empathy (incorporation), peace or low aggression, optimism or low depression, and emotional self-control. Table 3 shows the correlations of the criterion - successful work performance with the results of intelligence tests and each of the dimensions of the personality test and intercorrelations between them.

Table 3: Correlations between job performance and IQ test scores (TN-20) and 6-dimensional personality tests (PIE)

| Variables | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|-----------------------------------|---------|--------|--------|--------|--------|---|---|---|
| 1. Work success | 1 | | | | | | | |
| 2. IQ test TN-20-A | 0.702** | 1 | | | | | | |
| 3. Extraversion (reproduction) | 0,231* | 0,125 | 1 | | | | | |
| 4. Empathy (incorporation) | 0,219* | 0,084 | 0,808 | 1 | | | | |
| 5. Emotional un- control | -0.123 | -0,039 | -0,029 | -0,153 | 1 | | | |
| 6. Deprivation | -0,161 | -0,254 | -0,616 | -0,635 | -0,199 | 1 | | |

| | | | | | | | | |
|---------------------------------|---------|--------|--------|--------|--------|-------|--------|---|
| 7. Responsibility (exploration) | 0,382** | 0,284 | 0,213 | 0,123 | -0,042 | 0,473 | 1 | |
| 8. Aggression | -0,289* | -0,014 | -0,413 | -0,609 | 0,405 | 0,239 | -0,453 | 1 |

significant at the level ** 0,01; significant at the level 0,05*

The results show that each of the dimensions has a certain impact on successful work performance. The dimension of responsibility (exploration) has the highest positive correlation ($r = 0.382$, $p < 0.01$) with the successful work performance, after the intellectual abilities. The dimension of reproduction or sociability is with moderate correlation ($r = 0.231$, $p < 0.05$), as well as the dimension of incorporation or cooperation ($r = 0.219$, $p < 0.05$). From the other dimensions, aggression stands out, which has a negative correlation ($r = -0.2289$, $p < 0.05$) with the success. From this, it can be concluded that the personality test (PIE) improves professional selection. This confirms hypothesis 3: The personality traits determined by a test measurement of general intellectual abilities are a valid predictor of successful performance of the applicants for managerial positions in AD ESM.

In order to make the forecast of the expected success based on the achieved results of the personality tests (PIE), the multiple regression is calculated, which determines the direction of regression. The following table shows the values of the coefficients for determining the direction of regression, the standard forecast errors as well as the predictive validity tested with the t-test for the six dimensions.

Table 4. Regression coefficients for the multiple regression equation and significance of the predictive validity of the 6-dimensional performance

| Coefficient | | Value | Standard error | T-test | P-value | Down 95% | Up 95% |
|-----------------------------|---------------|--------|----------------|--------|---------|----------|--------|
| | a | 2,214 | 0,368 | 6,011 | 0,000 | 1,474 | 2,953 |
| Reproduction (extraversion) | b1 (R) | 0,048 | 0,023 | 0,681 | 0,499 | -0,030 | 0,061 |
| Incorporation (empathy) | b2 (I) | 0,031 | 0,015 | 0,084 | 0,933 | -0,029 | 0,031 |
| Uncontrollability | b3(Un) | -0,019 | 0,016 | 1,194 | 0,238 | -0,013 | 0,051 |
| Deprivation | b4 (D) | 0,011 | 0,017 | 2,909 | 0,005 | 0,016 | 0,086 |

| | | | | | | | |
|---|--------|--------|-------|-------|-------|--------|--------|
| Explora- tion (responsi- bility) | B5 (E) | 0,051 | 0,015 | 2,078 | 0,042 | 0,001 | 0,062 |
| Aggres- sion | B6 (A) | -0,038 | 0,016 | 2,360 | 0,022 | -0,069 | -0,006 |

Using the corresponding weights presented in the regression equation given below, one can predict job performance represented by the performance rating: $Y = 2.214 + 0.048R + 0.031I - 0.038A + 0.051E$ (where Y represents the performance rating, R is the scale of reproduction, I is the scale of incorporation, A is the scale of aggression and E is the scale of exploration - responsibility)

When the Test of Series (TN-20-A) and personality tests by Emotion Index Profile (PIE) are used together, the correlation increases from 0.75 to 0.82. When the tests are used together, then the "weight" of the PIE test decreases which is explained by the high interrelationships between the features measured by the PIE test and the intelligence measured by the TN-20 test. It can be concluded that the selection will be improved to the maximum value if the test for general intellectual abilities (TN-20) and the test for personality (PIE) are used with the dimensions: reproduction, ie. extroversion, incorporation i.e. empathy, exploitation, ie responsibility and aggression from the PIE test. We will best predict success in the workplace if we use all the predictors with our optimal weights. These findings confirm hypothesis 4: Professional selection with the help of psychological tests of abilities and personality is a valid predictor of the job performance of applicants for managers in the energy companies in North Macedonia.

Discussion

General intellectual ability participates in determining work success with 56.5%. This is explained by the nature of this group of occupations and their work tasks. These are responsible and complex tasks that require high intellectual abilities to solve professional problems. However, they are at the same time mostly managerial positions from all three levels, which in their work include several important operations: planning, organizing, staffing, managing, and controlling. Managerial professions are complex and require a high intellectual investment to perform successfully. These findings are consistent with data from other studies, where the validity of general intellectual ability ranges from 0.74 for professional and managerial jobs to 0.39 for unskilled jobs (Hunter et al. (2006). In other studies, the average importance of jobs of medium complexity is 0.66 (Schmidt, 2006). The margins of errors in predicting success with the help of intellectual abilities are reduced by 36%, ie the accuracy of prediction increases by that much.

The profile of a person measured by Emotion Index Profile (PIE) is significantly correlated with job performance ($R = 0.544$). These findings are consistent with

a meta-analysis based on 8 studies and 2,364 individuals rated the mean validity of personality tests for predicting managerial performance as 0.43 (Schmidt, Ones, & Viswesvaran, 1994). All dimensions of the person participate in determining the success with 27.2%. The traits of responsibility or exploration and aggression, have the greatest share with success (aggression negatively correlate with success). But the other characteristics each to a greater or lesser extent contribute to a better prediction of success. Among them, the dimension of reproduction and incorporation is prominent, which is in a slight positive correlation with success. Of course in order to achieve maximum connection, ie. predictability of personality traits for success it is necessary for each dimension to gain its optimal weight.

How to explain the relationship of these predictors with success in the workplace? Exploration is a personality trait that expresses a person who is organized and well-balanced with solid self-control and the ability to make long-term efforts. These characteristics correspond to the profile of a successful mid-level and senior manager. The dimension of reproduction or sociability is with moderate correlation 0.231, as well as the dimension of incorporation or cooperation n 0.219. Reproduction is a dimension of personality that expresses extraversion, cordiality, and friendly behavior, tolerance, understanding, support, and empathy. Higher incorporation is a sign of a person's ability to accept new ideas, and to approach people with confidence, but still to be critical and non-suggestive. The importance of these dimensions is important for success in the managerial professions, because they provide social competence with communication skills, emphasize empathy and good social relations. From the other dimensions, aggression stands out, which has a negative correlation -0.2289, with success because it prevents overcoming difficulties and conflicts in a peaceful and calm way. High aggression means an impatient and ruthless person who is prone to aggressive reactions and angry outbursts, which is excluded by the profile of a successful manager of any level. These characteristics correspond to the profile of successful managers in an organization that is in the mature period of its development stage.

Conclusion and recommendations

The results of this research indicate that the professional selection in hiring applicants for managerial positions in energy companies in North Macedonia improves when using a test that measures general intellectual abilities, in this research, it is a Test of Series (Test nizov, TN-20-A – Pogačnik, 1983), and a personality test Profile Index of Emotions - PIE (Plutcihk and Kellerman, 1986). The results of this research provide a basis to respond positively to the question: Is professional selection with the help of psychological tests a successful investment in human capital in energy companies in Northern Macedonia? According to this research, professional selection with the help of psychological tests is a successful investment in human capital in energy companies in Northern Macedonia.

Before the application of the selective program, the question for justification of generalizing the results to the population with the same jobs or similar jobs in other work organizations arises. Several authors state that one should be careful when

generalizing, to perform periodic checks to confirm the weights of the tests and the average results (Schmidt & Hunter 1992). The findings of this research lead to thinking about the application of scientific knowledge in the field of professional selection in practice. At the same time, some questions arise: How much is used the professional selection with the help of tests in the companies in North Macedonia, and what would be the economic and social benefits of wider application of professional selection with the help of tests? (Kotevska, 2000). It is necessary to create opportunities for professional selection as a method of employment to become an integral part of the management of companies in North Macedonia.

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