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Analytical Models for the Development of the Automated Control System of Mine Ventilation

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Key words and phrases: accuracy criterion; aerodynamic indicators; analytical models; automated control system; mine; natural-technical system; ventilation.

Abstract: The article describes the research conducted by the authors in the mines of Donbass and the Rostov region. The purpose of the research is the analysis of aerodynamic parameters and a set of practical problems for the creation of an automated system for the ventilation of mines. The research objectives are to determine the measurement interval by the accuracy criterion, taking into account the non-stationarity of the process of the object of the technical system. The problems were solved on the basis of a comprehensive study of indicators to improve the efficiency of the technical system. The research results are as follows: a method was developed with the use of analytical models to determine the measurement interval by the criterion of the accuracy of the aerodynamic indicators of mine ventilation.

Introduction

The intensification of mining operations in the underground method, the increase in the depth of development, the associated complication of the ventilation network of modern mines, the increase in gas evolution, dust generation, heat generation and uneven distribution in time and space require the solution of the issues of improving the ventilation of mine workings [1–3].

The solution of the problem of further increasing the efficiency of ventilation can be achieved by rational and timely redistribution of the air supplied to the mine, i.e. on the basis of management of ventilation of mines. Managing the ventilation of mines will improve working conditions, improve safety techniques, increase extraction of minerals and reduce energy costs for ventilation.

Methods and behavioral studies

The measurement interval for aerogasdynamic processes must satisfy the inequality and can be found by different, accuracy criteria. Most often, as the criterion of the accuracy of

measuring the I controlled process, the mean square error is chosen [3–5].

For the first time, the technique for determining the estimate of the time interval between adjacent measurements for the case in which the measurement error is given as the root-mean-square error was developed by E.L. Itskovich [1–3]. The field of use of these methods is limited to stationary processes, so their application to the gas dynamic processes of mining sites, which in general are nonstationary processes, leads to errors. These errors arise, firstly, due to the fact that without sufficient grounds the controlled process is considered as stationary, and secondly, due to the fact that it is impossible to take into account changes in the characteristics of the process over time in the final implementation [1–5].

The problem of determining the measurement interval by the accuracy criterion α with allowance for the non-stationarity of the process C(t) will be solved in the following formulation.

The discrete sequence of methane concentration values C(t), $t_k = t_{k-1} + \Delta t$, const (K = 1, 2, 3, …, n) was obtained during normal operation of the object; it is required to find such a mean-square function $\sigma_c(\Delta t)$ which for a period of time between two adjacent measurements did not exceed the value of the measurement accuracy criterion α.

The method for determining the measurement interval using the accuracy criterion can be used to determine the maximum root-mean-square error in the quantization of aerogasdynamic processes with respect to time [3–5]. To this end, using the function graph $\sigma_c^*(\Delta t)$, the maximum root-mean-square quantization error is determined σ_c^* from the given quantization step Δt.

It has been experimentally established that the following dependence exists for the mean square error of quantization of processes with respect to time σ_c and its maximum estimate σ_c^* there exists the following relationship:

$$\sigma_c^* = (1.5 - 2.5)\,\sigma_c. \tag{1}$$

In order to take into account the non-stationarity of the C(t) process, the most effective method is the periodic refinement of the found Δt_α measurement interval. To solve this problem, it is necessary to determine the values of the root-mean-square error of the measurement using the formula (1) at Δt_α = const at a rate with a discrete process registration and compare them with a given value σ_{set}.

In the case of the appearance of values satisfying the inequality:

$$\sigma_c^*(\Delta t) \geq \sigma_{set}, \tag{2}$$

the measurement interval for the Δt_α process should be reduced. To determine the new value of the Δt_α^* measurement interval, the following formula was obtained:

$$\Delta t_\alpha^* = \left[2 - \frac{\sigma_k^*(\Delta t)}{\sigma_{set}}\right] \cdot \Delta t_\alpha. \tag{3}$$

In the mining conditions, an express method can be used to estimate the required measurement interval from the experimental data obtained during the first hours of observation [5–8]. For evaluation and the measurement interval Δt, the following formula is proposed:

$$\Delta t^* = \left[1 + \frac{\sigma_{set} - \sigma_c^*(\Delta t_{\min})}{\sigma_c^*(2\Delta t_{\min}) - \sigma_c^*(\Delta t_{\min})}\right] \cdot \Delta t_{\min}, \tag{4}$$

Δt_{min} is the minimum process measurement interval.

The conclusion. Carrying out an experiment in the production site in order to determine the required measurement interval using formula (4) gives an accurate determination of the aerodynamic parameters.

Results of the research. A method was developed with the use of analytical models to determine the measurement interval by the criterion of the accuracy of the aerodynamic indicators of mine ventilation.

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Аналитические модели для разработки автоматизированной системы управления шахтной вентиляцией

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Ключевые слова и фразы: автоматизированная система управления; аналитические модели; аэродинамические показатели; вентиляция; критерий точности; природно-техническая система; шахта.

Аннотация: В статье описываются исследования, проведенные авторами на шахтах Донбасса и Ростовской области. Целью исследования является анализ аэродинамических параметров и набор практических задач для создания автоматизированной системы вентиляции шахт. Задачами исследования являются определение интервала измерения по критерию точности с учетом нестационарности процесса объекта технической системы. Проблемы были решены на основе комплексного изучения показателей для повышения эффективности технической системы. Результаты исследования заключаются в следующем: был разработан метод с использованием аналитических моделей для определения интервала измерений по критерию точности аэродинамических показателей шахтной вентиляции.

UDK 33

Evaluation as Part of Analytical Procedure at Auditor's Decision Making

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Key words and phrases: assessment; analytical procedures; audit.

Abstract: The main purpose of the study is to substantiate the main theoretical approaches determining the assessment process as part of an analytical procedure that enables the auditor to make appropriate decisions when preparing his or her opinion. The objectives of the study are to prove the need for risk assessment, the description of which is connected not only with the professional judgment of the auditor, but also on the basis of formalized calculations, data management tools located in modern information networks, and to study the cause-effect relationships between the evaluated result and the consequence for which this result is obtained.

The main hypothesis of the study is that the study of probabilistic values of risk assessment in auditing involves the processing of a large amount of information. This process requires both formalized and non-formalized methods, one of which may be the modeling of possible (estimated) risk situations that can change the opinion of the auditor. We propose to use elements of modeling possible (probabilistic) risk assessment at all stages of an audit using the Big Data management toolkit.

The result of the study is the proof that the main objective of the assessment carried out by the auditor in the framework of the analytical procedure is not only the calculation of a specific risk value (determination of the effect), but also the choice of a method for determining the risk area, information base and platform designed to clarify (adjust) the subsequent analytical procedures based on key risk (assessment of cause-effect relationships and identification of the most significant cause).

Analytical procedures in audit are evaluative, evidentiary and resulting process in the preparation of the auditor's reporting documentation. The article discusses the first component of this process.

Nowadays, when studying complex assessment processes, the description of which is associated with a high degree of uncertainty, risk, when making decisions by the auditor, an objective need arose to use modeling tools that describe formalized and non-formalized databases, as well as methods for applying these data.

The assessment can be carried out at all stages of the audit. At the "substantive audit" stage, the assessment is associated with determining the causal link between the resulting performance of the enterprise, possible risks for the enterprise in the future, and the conclusions presented in the audit report and report. We propose to use the elements of modeling possible (probabilistic) risk assessment at this stage using the big data management tools and econometrics. This will allow determining the causal relationship between the values of the estimated parameters of risk indicators (formalized result) and the auditor's findings presented in the audit report and conclusion [1].

The assessment process includes both an assessment of the actual event in the past and modeling the relationship between cause and effect in the future, which does not allow exceeding the threshold estimates for each particular enterprise [3].

To obtain objective information during the assessment, the auditor can use different technologies; some of them are presented below.

1. One of the most important purposes of the Data Mining methods [2] is to visually represent the results of calculations (visualization), which allows the use of Data Mining tools by people who do not have special mathematical training. At the same time, the application of statistical data analysis methods requires professional training of an auditor.

2. Crowdsourcing is the attraction of a wide range of people to the solution of various problems of innovative production activities in order to use their creative abilities.

3. Machine learning to automate repetitive audit processes will improve the effectiveness of the audit, which will subsequently affect the audit report. Machine learning will add value to routine tasks in data processing, such as text analysis, speech recognition, and image and video analysis. It can also be used in the evaluation in the implementation of the analytical procedure as confirmation [4].

4. Pattern recognition is recognition of objects requiring the construction of artificial neural networks that mimic multiple levels of neurons in the human brain and management of sensory data flows through these layers.

5. Predictive technologies (predictive analytics, predictive analytics) – a class of data analysis methods that focuses on predicting the future behavior of objects and subjects in order to make optimal decisions.

In the next stage, the selection of indicators, thresholds, methods for assessing the possible risk (establishing causal relationships) is carried out. This step involves:

1. Selection of indicators (random and non-random), formalized and non-formalized databases, which essentially determine the cause-effect relationships.

2. Determination of the probability density function of the probability of occurrence of events based on the achievement of indicators from the adopted databases, which includes all available information – both a priori and selective. The probability density function obtained in this way is an exact function for the case of a sample of finite volume, and with its help the corresponding probability statements about the parameters of the estimated risk can be obtained.

3. Evaluation of risks associated with major events in the operation of an enterprise, such

as entering into contracts with counterparties (for example, risks of bankruptcy or fraud), in this procedure, it is necessary to assess the possibility of a negative result and the consequences of ineffective cash outflows or a decrease in the financial stability of an enterprise, which subsequently may lead to termination of activities (bankruptcy).

4. Evaluation of threshold values of indicators of possible risks through an understanding of the nature and environment of the entity being audited.

5. Carrying out risk assessments and making professional judgments about the existence of cause-effect relationships and their adjustment.

When implementing this step, it is proposed to use the Jeffreys rules and his theory of inductive inference [2]. Based on this theory, the most important part of induction is a generalization of past experience and empirical data in order to predict the phenomena that have not yet been observed.

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Оценка как часть аналитической процедуры при принятии решения аудитором

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Ключевые слова и фразы: аналитические процедуры; аудит; оценка.

Аннотация: Основной целью исследования является обоснование основных теоретических подходов, определяющих процесс оценки как часть аналитической процедуры, дающей возможность аудитору принимать соответствующие решения при подготовке своего заключения. Задачами исследования являются: доказательство необходимости проведения оценки рисковых ситуаций, описание которых не только опирается на профессиональное суждение аудитора, но и сделано на основе формализованных расчетов, инструментов управления данными, находящимися в современных информационных сетях, а также связано с необходимостью изучения

причинно-следственных связей между оцениваемым результатом и следствием, по которому данный результат получен.

Основной гипотезой исследования является то, что изучение вероятностных значений оценки рисков в аудите, как части аналитической процедуры, при подготовке аудиторского заключения предусматривает обработку большого количества информации. Для данного процесса необходимы как формализованные, так и неформализованные способы, одним из них может быть моделирование возможных (оценочных) рисковых ситуаций, которые могут изменить мнение аудитора. Мы предлагаем использовать элементы моделирования возможной (вероятностной) оценки рисков на всех этапах аудита с помощью инструментария управления «большими данными».

Результат исследования состоит в том, что основной задачей оценки, осуществляемой аудитором в рамках аналитической процедуры, является не только расчет конкретного значения риска (определение следствия), но и выбор методики определения рисковой области, информационной базы и платформы, предназначенной для уточнения (корректировки) последующих аналитических процедур, основанных на ключевом риске (оценка причинно-следственных связей и определение самой существенной причины).

УДК 338.47

Approach to Assessment of Depreciation Charges for Telecommunication Agencies

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Key words and phrases: depreciation; innovations; innovative resource; technical resource; international information and telecommunication network.

Abstract: The article defines the role and the place of depreciation charges in production of information services with an increase in their volume and quality. The analysis of the factors influencing modernization of the manufacturing base and technological park of telecommunications agencies in modern conditions was carried out. A new approach to the assessment of depreciation charges for the enterprises using the example of telecommunication industry is proposed.

In the developed countries where economy is characterized by the high level of innovative activity the depreciation policy is one of the most important instruments of investments into modernization of manufacturing facilities, high technologies, scientific research and development works.

In view of the fact that many strategic administrative decisions are connected with the use of fixed assets, the questions of various schemes development of depreciation charge and forecasting of depreciation processes results are relevant in modern conditions of economy.

The purpose of the paper is to develop a new approach to the assessment of depreciation charges considering introduction of innovative solutions.

Traditional approaches do not consider a number of new, significant factors and are characterized by rather low level of reliability. This is explained by the fact that expert assessment procedures are practically not adjusted to the specifics of communication industry, which is characterized by high rates of innovative solutions.

The current situation causes the need to consider the following factors:

– reduction in the quantity of expert estimates by using strict methods of the theory of reliability that will increase reliability;

– rates of decrease in an innovative resource of fixed assets significantly exceed rates of physical wear that causes the necessity of development of an innovative resource exhaustion time definition methods on the basis of the forecasting theory methods;

– steady tendency of miniaturization and decrease in a power consumption of communication means that reduces the need for the areas (volumes) of rooms for communication investment of funds, and, above all – increases reliability of products, but significantly depends on service conditions which range is narrowed;

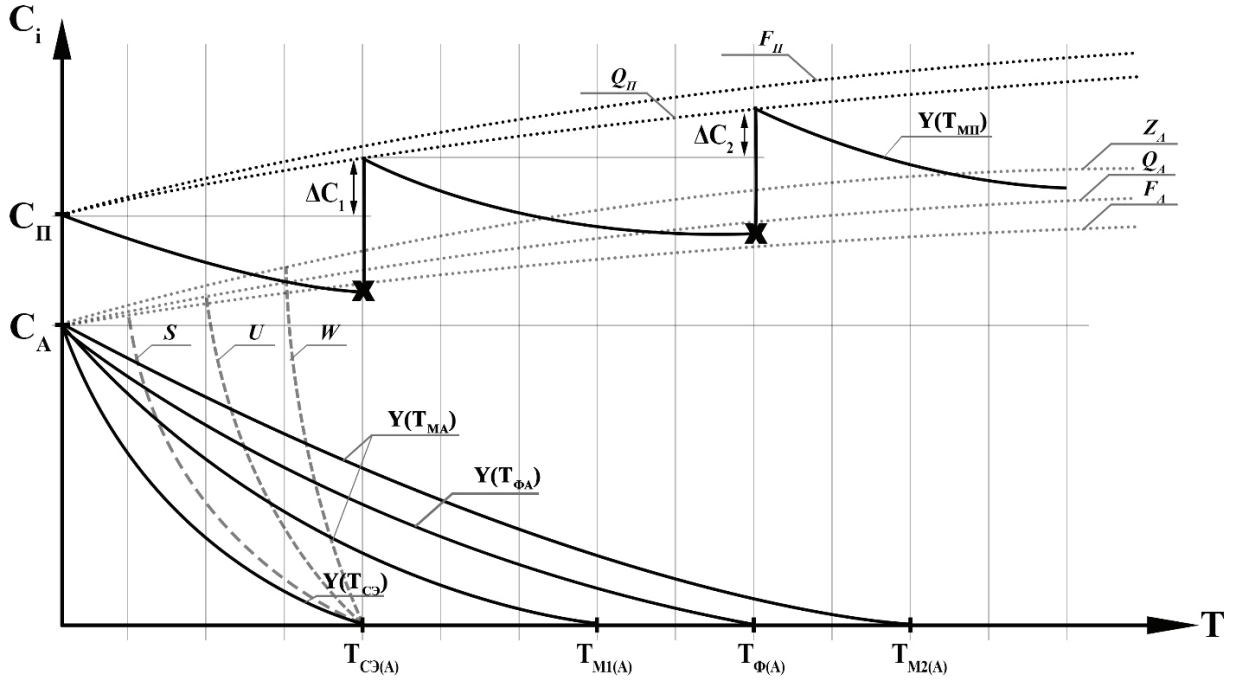

Fig. 1. Generalized graphical representation of the approach

– traditional calculation of depreciation charges is based on simple completion of business assets, and in telecommunication branch the quantity of telecommunication services and their quality constantly increases that just does not allow to reproduce without basic changes of fixed assets, and the cost of new fixed assets, as a rule, significantly exceeds the cost of previous;

– fixed assets (means of telecommunication), protocols, communication services are provided at the international level, and depreciation charges are regulated by national standard and legal base;

– the need to consider the basic changes of social and economic spheres in quantitative and qualitative aspects for a short period;

– the fact of depreciation of the provided services, but with simultaneous increase in number of the provided services is not considered;

– the inflation changing in considerable limits;

– essential non-simultaneity of additional elements creation of communication systems which causes the necessity of the corresponding elements modernization.

These and other factors cause the necessity of development of methods of their calculation.

The generalized graphical representation of the developed approach is shown in Fig. 1.

C_i is the initial cost of fixed assets; C_A is the initial cost of the hardware of fixed assets; $C_П$ is the initial cost of the software of fixed assets; $T_{Ф(А)}$ is the term of exhaustion of the technical resource; $T_{М1(А),\ М2(А)}$ is the term of exhaustion of the innovative resource; $T_{СЭ(А)}$ – term of social and economic wear of the hardware of fixed assets; $Y(T_{ФА})$ is the function of change of a technical resource; $Y(T_{МА})$ is the function of change of an innovative resource; $Y(T_{СЭА})$ is the function of change of volume and quality of fixed assets, owing to change of social and economic conditions; $Y(T_{МП})$ is the function of exhaustion of an innovative resource of the software of fixed assets; ✖ is the need of modernization of software of fixed assets; $\Delta C_{1,\ 2}$ is the cost, which

has been adjusted for rates of inflation and specifics of innovative developments in the field of the software; F_A is the function of the hardware of fixed assets cost change taking into account scientific and technical progress; $Q_{A, П}$ is the function of inflation rates change; Z_A is the function of the hardware of fixed assets cost change, owing to continuous improvement of quality; F_A is the function of the software of fixed assets cost change taking into account realization of additional functions and reduction of requirements to the hardware; S is the function of residual cost change of fixed assets taking into account of the hardware cost change; U is the function of residual cost change of fixed assets taking into account change of inflation rates; W is the function of residual cost change of fixed assets taking into account continuous improvement of quality.

The developed approach consists in the allocation of three categories of wear with varying durations:

1) exhaustion of a technical resource;
2) exhaustion of an innovative resource;
3) obsolescence caused by basic changes of social and economic conditions.

Establishment of terms of technical resource exhaustion must proceed from the theory of reliability as modern technical means consist of the interacting components set. The technique of assessment of probabilistic and time indicators of a technical resource of elements of communication systems and automated control systems is presented in [1].

The extent of the innovative resource loss is predetermined by rates of introduction of innovative solutions. The approach to the assessment of an innovative resource is presented within an algorithm of determination of parameters of innovative development of telecommunications agencies in [2].

If decrease in a technical resource and to some extent an innovative resource can be eliminated by recovery work, reconstruction or modernization, then requirement of preliminary change of fixed assets of production structure owing to basic changes of social and economic conditions is always not removable.

It is important to note that now fixed assets of production of information services are implemented in the form of software and hardware [3]. From the economic point of view, software is characterized by the tendency of cost growth and the fact that they are not subject to physical wear. As the software of means is not subject to physical wear, for hardware-software fixed assets it is necessary to divide the cost and useful service into two components – separately for the hardware and separately for the software.

Thus, in the article, the new approach to the assessment of depreciation charges taking into account the introduction of the innovative solutions adapted to the conditions of expanded reproduction is offered; and also the need of accounting of the new factors influencing modernization of the manufacturing base and technological park of the enterprises is proved.

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Подход к оценке амортизационных отчислений для предприятий связи

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Ключевые слова и фразы: амортизация; инновации; инновационный ресурс; международная инфотелекоммуникационная сеть; технический ресурс.

Аннотация: В статье определены роль и место амортизационных отчислений при непрерывном производстве информационных услуг с повышением их объема и качества. Осуществлен анализ факторов, воздействующих на обновление производственно-технологического парка предприятий связи в современных условиях. Предложен новый подход к оценке амортизационных отчислений для предприятий на примере отрасли связи.

UDK 330

Job Satisfaction and Staff Turnover Intentions of Banking Employees in Cyprus and Its Effect on Profitability

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Key words and phrases: banking; Cyprus; job satisfaction; staff movement.

Abstract: This study examines job satisfaction and staff turnover intentions of banking employees in Cyprus and its effect on profit. This study examines some characteristics that have an effect on profit and the level of job satisfaction and staff turnover intentions of banking employees in Cyprus. These factors include amongst others: basic salary and benefits; job security; location of the bank and working schedule.

The paper provides weak evidence of the effect of job satisfaction on profitability. It does provide evidence that staff turnover intentions could affect profitability in the short and long term. It provides recommendations to the banking sector, based on the study, to improve labour relations and at the same time have a positive impact on profitability.

1. Introduction

The banking sector in Cyprus has suffered a banking crisis that is still evident with the financial rescue of the Cooperative Cyprus Bank by Hellenic Bank in June 2018. According to Ioannidis (2018) the Cooperative Cyprus Bank has been split into a good “bank” that was sold off to Hellenic Bank on what are deemed to be very generous terms while the bad “bank” will be transferred to a special purpose entity that will be set up and governed by professionals who know about distressed debt management (that is Altamira). On 3 August 2018, an independent committee was tasked with investigating the collapse of the Cooperative Cyprus Bank and coming to conclusion as to what caused the bank to fail and whom was responsible for its failure.

The banking crisis first peaked in 2013 when the island’s second largest bank, Cyprus Popular Bank, collapsed and the island’s largest bank had to be recapitalised by a partial bail-in of uninsured deposits (Brown et al, 2018). According to Lascelles (2013) there were various reasons for the collapse of the Cyprus Popular Bank. Amongst these are the following:

Firstly, Cyprus’s accession to the European Union in 2004 and its adoption of the Euro in 2008 made it difficult for the authorities to restraint credit growth; Secondly, the global financial crisis hit the two main Cyprus banks due to their significant involvement in Greece and, thirdly

the major banks in Cyprus used risky strategies to use the excess liquidity at their disposal. The decision to acquire € 5.7 billion of Greek Government bonds resulted in a loss to the Cyprus banking sector of € 4.5 billion. Due to this a significant erosion of the capital resulted to the two main banks that were the main investors: namely Bank of Cyprus and the Cyprus Popular Bank.

Due to the collapse of the Cyprus Popular Bank that came at the same time as the hair cut in non-secured depositors savings in the Bank of Cyprus, most of employees' salaries were reduced while other bank employees were made redundant. In 2013 Banks sold most of their operations abroad, the number of employees, number of branches and total assets had decreased dramatically (Bank of Cyprus, 2014; Hellenic Bank, 2014).

It may be argued that these factors may have a negative impact on the profitability of the firms due to the performance of employees. It addition it may be argued that the negative climate in the banking sector in Cyprus may have an effect on job satisfaction and the turnover intentions of banking employees.

The aim of this research is to examine the link between job satisfaction, staff turnover intentions and their effect on profit. It also aims to examine the factors that affect job satisfaction and staff turnover intentions in banks in Cyprus.

2. Literature review

Job satisfaction can be defined as the extent to which a worker is content with the rewards he or she gets out of his or her job, particularly in terms of intrinsic motivation (Statt, 2004).

The term job satisfaction refers to the attitude and feelings people have about their work. According to Armstrong (2006) positive and favourable attitudes towards the job indicate job satisfaction. Negative and unfavourable attitudes towards the job indicate job dissatisfaction.

There are a number of factors that affect job satisfaction. According to Rue and Byars (2003) these factors include the following: job design; compensation of employees; working conditions; social relationships; management concern for its human personnel, perceived long term prospects and, perceived opportunities outside the firm amongst others. They provide evidence that these factors will affect the level of commitment to the firm and staff turnover intentions amongst others.

Hassan et al (2011) concludes that the employees who work in private banks are satisfied with their work. He also adds the factors that concern the employees regarding their job satisfaction are: job security, organizational operations, working conditions and rewards amongst others.

Moynihan et al (2000) provided evidence that job satisfaction is linked to commitment to the work place. They found that managers who have low commitment to the firm are more likely to have turnover intentions whereas the opposite is true for managers with a high commitment to the firm. They provide evidence that job satisfaction has an effect on the performance and by implication has an effect on the profitability of the firm.

Okpara (2002) provided evidence that factors such as: pay, the work itself,supervision, relationships with co-workers and opportunities for promotions have been found to contribute to job satisfaction.

According to Rahman and Iqbal (2013) staff turnover intention is defined as one's behavioural intention to quit. According to Schermerhorn et al (2000) job satisfaction has an effect on staff turnover intention decisions for employees to leave their employment. They provide evidence that dissatisfied employees are more likely than satisfied workers to leave their employment.

There a few studies that examine the relationship between job satisfaction and staff turnover

intentions in the banking sector. One of these studies by Rahman and Iqbal (2013) found strong evidence that there is a negative relationship between job satisfaction and staff turnover intentions.

In addition Sehgal (2012) support that the employees in the banks who have more experience and have higher educational qualifications are highly satisfied with their jobs unlike those who have less experience and less educational qualification. It was found that the later were dissatisfied with their jobs due to the lack of benefits that they had.

Mohanty (2009) presented specialized practices for retaining employees within organization. He stated that practices like open communication, recreational facilities and employee rewards programs amongst others can help organization to retain potential human resources. He further added that open communication keeps employees up-to-date on key issues and enable them to know that their opinions and that management is fully interested in their inputs,likewise, recreation facilities help staff away from stress.

3. Methodology

The survey aimed to examine the relationship between job satisfaction and staff turnover intentions of banking employees in Cyprus and its effect on profit. Various approaches were adopted in the methodology to acquire the research data.

Firstly, an analysis was carried out of the financial and non-financial information (mainly through their annual reports) of the three main banks in Cyprus from the year of the crisis, 2013, to date. The three main banks are: Bank of Cyprus; Hellenic Bank and, the Cooperative Cyprus Bank. The rationale of this approach is to find evidence concerning the relationship between financial performance and staff costs and to find evidence, whether it is directly or indirectly, concerning job satisfaction and staff turnover.

Secondly, interviews were carried out on 5 former bank employees who were made redundant after the financial crisis. Questions concerning their job satisfaction and their voluntary redundancy were carried out in order to accumulate data concerning the research aims.

Thirdly, interviews were carried out on 10 existing bank employees in the area of job satisfaction and staff turnover intentions. In each three research approaches content analysis was used to derive the results.

A main limitation of the research is that the sample for the interviews was small and this may have an impact on the reliability of the results.

The interviews to former and existing bank employees aim to analyse the factors that affect job satisfaction and staff turnover intentions and aim to ask questions concerning the link between profitability with job satisfaction on the one hand and profitability and staff turnover on the other hand. The interview questions were based in part on a survey carried out by Rahman and Iqbal (2013).

4. Results and discussion

4.1 Analysis of financial and non-financial information

The evidence from the three banks' annual reports show that in the past few years, the number of employees in these banks decreased due to various voluntary redundancy schemes meaning there is evidence that job security is a factor in turnover intention. The reasons for former employees accepting the redundancy scheme will be analysed in section 4.2. Details of the voluntary redundancy schemes for the three banks are given below

4.1.1 Bank of Cyprus

During the year 2013, a financial crisis arose due to the collapse of the Cyprus Popular Bank. A deal was carried out whereby the "good" bank, that includes deposits up to € 100,000 and recoverable loans, were transferred to the Bank of Cyprus whereas the "bad bank", that includes deposits over € 100,000 and non-recoverable loans were to be managed by a liquidator. It should be mentioned that to help the eroded capital base of the Bank of Cyprus, a 47.5 % of deposits exceeding € 100,000 were "haircut". In other words there was a bail in. (Yiangou, 2013). This meant that for depositors' savings in excess of € 100,000, 47.5 % were converted to equity at a share price of € 1 per share.

For example if a depositor had € 200,000 of savings at the Bank of Cyprus then € 47,500 would be converted to € 47,500 share of the Bank of Cyprus whereas the value of the deposits would fall to € 152,500.

Due to the above developments, in July 2013 a significant number of the employees who work in the Bank of Cyprus left their work. During this year 1.370 employees have accepted the terms of the voluntary redundancy scheme (See Table 1). According to Bank of Cyprus (2014) this resulted in a reduction in staff costs of the Group in Cyprus by an estimated 25 %. The evidence from the subsequent financial results shows that due to the voluntary redundancies, staff costs have decrease by around € 30 million since 2013.

A further voluntary redundancy plan occurred in 2016 however the evidence shows that staff costs have stayed at similar levels despite these redundancies. In addition despite the voluntary redundancies the group's profitability has not improved and the firm made a significant pre-tax loss in 2017 (See Table 1).

According to Bank of Cyprus (2018) the main cause of the loss was an impairment loss on loans and advanced to customers of € 935 million.

4.1.2 Hellenic Bank

During the year 2013, 170 employees were made redundant through a voluntary scheme. As a result, the number of employees of the Group in Cyprus decreased by about 11 %. Though originally there was a € 11 million reduction in staff costs up to 2016, from 2017 staff costs increased marginally. The firm's profitability has improved from the voluntary redundancy plan (See Table 1).

4.1.3 Cooperative Cyprus Bank

In 2014 and 2016 a number of employees who work in the bank accepted a voluntary redundancy plan. The total of employees who accepted the plan was 297 and 78 respectively.

The firm has reduced its staff costs from the 2013's levels however its profitability is mixed. Its 2017 results have yet to be published and the bank's main shareholder, the Government, had invited public tenders for the sale of the business (in part or in whole). It would appear that the results have been adversely affected by a significant impairment in loans.

As mentioned before, in the year 2018 the bank was rescued by an acquisition by Hellenic Bank of part of its assets and on 3 September 2018 ceased to exist as a bank. The Cyprus Government proposed a voluntary redundancy scheme and significant interest was registered by employees who were interested in accepting this proposal.

Based on the analysis there is weak evidence of a relationship between staff turnover and

Table 1. Financial Information of Cyprus Banks

	2017	2016	2015	2014	2013
Bank of Cyprus:					
Salaries (€ millions)	209	208	214	210	239
Retirement benefit plan costs (€ millions)	18	16	20	24	25
Voluntary exit plans/other termination benefits (€ millions)	1	63	0	13	121
(Loss)/Profit before tax(€ millions)	(478)	86	(389)	1	(517)
Number of employees who left through voluntary exit plan	N/A	426	N/A	N/A	1370
Hellenic Bank:					
Staff remuneration (€ millions)	77	75	75	71	83
Provident fund contributions (€ millions)	5	5	5	5	8
Voluntary exit plans/other termination benefits (€ millions)	N/A	N/A	N/A	N/A	10
(Loss)/Profit before tax (€ millions)	(12)	4	4	(147)	(178)
Number of employees who left through voluntary exit plan	N/A	N/A	N/A	N/A	170
Cooperative Cyprus Bank:					
Staff costs (€ millions)	N/A	95	90	93	112
Provident fund contributions (€ millions)	N/A	4	4	4	9
Voluntary exit plans/other termination benefits (€ millions)	N/A	4	N/A	24	3
(Loss)/Profit before tax (€ millions)	N/A	28	(211)	26	(1695)
Number of employees who left through voluntary exit plan	N/A	78	N/A	297	N/A

Sources: Annual reports between 2013–2017 of Bank of Cyprus, Hellenic Bank and Cooperative Cyprus Bank. At the time of the article the Cooperative Cyprus Bank has yet to publish its annual report for 2017.

the profitability of banks. The profitability of Cyprus banks are significantly affected by other factors such as impairments to their loan advances.

4.2 Analysis of interviews with former bank employees

When asked whether the participants were satisfied with their job all agreed that they were dissatisfied. The main reasons given for their dissatisfaction were as follows.

Firstly all agreed that there was a lack of job security caused by the collapse of the Cyprus Popular Bank and the bail in of unsecured depositors of Bank of Cyprus that saved it from bankruptcy.

A second reason that was highlighted especially from former employees of Bank of Cyprus was that the working environment was terrible due to tensions between the bank's customers

(who lost a significant amount of money due to the bail out) and bank employees. Some participants admitted that it did affect their health.

Finally some also mentioned that they were not satisfied by the work pressures from the superiors that they believe was caused by the difficult conditions their bank was facing.

All agreed that there were positive factors of job satisfaction in their previous employment. The main factor was the attractive basic salary and fringe benefits.

Many admitted that compared to other workers in Cyprus, the banks pay well and offer other fringe benefits to their employees. In addition they were also satisfied with their working hours, with many finishing work before 3 pm.

The response was mixed when asked if they regretted leaving through the voluntary redundancy plan. One participant stated “I was hasty in accepting the plan. The second voluntary redundancy plan was more attractive and I should have waited”. Another participant stated “I do not regret accepting the plan. I am close to retirement and got an attractive package when one considers I will get my pension within a few years”. Another participant stated “I was right to leave. The banks are in a terrible shape. I do not know if they can survive their major problems of high non-recoverable loans.” The main findings from this are that former employees were not satisfied with their employment and accepted the scheme due to a lack of job security and the working environment.

When asked whether job satisfaction has an effect on profitability, the general consensus was that it did not affect profitability. All stated that bank employees are on the whole professional in their job and they did not believe dissatisfaction had a bearing on their performance. Some said that the performance of banks was affected by poor banking decisions that had a negative effect on the results of all banks over the recent past.

When asked whether staff turnover had an effect on profitability, the general consensus was it did not. One participant stated “The banks encouraged voluntary redundancies but their results have not improved. The problem is poor decisions made concerning loans that the banks have yet to deal with effectively”. Another participant stated “The profitability was not affected by staff turnover intentions. Even though there was a lot of unhappiness before the crisis, I believe that the employees would not allow this to affect their work. The bank is suffering from making poor investments decisions in bonds and poor decision concerning loan applications that both occurred before the crisis and if it wants to improve profitability it must find ways of dealing with these problematic loans.”

The main findings from former employees are that neither job satisfaction nor staff turnover intentions have an effect on profitability. There is some evidence to support this from the financial information that show especially for Bank of Cyprus and probably for the Cooperative Cyprus Bank that the financial results have gone worse even after implementing voluntary redundancy plans. Factors such as poor investment decisions and bad loan decisions are more influential in effecting profitability.

4.3 Analysis of interviews with current bank employees

The participants were asked about factors that had a positive effect on their job satisfaction. The vast majority of participants agreed that the basic salary and fringe benefits were positive factors of job satisfaction. However it was noted that employees from Bank of Cyprus and Hellenic Bank were more satisfied with their remuneration package than those of the Cooperative Cyprus Bank. Many admitted that they are at an advantage to many due to the fact that the banks reward their employees much higher than most sectors of employment and offer other

attractive fringe benefits to their employees (such as provident fund contributions, retirement benefits schemes etc.). They were also satisfied with their working hours, with many finishing work before 3 pm.

Another positive factor stated by most of the group was the location of the bank. The vast majority of participants stated that the work place was very close to their place of residence. A few of the participants did state that the location was far from their place of residence however they did state that it was a result of a promotion in which their remuneration increased significantly. For this reason they admitted it had no impact on their job satisfaction.

Concerning the manner in which employees are evaluated, the general view was the banks are in fair in evaluating employees' performance however a number complained about some aspects of this. A participant stated "Due to the problems concerning our bank, the number of employees has decreased and this has resulted in fewer promotion opportunities. Therefore the evaluation process has lost some of its usefulness."

A number of negative factors were identified with job satisfaction. One of these stated by the majority of employees was job security. Most agreed that there was a lack of job security caused by the problems in the banking sector caused by the high amount of non-recoverable loans and the problems carried out from the financial crisis that have yet to be dealt with effectively.

Participants from the Cooperative Cyprus Bank were very concerned about the future of the bank due to the past decision of its main shareholder (the Cyprus Government) to put the business (or part of it) for sale via a public tender. A minority of participants from the Bank of Cyprus believed that job security was not such an issue due to the bank raising capital from the London Stock Exchange. When asked whether a lack of job security would cause them to leave their employment, the majority stated that due to the fact there are few alternatives they would not leave their jobs.

When asked the question of whether they would accept the offer now of an attractive voluntary redundancy plan, the response was mixed. All the younger participants (below 40 years old) stated that they would not accept such plan since it was difficult to find a job that would sustain their present salary. A typical comment is "Unemployment is higher with white collar workers and it's difficult to set up a business in Cyprus." On the other hand older participants stated in the main they would accept such a proposal. A typical comment is "Things are very hard in the bank, the pressures are too much! Since I am getting close to retirement, if a plan came my way and it's attractive, I would take it together with my provident fund from my employment.

A second negative reason for job satisfaction that was highlighted by of Bank of Cyprus was that the working environment was terrible due to tensions between the bank's customers (who lost a significant amount of money due to the bail out) and bank employees. Some typical comments were "Some customers are shouting at us about losing money when the decisions were made at a higher level of management" and "At times I am frightened by the attitude of some customers who are clearly angry with the bank for its previous failings". Many participants admitted that it did affect their health. When asked whether the working environment would cause them to leave their employment, the majority stated that due to the fact there are few alternatives they would not leave their jobs.

When asked whether job satisfaction has an effect on profitability, the general consensus was that it did not affect profitability. All stated that bank employees are on the whole professional in their job and they did not believe dissatisfaction had a bearing on their performance. Some said that the performance of banks was affected by poor banking decisions that had a negative effect on the results of all banks over the recent past.

When asked about the link between job satisfaction, staff turnover intentions and the effect on profit there were a number of different answers. In general the consensus stated that job satisfaction would not have an effect on profitability since the general view was that the employees are professional and would not allow their dissatisfaction to affect their performance. Concerning the link between job satisfaction and staff turnover intentions that majority of participants stated that job dissatisfaction would not cause them to consider leaving the firm due to the lack of alternatives. Concerning whether staff turnover intentions affected profitability, the majority of participants agreed that a number of employees would leave if the firm was willing to offer an attractive voluntary redundancy plan that a number of employees would take it up.

Hence the implication is that if staff turnover intentions if followed up by an offer by the firm to leave would have a negative impact on profitability in the short-term. This is supported by the evidence in Table 1. Concerning the long-term impact on profit there is weak evidence (See Table 1) to suggest that this will result in a positive impact on profitability.

5. Conclusions

The aim of this study was to examine the relationship between the effect on profitability of job satisfaction and staff turnover intentions. Based on the research evidence it is concluded that job satisfaction has little effect on profitability of the banks in Cyprus. It was found that factors such as poor investment decisions and bad loan decisions are more influential in effecting profitability.

It was also concluded that if staff turnover intentions if followed up by an offer by the firm to leave would have a negative impact on profitability in the short-term due to the redundancy costs involved. Concerning the long-term impact on profit there is weak evidence to suggest that this will result in a positive impact on profitability for a number of years.

There is also evidence that the factors that negatively affect job satisfaction are job security and the work environment and these factors may be affecting the health of employees. By implication this could lead to an increase in absenteeism.

The implications of the research are the banks need to find methods to improve job satisfaction and to reduce the likelihood of staff turnover intentions. One recommendation is for the top management banks to improve their communications with employees so that relations improve, job satisfaction is increased and there is a reduction in staff turnover intentions. One area this could be done is in the area of job security.

It is further recommended that the top management introduce measures to improve the working environment (a feel good factor) that based on the evidence is negative. Offering training to employees for their professional and personal development may be one approach to that help this to occur.

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Удовлетворенность работой и движение персонала в банковской сфере на Кипре и их влияние на прибыльность

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Ключевые слова и фразы: банковская сфера; Кипр; движение персонала; удовлетворенность работой.

Аннотация: В исследовании рассматривается удовлетворенность работой и движение кадров среди банковских служащих на Кипре и их влияние на прибыль. Изучены некоторые факторы, которые влияют на прибыльность и уровень удовлетворенности работой, и их влияние на движение персонала банков на Кипре. К числу этих факторов относятся базовая зарплата и льготы; обеспечение занятости; расположение банка и график работы.

Приводятся доказательства влияния удовлетворенности работой на прибыльность. Это свидетельствует о том, что намерения сотрудников, связанные с движением персонала, могут повлиять на прибыльность в краткосрочной и долгосрочной перспективе. На основе проведенного исследования даны рекомендации банковскому сектору по улучшению трудовых отношений и усилению положительного влияния на прибыльность.

UDK 373

Theoretical Analysis of Innovation Policy as an Element of the National Innovation System

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Key words and phrases: innovation; innovation policy; National Innovation System.

Abstract: Innovation policy, especially in a modern perspective, is a key element of the national innovation system. The article discusses the theoretical aspects of innovation policy, situating it as part of the National Innovation System. The role of innovation in the economic policy of the state has been discussed. The contemporary model of innovation policy as part of the innovation system has been analyzed. Some suggestions for decision-makers regarding the prioritization of innovation policy have been proposed.

The concept of the National Innovation System

The concept of the National Innovation System (**NIS**) emerged in the world literature in the late 1980s and took on a mature shape in the first half of the next decade. According to the most classic definition of NIS, it is "a network of institutions in the public or private sector, whose operation and mutual interactions initiate the import and diffusion of new technologies" (Freeman 1987: 1) or "production structure and supporting institutional set-up" (Lundvall 1992: 10).

In the course of the theoretical work on the concept of NIS, the definition of Charles Edquist (2000: 14) seems the most capacious, which interprets the innovation system as "all significant economic, social, political, organizational institutional and other factors affecting development, diffusion or the use of innovation". Edquist points out that currently three types of activities concentrate on innovative systems (Edquist, 2005: 192):

- innovations (product and process innovations), created in innovative companies, leading to the accumulation of structural capital being a kind of "knowledge assets" controlled by companies;
- R&D activities – carried out by universities and research institutes, companies and other types of units related to knowledge;
- building competences (eg. education, training, lifelong learning), supporting the creation of human capital by companies, institutions and individual entities.

The innovative system creates a specific mechanism of connections between these elements and makes their impact comprehensive. It allows, among others, to determine what types of knowledge are necessary to create individual innovations. In addition, it generates close links between its individual elements. These relationships may have a market or non-market

character and operate basically on the basis of the following mechanisms (OECD 2002: 15):

- competition – entities competing on the market create conditions or affect the intensity of innovation;
- transactions – goods and services containing new technological solutions or hidden knowledge are exchanged by individual entities and reach an increasingly broad range of entities;
- networks– allow the transfer of knowledge between cooperating entities, creating long-term relationships.

A compromise was reached on the most important elements of NIS, regardless of the economic context, and the following ones were distinguished:

- innovative companies;
- public and private institutions conducting and supporting research and promoting the dissemination of knowledge and innovation;
- personnel education and training systems;
- financial systems (added later).

Each of these elements requires a separate approach and other indicators for the effectiveness assessment. Used as indicators to measure all NIS components, thus enabling international comparisons, leading to the search for the best NIS, which can be a benchmark for other countries (Patel, Pavitt, 1994). NIS has therefore become a normative tool, with strong policy suggestions, which are also readily adopted by decision makers (OECD, 2002).

The role of innovation policy in the economic policy of the state

Innovation policy is a relatively young field of economic policy. It was not until the 1980s that governments began to use tools directly affecting innovation activity and in the scientific literature there appeared attempts to analyze this phenomenon.

The development of science and technology has a wide dimension, going beyond the economy, and its impact on society is diverse and difficult to measure and evaluate. This also has implications for innovation policy. Since innovations are inextricably linked with entrepreneurship, innovation policy is part of the state's economic policy. However, the relationship between economics and policy in science, technology and innovation is not easy to characterize because of its complexity. The regulations of the innovation policy cannot be based solely on economic rules, but should be inscribed in a broader strategy of economic and social development (Weresa, 2014: 88). Therefore, innovative policy aims at achieving economic or social goals.

Different motives for conducting innovation policy may be indicated, although it is usually justified by the unreliability of the market mechanism, with two conditions being met. Firstly, state intervention may be justified by the lack of possibility or effectiveness of achieving strategic goals through the market, i.e. there is a problem that needs to be solved. Secondly, public administrations should have the ability to solve or alleviate this problem (Edquist, 2000; 2005). Generally, it can be said that this type of policy is to shape the R & D infrastructure, point out key research directions, support the development of scientific staff, remove barriers in the development of entrepreneurship and innovation, and dynamize connections between science, business and the government.

Innovation policy has a wider range of interests and slightly different objectives than scientific and technological policy, as it contains yet another additional component, namely elements of industrial policy. Innovative policy integrates scientific, research, technical and partly industrial policy (Atkinson, Ezell, 2012: 135). The innovation policy aims at organizational and marketing changes as well as introducing new products. It is related to other types of

economic policy: macroeconomic policy, competition policy, as well as many sectoral policies relating to the environment, energy, transport and communication. However, the most important element is the close relationship between innovation policy and scientific and technical as well as educational policy.

A position of innovation policy in the National Innovation System

Most definitions of the concept of the national innovation system include institutions that also consist of regulations related to the design and implementation of innovation policy. Therefore, innovative policy can be considered as an element of the innovation system, not only the national one, but also regional, industry or technological. The state's influence on the decisions and behaviors of entities operating within the innovation system may take direct form, i.e. by means of regulations concerning the research sphere, entrepreneurship, etc., as well as an indirect form, including by influencing other spheres, e.g. the labor market or education (Weresa, 2014: 84).

Innovation policy affects not only the private sector but also the entire system, according to the Triple Helix concept, developed in the 1990s by Henry Etzkowitz and Leot Leydersorff (Etzkowitz, Leydersorff, 1996). This model presents innovativeness in the form of a spiral, which includes interconnections and feedback, occurring in a given institutional environment between three groups of entities involved in creating and spreading innovation, representing the sectors: science, business and government administration (Etzkowitz, 1998). The role of innovation policy is emphasized in particular in the evolutionary understanding of the Triple Helix model, in which the governmental sector plays a key role, setting the normative framework of action of both other spheres and their interactions (Leydesdorff, Meyer, 2006).

In summary, it should be pointed out that innovation policy combines elements of economic, technological, educational and infrastructural policy. Bengt-ÅkeLundwall emphasized its special role in innovation systems, pointing to the need to coordinate innovation policy with other trends in economic, social, educational policy, etc. (Lundwall, 1999).

The contemporary model of innovation policy as part of the innovation system

All innovation systems are embedded in the wide world economy and are influenced by international forces and links. Globalization strengthens the need to conduct innovation policy. Researchers and entrepreneurs, operating in an international environment, must demonstrate flexibility and adapt smoothly to rapidly changing institutional and market conditions. In addition, innovative activities and technological changes are burdened with additional risk and uncertainty in the conditions of globalization resulting from the functioning of not only companies, but also universities and research units on international markets. Such a phenomenon makes it necessary to redefine innovation policy as part of the contemporary innovation system and requires the direction of public administration activities that creates and leads this policy to adapt the innovation system to the rapidly changing external conditions.

The role of contemporary innovation policy will therefore consist in shaping the national and regional framework that fosters the adaptability of companies and scientific units and enable them to effectively use the opportunities offered by globalization. This means that the core of modern innovation policy are activities focusing on those elements of the innovation system that prevent integration into internationalization processes. In particular, it would mean supplementing the missing institutional elements in the innovation system to increase the ability of companies

and researchers to operate in a global environment (Edquist, 2005; Weresa, 2014).

Changes in the system of creating and transferring knowledge determine the direction and dynamics of the evolution of innovation policy. In contrast to traditional policy, oriented at the development of institutions directly involved in research and development, contemporary innovation policy is focused on developing people's knowledge and skills by supporting cooperation between different environments. This means actions towards the integration of innovation systems, aimed at creating structures that combine many disciplines of science. Such structures enable the diffusion of knowledge between various fields of science and between the sphere of research and implementation. In a modern approach to innovation policy, public support shifts from stable organizational structures of innovative units to flexible and variable forms, which is to stimulate continuous communication of researchers, sharing knowledge and experiences (Weresa, 2014: 97).

Conclusions

Innovation policy, especially in the modern sense, is a key element of the national innovation system. Innovation policy, which is a kind of public policy, has many opportunities for intervention and many tools it can use. In addition to increasing public R&D and innovation spending, there are several mechanisms to stimulate private spending, such as tax reduction or accelerated depreciation rules. Instruments directly supporting the development of young technology companies may be introduced, that stimulate the development of venture capital funds (private equity, venture capital, angel investors) and pro-innovation structures: business incubators, technology parks, clusters or network connections.

At the end of these considerations, however, it is worth emphasizing that there is not one unique model of innovation policy that would be appropriate in all cases. There is not one, the best model of innovation policy that would work in every country. And even in the same country, as a result of changes in various conditions, also innovation policy must undergo the process of adaptation. Innovation policy must take into account a wide range of factors, depending on the national, cultural, social or organizational context.

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Теоретический анализ инновационной политики как элемента национальной инновационной системы

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Ключевые слова и фразы: инновации; инновационная политика; Национальная инновационная система.

Аннотация: В современных условиях инновационная политика является ключевым элементом национальной инновационной системы. Рассмотрена роль инноваций в экономической политике государства. Проанализирована современная модель инновационной политики как части инновационной системы. Внесены предложения по принятию решений в отношении приоритетности инновационной политики.

UDK 37

Educational Opportunities of the University in Professional Talent Management

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Key words and phrases: teacher talent education; professional attempt;talent management.

Abstract: The aim of the article is to revise the educational opportunities at university in the professional talent management. The objectives include the analysis of the university educational programs and revision of management of the talented students. The article is based on philosophical, sociological, psychological and pedagogical literature on the research topic.

The main priorities in talent management are the educational opportunities of the university. The researches A. Rappaport, G. Shedrovitskiy, V. Sidorenko, E. Sidorina, O. Genisaretskiy, V. Glazychev proved the urgency of the research [1]. The student's class activity and management of students' scientific research are referred to the educational operations which can provide diversification. The research work contests are held by the university and these contests are not only regional but also All-Russian and international. In the framework of the implementation the different federal and regional programs, the research conferences are arranged, student's research exhibitions and the best student's work contest are held. The named forms to boost talents are specific and they are reflected in informative and organizational aspects. In this context, university is the main organizer of these events. The strong sense for the boost and development of the professional talent in the university educational environment matters the scholarship system, contests and various awards. Consequently, the talented students have a possibility not only to develop their scientific capability and creativity but to get financial commitment [2; 3].

The analysis of the educational possibilities in the field of talent and development management makes us rethink student's class activities, which are aimed at training high quality professionals. Therefore, the organization of the educational process at the university aims to:

- develop new technologies to spot and select talented student;
- provide tutors' and graduates' support for talented students, candidates and young talented teachers is provided;
- design advanced tasks for self-guided work;
- ensure collaborative development of the academic "teacher-student"programs;
- offer the newest technology in the educational process;
- organize and revise the substantive aspects self-guided work;
- develop and provide optional courses to reveal talented students' skills;

- to use various methods, including project-based learning, task-based learning, interactive lectures, etc.;
- participate in the Russian and foreign books fairs;
- use digital technologies in teacher education;
- provide additional training and re-training to university teachers;
- organize advanced foreign education with the help of additional courses;
- ensure the development of academic mobility not only for teachers but also for students;
- to engage talented students in the education quality control;
- to engage talented students in research and development;
- organize scientific and practical work with talented students to increase their motivation;
- develop the university scientific infrastructure;
- support talented students involved in international research;
- establish the student"government" to enhance self-starters and independence;
- support the social initiative of the students;
- enhance various university programs to help develop the leadership;
- provide background to develop artistic and creative abilities of students.

Consequently, the above mentioned points of the educational process development in the university allow educating, guiding and developing professional talents of students at the university.

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Образовательные возможности университета в сфере управления профессиональными талантами

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Ключевые слова и фразы: педагогическое образование талантливой молодежи;

профессиональное обучение; управление талантами.

Аннотация: Цель статьи – пересмотреть образовательные возможности университета в области управления профессиональными талантами. Задачи исследования включают анализ университетских образовательных программ и переосмысление специфики работы с талантливыми студентами. Статья основана на философской, социологической, психологической и педагогической литературе по теме исследования.

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Speech Culture of Pedagogical Communication Tolerance

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Key words and phrases: pedagogical communication; speech culture; tolerance; tolerant consciousness.

Abstract: The paper focuses on the problem of speech culture of pedagogical communication tolerance manifested in the desire to improve their speech skills such as the ability to maintain conversation,show interest and be actively involved in communication, focus on feedback, tune in to productive speech interaction. The communicative and culturological approach makes it possible to form a speech culture by teaching all types of speech activity, which should take a proper place in the educational process of higher education institutions, where the teacher is an example of a culture of speech pedagogical communication. The criteria for the formation of the speech culture of the teacher's tolerance include emotionality and expressiveness, knowledge of generally accepted standards of communicative behavior, knowledge of the attributes of pedagogical communication, knowledge of the norms of the modern Russian literary language; the ability to use in the process of professional communication various forms and methods of verbal and non-verbal communication, the ability to relate the language tools to the tasks and conditions of pedagogical communication. Speech culture forms a professional culture of the teacher, which becomes an example of genuine professional communication.

The term "tolerance" which comes from the word meaning "to tolerate", "to endure", "to bear"is often used in modern pedagogical community. In linguistic dictionaries "tolerance" is defined as the ability or willingness to tolerate the existence of opinions or behavior that one dislikes or disagrees with. According to Prof. I.A. Sternin, the significant features of the Russian mentality (**RM**) are: the tendency to bipolar, black-and-white thinking (someone who is not with us is against us); dislike of compromises as a manifestation of the lack of principles; dislike of everything that is average (if someone runs with the hare and hunts with the hounds he is a bad person) [6, p. 7].

In the area of communicative tolerance we can speak about its different types: political; scientific; domestic; medical; ethnical; cultural, etc.; pedagogical tolerance is tolerance for your

own children and students, the ability to understand and forgive their shortcomings.

All kinds of tolerance have two aspects on the subject of its demonstration: behavioral (activity)and communicative. Hence, we can speak about communicative tolerance, which is seen in communication and behavioral tolerance which is seen in activity. According to the definition given by A.A. Leontiev the optimal pedagogical communication is such communication of a teacher or teachers' team with the students in the process of teaching that creates the best conditions for motivation and creative character development in academic activity, for a proper student's personality formation and allows using a teacher's personal characteristics at most [4, p. 20].

Pedagogical tolerance is a positive moral quality of a teacher's personality consisting of a value-based mental attitude to tolerance for another people's opinion and behavior.

A tolerant teacher (interlocutor) is polite, educated, tactful, understanding, friendly,calm,reserved and intelligent. He is a good listener, he can argue and agree, he has good manners and does not impose his point of view. Indirect signs can be described as follows: easy to communicate, frank, sincere, cheerful and optimistic [6, p. 21].

For modern Russian thinking in general attitudes of tolerance are weakened. Russian thinking is more accustomed to irreconcilability, disputes, collision of views and so on. This leads to conflicts, inability to compromise and to achieve cooperation, which in the public sphere often leads to a split of the society (political non-tolerance), official and domestic conflicts (families, working teams, quarrels in public places, domestic aggression), envy and non-tolerance towards some social groups in the society (entrepreneurs, homeless people, refugees), etc. All above-mentioned takes place against the background of high sociability, emotionality, communicative contact and sincerity of the Russian people.

The category of tolerance in the Russian consciousness is formed due to special features of academic, propagandist, cultural and educational nature [2, p. 12]. A special role belongs to a speech culture as an important area of linguistics, which is necessary to watch the interests of the literary language and, therefore, the national interests. In all developed and developing countries that are attaining their national self-consciousness cultivation of the literary language is one of the national tasks of higher priority.

When talking about the speech culture in communication, it usually means following the standards of the literary language,and having speech without mistakes (proper stress, prescriptive collocations, etc.). Following the standards and the rules is obligatory, but there should be the choice and organization of linguistic means, which provide the greatest effect in achieving the communicative tasks, set in a particular situation of pedagogic communication while keeping up the language standards and communication ethics [7, p. 36].

Thus, in addition to a normative component the concept of speech culture also includes ethical and communicative components. Ethics of communication forbids, for example, foul language, and regulates the forms of addresses and so on. The communicative component of speech is clearly and briefly defined by a well-known linguist G.O. Vinokur. For each purpose there should be special means, this must be the slogan of a cultural society in a linguistic way [1, p. 28].

For the texts with different purposes (functional orientation) there are their own patterns of construction. It is necessary to know them for the culture of functional language varieties. The ability to use all the functional varieties of a language, to move freely from one to another is inseparable quality of the speech culture of pedagogical communication. Having this ability a teacher as a native speaker of the literary language differs from other people's language who speaks in one and the same manner in all communicative situations.

A significant role of the communicative component for speech culture has been emphasized by a Czech linguist K. Hausenblas saying that using nonliterary language one can speak both in a civilized manner and in an absolutely uncivilized one. “There is no paradox about the fact that one is able to speak on the same topic using non-literary language and look more polite than someone using a literary one” [3, p. 301]. It should be noted that demonstration of tolerance is not restricted by an educational institution as it is placed in a larger social environment and its factors are less available for pedagogical influence [5, p. 121].

On the one hand, this environment “contains” many positive examples of real tolerance (in multicultural environment, particularly, in a multiethnic and multi-confessional ones). On the other hand, there are more negative objects that require tolerance and that are different in content and character,in value and significance, as well as in the strength of the “stimulus”.

Identification of national, social, gender, age specific features of speech tolerance in pedagogical communication will allow to formulate concise approaches to the formation of attitudes of tolerant consciousness through learning to communicate.

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Культура речи толерантного педагогического общения

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Ключевые слова и фразы: педагогическая коммуникация; речевая культура;

толерантное сознание; толерантность.

Аннотация: В представленном материале рассмотрена модель речевой культуры толерантного педагогического общения, которая проявляется в стремлении улучшить свои речевые навыки: умело вести диалог, поддерживать интерес и активность собеседников, сосредоточиться на обратной связи, настраивать на эффективное взаимодействие речи. Коммуникативный и культурологический подход позволяет формировать речевую культуру путем преподавания всех видов речевой деятельности, с учетом места и значимости данной дисциплины в учебном процессе высших учебных заведений, где учитель является примером культуры речевой педагогической коммуникации. Среди критериев формирования речевой культуры учителя мы выделяем: эмоциональность и выразительность, знание общепринятых стандартов коммуникативного поведения, знание атрибутов педагогического общения, знание норм современного русского литературного языка; способность использовать в процессе профессионального общения различные формы и методы вербальной и невербальной коммуникации, способность связывать языковые инструменты с задачами и условиями педагогической коммуникации. Речевая культура формирует профессиональную культуру учителя, что становится примером подлинного профессионального общения.

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