

## Improving public administration performance demands investment in human resources\*

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### *Abstract*

*The paper emphasizes that investments in human resources are one of the important factors for improving public sector performance. In strategic papers of Slovenian government and during the reform process of public administration, government stressed out that human resources are one of the most important factors for improving performance. This is originating point of research. The main hypothesis of presented research is that investments in human resources improve efficiency and effectiveness of public sector. For several reasons explained in the paper, tax administration was chosen to test the hypothesis. We used a number of training participations per employee as an indicator of investments in human resources. For determination of efficiency and effectiveness, we used selected performance indicators and survey among taxpayers about their satisfaction. The main obstacle of the research is that not long-time series are used for better test of hypothesis since surveys among taxpayers are not regular. The results indicate a positive correlation between training and performance indicators and training and taxpayers' satisfaction.*

**Key words:** public administration performance, human resource development, training, tax administration, Slovenia

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## 1. Introduction

Society is undergoing rapid change and one manifestation of this is the public desire to be better informed about the work of the public administration. This is matched by a demand for greater employee autonomy within the public administration and for cooperation in the management of its organisational units. Every organisation functions well only where people or employees adequately stimulate its activities. The success and development of the organisation depends on their activities. A study of human resources management reduces the obscurity with respect to qualities, capabilities and capacities of employees and points out the need for continued study and development in this area. The effectiveness of the public administration is generally due to the professionalism and understanding (or lack of these) for the operational methods of the most sensitive part of the state system as a whole – the parts that relate to leading, directing, planning, organizing and supervising the state's main activities. The development of the modern public administration system must take into account developments in modern human resources. This approach must cover both internal and external factors.

In the public administration (as in private sector) human resources are a fundamental and decisive factor, regardless of whether one is discussing private organizations, or public and central government organizations. These organizations, however well they are organized otherwise, will only function if their peoples are prepared to support their actions. Their actions also depend on the successful performance of the organization in public administration.

We can conclude that this is also true in practice in Slovenian public sector, despite the fact that there are no empirical evidences. On the base of intuition, general public opinion, and descriptive knowledge of reality can be used to verify that human resources are important factor of successful performance. The main goal of presented research was to empirically investigate one factor of efficiency, which depends on investment in human resources. We tried to analyse if there is any dependency between training of employees and performance in public sector measured by citizens' satisfaction. It is ambitious and original approach of this important issue. Nevertheless authors could not find similar researches in literature studied during the research. Therefore one of the lacks of the research results is that no comparisons were made. We presented some similar researches but they could not be directly compared.

The paper presents research results on testing influence of public servants' training on work efficiency e.g., performance. In the research, presented in the paper, we tested two hypotheses:

- the increase in the number of employees who were included in education/training in year  $t$ , will improve the administration's performance indicators in year  $t+1$ ;

- the improved performance indicators influence citizen satisfaction.

After introduction, the paper presents some theoretical and partly empirical background of importance of investments in human resources in public sector and its performance. After that we present methodology. Further on some developments of public sector in Slovenia are explained and before conclusion research results are presented. The conclusion includes some recommendations and potential areas for further research.

## **2. Investment in human resources and their importance for better performance**

Different authors describe the subject of human resource management differently. Human resource management is a part of the process that helps an organisation attains its goals. Price (2004: 558) describes human resource development (HRD) as a strategic approach to investing in human capital. It draws on other human resource processes, including resourcing and performance assessment, to identify actual and potential talent. HRD provides a framework for self-development, training programmes and career progression to meet an organisation's skill requirements.

The complexity of HRD as a discipline and as an organizational activity can be seen in the numerous approaches used in defining HRD. Definitions it can be seen either as a performance-driven aspect of human resource management, as a learning and development-driven field of adult education or as an occupational growth-driven field of (mainly continuous) vocational education and training in various workplace contexts. Furthermore, interpretations given of the aims and methods of HRD function vary according to the stakeholder group in an enterprise, e.g. managers, workers and labour unions do not necessarily come to a common understanding of the aims of HRD. This complexity brings with it a number of factors relating to questions of how to identify what is expertise in HRD work, how it is constructed in organizations and by the practitioners themselves, and what can be expected from an expert's performance in the field (Valkeavaara, 2000: 254).

Human resource development professionals claim to be concerned with the thoughtful application of tools and interventions that can have a positive impact on the lives of organizational workers, managers, executives, communities and nations. Are they also concerned about the manner in which such beneficial practices might be carried out in the future? In a world of increasingly rapid change, scenario planning has emerged as a tool for considering multiple plausible futures, embracing multiple differing views on what 'better' futures might and 'should' look like. The are the following five key connections between HRD and scenario planning: (1) increased knowledge about scenario planning can leverage HRD to become a shaper of business

strategy; (2) implementation of actions resulting from the scenario-planning process often require HRD expertise; (3) the connection between scenario planning and organization development or change efforts implies a domain of HRD; (4) the theory of the scenario-planning process can benefit from learning expertise in HRD; and, finally, (5) scenarios were advocated to consider the future of HRD itself (Chermack, 2004: 117).

Human resource development is under the influence of two factors: internal and external. Internal factors in the human resource development system depend on various actions ongoing within an organization and are directly connected to changes in conditions within that organization. The changes are generally caused by changing organizational, informational and/or technological processes or changes in ownership conditions, the composition of the human resource development system within the public administration, as well as, importantly, the political climate. Political conditions have a significant impact on the formation of human resource development in the public administration (Brejc, 2004: 232-243). The external factors include the general political environment, the economic system, the technical and technological development of society, demographics, social factors, and the culture in general.

Human resource development systems involves a whole range of activities, from gathering information for staff development purposes, to preparations and subsequent implementation of human resource development activities, to the evaluation of the results achieved. A human resource development system must be a long-term, systemic and target-oriented process, harmonized with current and future demands of work. The objectives of a human resource development system must be related to the continual professional, personal and working development of each individual. This means that the optimization and modernization of work processes and procedures alone is not enough. There is also a need for the development and allocation of employees (employees' competences), ensuring that each individual can make their anticipated contribution to the work process.

A wide range of views have been expressed on human resource development in organizations. Dauphin and Starbird (1996) consider that the main reasons for staff development are:

- creating conditions to increase an organization's effectiveness and competitiveness;
- gaining highly-motivated staff;
- achieving suitable human resources to introduce and implement new programs;
- increasing skills required to use the organization's available technological resources;
- ensuring rapid and suitable replacements for any staff that leave the organization.

A suitable approach to human resource management allows easier cognition, forecasting and directing of the behaviour of people and the manner in which they react. All this is carried out with the purpose of assuring greater thoughtfulness, motivation, creativity, success and effectiveness of individuals at work and, indirectly through this, raise the success, effectiveness and competitive advantage of the organisation. The stated goals should also be set in local government where the deciding factor is the employees.

The fundamental principle of human resource development is that it goes further than piecemeal training. Human resource development should be part of a planned and systematic process in which (Price, 2004: 574):

- competencies or capabilities are identified by a performance management system;
- there are matched with need specified by the human resource strategy;
- gaps are addressed by the development programme.

“Contemporary public administration is inherent of reform changes and innovations. Striving for solution to complex problems in Central and Eastern European countries, the main focus should be laid on improvement of state structures efficiency, government bodies’ stability and increment of professionalism and accountability of human resources in state institutions. Human resources system is concurrent with establishment of new quality since the aim of the latter is to create an integrated and well-manageable system of central and local government human resources and to ensure expansion of the system as well as action programmes related to it... Public servants training is one of the means improving public administration and enhancing continuous policy on public staff training, which aims at ensuring implementation of objectives set to state and self-government institutions (further-institutions)” (Chlivickas, 2003: 1).

The systematic training model assumed an organisational environment based on slow change, hierarchical lines of authority and clear requirements. It was a logical series of steps centred on the use of an objective training needs analysis. Normally, this would take the shape of an empirical exercise to identify current needs but bringing in the organisation’s objectives for consideration. It provided a framework within which the trainer could ensure a thorough and “professional” job. However, it required a methodical and time-consuming series of activities than do not fit in so well with modern organisations (Price, 2004: 585). Swanson and Arnold argued (1996) that the purpose of HRD is to improve performance. This view is founded on the premise that HRD, when practiced in productive organizations, should strive to contribute directly to the organizations’ performance goals.

## **2.1. Human resource development and performance**

The systemic organization of human resource development is well organized, but testing its influence on efficiency and effectiveness in practice very diverse. In some cases of public administration operation, the effect of training on operational efficiency is tested using Kirkpatrick's four-level model for assessing training efficiency, which includes assessments of the training provider and content, the usefulness at work of the knowledge acquired, and the impact of the new knowledge on operating results. Kirkpatrick's four-level model for evaluating training efficiency is based on (Reichmann, 2004) participants' reaction on implementation, the increase in knowledge, the application of new knowledge in practice, and the impact of new knowledge on organizational performance. The Kirkpatrick Model for Summative Evaluation is based on four levels (Kruse, 2008):

- In first level (Reaction), students are asked to evaluate the training after completing the program. These are sometimes called smile sheets or happy sheets because in their simplest form they measure how well students liked the training. This questionnaire moves beyond how well the students liked the training to questions about: the relevance of the objectives, the ability of the course to maintain interest, the amount and appropriateness of interactive exercises, the ease of navigation and the perceived value and transferability to the workplace.
- Level Two in the Kirkpatrick model measures learning results. In other words, did the students actually learn the knowledge, skills, and attitudes the program was supposed to teach? To show achievement, have students complete a pre-test and post-test, making sure that test items or questions are truly written to the learning objectives. By summarizing the scores of all students, trainers can accurately see the impact that the training intervention had. This type of evaluation is not as widely conducted as Level One, but is still very common.
- Level Three evaluations attempt to answer whether or not students' behaviours actually change as a result of new learning (Behaviour in the Workplace). Students typically score well on post-tests, but the real question is whether or not any of the new knowledge and skills are retained and transferred back on the job... Ideally, this measurement is conducted three to six months after the training program.
- The fourth level in this model is to evaluate the business impact of the training program. The only scientific way to isolate training as a variable would be to isolate a representative control group within the larger student population, and then rollout the training program, complete the evaluation, and compare against a business evaluation of the non-trained group. Unfortunately, this is rarely done because of the difficulty of gathering the business data and the complexity of isolating the training intervention as a unique variable.

Up to date in Slovenia the Kirkpatrick Model was used in public administration only in one Administrative Unit (see Grah, 2005). Attempt was to use results as an example of defining the impact of training on work output. The effects of acquired knowledge were tested using the Kirkpatrick methodology, and the score was based on the opinions provided by the line managers of those employees involved in the learning process, the employees themselves, and also users. The score was compiled on the following basis:

- opinions on the adequacy of the training, from the line managers of the employee/students;
- opinions on whether the training was adequate from the employee/students;
- user-satisfaction surveys and
- tests of knowledge for employees providing services.

Other research relating to human resource development in the Slovenian public administration has critically assessed employment development and development actions, and particularly emphasized the adequacy or, more often than not, the inadequacy of education and training provision, assistance to subordinates in career development in terms of achieving an impact on work (Stare, 1999). The research has also emphasized the issue of employee development, which in the case study in administrative units (Stare, Seljak, 2005) was given a score of 2.94 on a scale of 1 to 5. Similar results can also be found from the evaluations gathered with the CAF, where the set of criteria relating to career satisfaction and skills development (Criterion 7 - results for employees) gave a relative low score on the comparative European level. On a scale of 0 to 5, the average scores in 394 organizations from 24 countries (EIPA, 2005) range from 2.6 (in 2000) to 1.9 (in 2002), which indicates the major deficiencies, and the great potential for improved work efficiency that human resource development offers.

## **2.2. A selection of research in other countries**

The similar research or methodology to correlate investment in human resource and performance in public administration in other countries to the presented in the paper was not found in revised literature. Nevertheless several reports are available about investment in human resources and its influence on performance. Training and education have been put forward as an important element of improved public sector performance also in other researches:

- Australia: the research was conducted to examine how to manage human resources for better outcomes in public sector. Results showed that workforce planning, performance management and organization development are the three most critical fields to be more successful. Training can be important for

development of performance-based culture among employees, but training was not determined as separate field (Australian National Audit Office, 2002).

- Singapore: the Inland Revenue Authority of Singapore reengineered its organization to achieve better performance. One of the measures was training and participation in effectiveness courses. The results of the whole reengineering resulted in better performance and better customer satisfaction (Kien Sia and Siong Neo, 1998).
- Ghana: Analoui (1999) in his study about public sector stated that almost all departments and organizations considered training as one of the most important factors in increasing effectiveness.
- UK/Ireland: the government mentioned that results found in private sector could be useful also for public sector. The research identified that HR policies are seemed particularly influential in helping to generate organisational commitment, which is important for better performance. The key policy areas, in descending order of importance, were: career development, training opportunities, job influence and challenge, involvement, appraisal processes and work-life balance (O’Riordan, 2004: 22).

It is obviously that theory put great emphasis on HRD for organizations. The research try to follow these findings, nevertheless it should be pointed out that selected performance indicators are not influenced only by investments in human resources. There are several other factors that improved performance of public sector in Slovenia, i.e. EU accession, economic growth, growing use of IT etc. Therefore we must take all these into consideration when we explain research results.

### **3. Methodology**

The aim of the research was to indicate that the reform towards public sectors’ performance improvement needs investments in human resources. The authors’ intention was to demonstrate whether development and investment in human capital also had an impact on public sector performance and citizens’ satisfaction.

Since performance measurement in Slovenia is being introduced to the public administration on a gradual basis, most of the public administration has only recently introduced indicator-based reporting. On the other hand, user satisfaction, measured by the “barometer” survey, was initially only used in administrative units, and has only spread to other parts of the public administration in the middle of year 2006, meaning the data it produces are insufficient for this analysis. This led to the selection of the Tax Administration of the Republic of Slovenia (TARS) as the example of public administration. A TARS in recent years has paid increasing attention to

training its employees. Furthermore, since 2000, it has used a set of indicators to measure efficiency and effectiveness and has published them in its annual reports. An additional reason for selecting TARS is that in 2000, 2002, 2004 and in 2007 the surveys among taxpayers to evaluate the work of the tax administration as perceived by the users of its services. The sample includes taxpayers liable for income tax, value added tax, and corporate income tax, as these taxpayer groups represent almost the entire population in contact with the TARS. The major deficiencies of data collection were that in each mentioned year different sample was used, as well as determination of the sample.

To test the research hypotheses that investments in human resources improve efficiency and effectiveness we collected data from two different resources: from TARS' annual reports and from survey results about taxpayers' satisfaction. As indicator for the investment in human resources the number of training participations per employee was chosen. We did not use the costs for education since several trainings are free of charge or are part of twinning projects etc., therefore costs are not the best indicator of investment in that case. The drawback to the analyses presented was the short measurement period for all the selected indicators. Initially Pearson's correlation coefficients were used to test hypotheses, i.e. the correlation between training and performance indicators at the TARS and training and taxpayers' satisfaction.

### **3.1. TARS performance indicators**

In its annual reports the TARS publishes several groups of indicators, divided into six basic categories: taxpayer register, public revenue collection, enforceable collection, resolution of appeals, inspection (tax audit) and cost efficiency (see TARS Annual Report, 2000-2005). For the purpose of this analysis, the authors selected indicators they considered to be dependent on employees and their performance. The analysis therefore included three indicators: costs per employee, value of additional liabilities discovered by inspection, and number of documents processed per employee. Number of appeals per employee as important indicator was excluded for one reason: Slovenia was going through several tax changes from 2004 every year. Therefore tax appeals increased significantly for those taxes with major changes and can not be used as relevant indicator of efficiency in the period for which the analysis was done.

The selected indicators do not only depend on employee work performance, as they are also affected by other factors, such as the number of taxpayers, frequency of tax return submission, etc. Nevertheless, it was assessed that successful employee performance is a significant factor influencing the selected indicators. Taking this drawback of the research, the results are only an indicator of possible influence of investment in human resources to performance of tax administration. The impact of employee training on the educational qualification structure of employees was also measured, in addition to these four indicators. Cost efficiency is common indicator

of good performance but in this case the more employees are trained the higher are their education and the costs for wages increase. The research results indicated that cost efficiency even decreased as a result of investments in human resources.

As already mentioned employee training was measured with the number of participations in training per employee. To exclude the influence of the number of employees on the results of indicators, all indicators were measured on a "per employee" basis.

### **3.2. Taxpayer satisfaction**

Data on taxpayer satisfaction was acquired by surveying taxpayers from all three taxpayer categories mentioned above. For three consecutive years (2000, 2002 and 2004) we used the same questionnaire, which included seven statements (listed below) relating to TARS operations, which the respondents evaluated on a scale of 1 (do not agree) to 4 (completely agree). In 2007 some additional statements were added but only those seven as in previous years were used for the purpose of presented analyses. The taxpayer statements were related to the following areas of TARS operations:

- A efficiency of tax supervision
- B duration of procedures
- C organization of data register
- D informing taxpayers of their liabilities
- E notifying taxpayers of new and amended requirements
- F advice and assistance with queries
- G work performance.

In year 2000 the survey was done among personal income taxpayers and VAT taxpayers. The sample included 750 VAT taxpayers and 350 personal income taxpayers. The questionnaire was sent by post to VAT taxpayers and response rate was low as usual for mail surveys (11%). We additionally interview 21 taxpayers. The final number of used answers from VAT taxpayers is 104. To gain better response rate the decision was made to interview half of the sample of personal income taxpayers and use mail survey for other half. Final number of responses used in analysis was 226. As both group of taxpayers evaluated the same seven statements the total number of used responses was 330.

In 2002 the postal survey was used among corporate income taxpayers and employers eligible for paying social security contributions. This group included also VAT taxpayers and personal income taxpayers, since companies and self-employed persons are eligible for VAT and social security contributions. A random sample of

200 taxpayers was selected from taxpayers' register. The total number of respondents was 126.

In 2004 the mail survey for VAT taxpayers was used. A random sample of 500 taxpayers was selected from taxpayers register (50.8% of companies and 49.2% of entrepreneurs). The proportion between of each group of VAT taxpayers was determined by proportion in total population. The response rate was low (14%) but it was higher than in year 2000. The total number of respondents was 69.

In 2007 separate survey for personal income taxpayers and companies was done. The survey among personal income taxpayers was done online and the link was presented on web pages of TARS, Ministry of Public Administration and Faculty of Administration. Online survey was answered by 417 respondents. Additional 22 taxpayers were interviewed. Among companies the random sample of 323 taxpayers from register was selected. Since we used personal contact with companies the response rate was higher and 128 companies agree to fulfil the questionnaire. The total number of responses for year 2007 included in the research was 567.

For all years included the sample of companies was defined in relation to taxpayers' size by turnover, while the sample of personal income taxpayers was not specifically structured, as data on income taxpayers is confidential.

In different years the different number of responses was included in analysis but for the purpose of the research only an average score for each statement per taxpayer was necessary. Therefore the total number of respondents is not determining factor. The different structure of surveyed population is more important if the score significantly differ among different groups of taxpayers (persons and companies). To exclude this drawback of analysis we compare all groups of taxpayers in each researched year and there was no significant difference between groups.

#### **4. Public administration and measurement of administration performance in Slovenia**

The public administration (sector) reform in Slovenia started in 1996 and included different changes towards effective and competitive governance system. The performance measurement of central and local governments was one of key issues of the reform. The quality of civil services, cost efficiency, performance budgeting, and citizen satisfaction measurements have become an important part of public sector performance. Several ideas, measures and changes could not take place without a change in the mindset of civil servants, who have to become more user-oriented and less bureaucratic. Education and on-the-job training are therefore important elements in implementing the reform process. The Slovenian government is aware

of the importance of the knowledge for effective administrative performance and has therefore included provisions on responsibility for education and training and upgrading civil servants' knowledge in the Civil Servants Act. The Government's Strategy on Education, Training and Upgrading the Knowledge of Public Officials 2006-2008 states: "... the officials employed in the public administration are its main assets and it is essential to invest in them to achieve further success... It is therefore of essential importance that public officials are provided with systematic, permanent and accessible modes and sources of upgrading their professional knowledge as well as strengthening of skills for administrative work."

The growth in public spending throughout the post-second world war period, and the increase in central government debt was the main reason for questions being raised about public sector efficiency. While market forces drove the private sector to improve competitiveness in order to further its existence on the market, the public sector used more and more funds, until cost efficiency became a vital issue for the public sector as well (Lane, 1997).

The need for a modern public administration launched numerous reform processes in a large number of countries. The main objective of most of the reforms was to reduce public spending, while maintaining the same level of services, and improving service quality and efficiency. Above all, it involved a focus on results and users, the reengineering of working processes, new organization, new forms of leadership, elimination of bureaucracy, increased autonomy, demarcation of responsibilities, promoting competition, and increasing efficiency and effectiveness.

Most theoreticians agree that a change occurred in the way the public sector worked, in parallel with the reforms. This change involved a new emphasis on the responsibility of the state towards the public – its citizens. The consequence of these changes was an emphasis on human rights and ensuring transparency of government actions. One further characteristic of the reform must be mentioned, and that is the desire to change the working culture of the public sector in order to reposition change the attitudes and status of public officials, who have been accustomed to playing a bureaucratic role. The move towards assuming responsibility should reduce the probability of official exploiting their status, and facilitate the improvement in the attitude to users of public services.

An important step in developing quality, efficiency and effectiveness at the central government level in Slovenia was developed in 1993, when the National Quality Program for the Republic of Slovenia was produced as the key benchmark document for quality. In October 1996 a document was adopted entitled Central Government Quality Policy, and in March 1999 the Quality Committee was established in the then Ministry of the Interior, the aim of which was to improve efficiency and effectiveness in the public administration, and increase user and employee satisfaction.

In 2001 an important step was taken to improve quality. The Decree on the Method for Public Administration Dealings with Clients (Official Gazette of the Republic of Slovenia, No 22/2001) introduced one of the main measures in the field of quality in the public administration. In 2005 the Decree was replaced by the new Decree on Administrative Operations. The Decree included new standards for dealing with clients or users, which bring together the best practice of bodies that, have already attempted to reach standards of operational excellence. An administrative inspectorate was introduced to ensure the decree was enforced, and in addition to that introduced a new feature requiring compulsory annual measurement of user and employee satisfaction, using a standard methodology. In 2001 these standards were piloted in 14 administrative units, and since 2002 the decree has been enforced in every body of the public administration.

As an EU member state, Slovenia also has the assessment framework adopted at the EU level available. More and more public administration bodies in Slovenia are attempting to acquire the ISO 9001:2000 quality certificate. By 2003, 30 agencies had acquired the certificate and the number continues to increase. Since 2002 the common European assessment framework has been applied to public sector organization – CAF, which is based on the EFQM model. To date it is used by over 80 agencies.

Slovenia's public administration is undergoing transformation and modernization. We have witnessed the fact, unexpected for some, yet predicted by others, that most of the problems which arise in modernizing public administrations are connected to human resource development. These include the urgent need to increase employee competence, resolving the failure to meet certain knowledge standards, such as inappropriate human resource management, and particularly attitudes to career development and employee work potential. No organization, however perfect in every other aspect, can actually function unless the people, its employees, are prepared to pursue it activities. An organization's successful performance and development depends on their work. This is also one of the reasons that more and more organizations, including those in public administration, are now discovering and developing unutilized or underutilized human resources. The proportion of public administration employees in the total active working population in Slovenia is comparable to other countries (Table 1).

Table 1: The proportion of employees in public administration in the total working population

Ireland (1998)	4.9
Canada (1998)	5.5
United Kingdom (1998)	5.8
Slovenia (2001)	5.9
Finland (1998)	6.2
Portugal (1998)	6.3
Austria (1998)	6.7
Netherlands (1998)	7.1
Greece (1997)	7.3
Germany (1998)	8.9
Poland (1998)	5.1
Czech Republic (1997)	6.5
Hungary (1998)	8.0

Source: Bole (2001) in: Government of the Republic of Slovenia (2003)

A research work (Government of the Republic of Slovenia, 2003) ranked Slovenia in fourth place among the selected countries by proportion of employees in public administration (Slovenia: 5.9%), and even in third place in a 1996 comparison. According to data from the Statistical Office of the Republic of Slovenia (2008), in 2005 21.9% of the active working population in Slovenia held a college or university education, with an increase of 6.6 percentage points from 1995 (Government Office for Local Self-Government and Regional Policy, 2007). The average number of years in education for the active working population has grown more in the wider public sector than in the private, and has always been higher in the public sector.

Table 2: The average number of years in education

	1995	2005
Wider public sector	12.4 years	13.2 years
Private sector	10.6 years	11.1 years

Source: Government Office for Local Self-Government and Regional Policy (2007)

The average number of years in education increased in the wider public sector increased more than in the private sector (Table 2). The difference between the sectors increased from 1.8 years in 1995 to 2.1 years in 2005. This effect was strengthened by the tightening of legal regulations on educational requirements for working in the private sector. Analysing the economy by sector, the active working population in the wider public sector had the highest average number of years in education over the period 1995 to 2005. The highest average number of years in education in wider public sector was in the education sector, followed by public administration, defence and social security. Between 1995 and 2005, the proportion of those with a college or university education in the wider public sector rose by 9.0 percentage points and in the private sector by 4.8 percentage points (Table 3). The difference in the proportion of employees with college or university education in the two sectors increased, and was almost three times higher in the wider public sector (45.8%), than in the private (14.3%). At the same period the total general government expenditure decreased by 7.3 percentage points to 46% in GDP.

Table 3: Proportion of those with a college or university education in total working population by sector in 1995 and 2005

	1995	2005	Index (2005/1995)
Wider public sector	36.8 %	45.8 %	124,46
Private sector	9.5 %	14.3 %	150,53

Source: Government Office for Local Self-Government and Regional Policy (2007) and Eurostat: General government statistics (2008)

The number of participants in continuing vocational training among all employees in Slovenia (Table 4) was 316,268 in 2005, the number of participants in continuing training in public administration, defence and social security sector represented 11.4% of all employees. If we include the data from education and health which is mostly part of wider public sector the proportion reached more than 30%. The costs in wider public sector in all costs for training in Slovenia represented about 25% in wider public sector.

Table 4: Main variables for continuing vocational training of employees in Slovenia in 2005

Activities	Labour costs 1000 EUR	Number of participants in CVT	Total costs for continuing vocational training courses 1000 EUR
TOTAL	11,853,111	316,268	133,910
A Agriculture, hunting and forestry	93,851	1,405	636
B Fishing	-	-	-
C Mining and quarrying	102,732	1,154	412
D Manufacturing	3431,459	104,871	47,578
E Electricity, gas and water supply	271,582	5,140	6,565
F Construction	558,162	7,375	3,839
G Wholesale, retail; certain repair	1192,294	34,477	9,482
H Hotels and restaurants	187,865	4,398	1,117
I Transport, storage and communication	1324,753	21,986	8,445
J Financial intermediation	652,126	17,772	9,397
K Real estate, renting & business activities	708,868	14,141	10,432
L Public administ. & defence; comp. soc. sec.	1171,970	35,986	12,677
M Education	991,260	34,568	8,835
N Health and social work	764,639	23,940	11,426
O Other social and personal services	401,551	9,055	3,070

Source: Statistical Office of the Republic of Slovenia (2007)

Government documents (The Framework of Economic and Social Reforms for Increasing the Welfare in Slovenia (2006), Resolution on National Development Projects for the Period 2007-2023 (2006),...) defined way of state modernisation. Hence it follows that the most important objectives in the modernization of the public administration in the Republic of Slovenia are achieving better quality, more effective public administration operation, open and transparent functioning, and user-oriented services. More and more theoretic and expert supposing that the key to these objectives are the people within the public administration, and their knowledge and competences. Human resource development provides support for increasing work complexity and clients/users as key partners.

The Slovenian public administration system includes an efficient staffing system and effective human resource management, and is even one of the four main operating objectives, from the Work Program of the Slovenian Government or the work program of the Ministry of the Public Administration (Government of the Republic

of Slovenia, 2006, and the Ministry of the Public Administration, 2006a and 2006b). The remaining three objectives relate to quality and effective operations, open and transparent public administration functioning, and user orientation of the public administration.

Investment in human capital is one of the key priorities of the Slovenian Presidency EU in 2008. Minister of finance (Bajuk) mentioned that investment in human resources is a crucial factor for growth, structural adjustment and social inclusion. In terms of the quality of public finance, the Minister emphasised "... the impact of education quality on public revenue through increased productivity and reduced social transfers. Considering that, in keeping with the Lisbon Strategy for growth and jobs, the EU Member States have committed themselves to increasing R&D expenditure to 3% of GDP, the tie-in between this target and tertiary education investment needs should be assessed." (Ministry of Finance, 2008). EU Member States invest a significantly smaller proportion compared with the United States. The USA invest approximately 7% of their GDP in education while, in the EU Member States, the average investment is close to 5.5%. However, the discrepancy in tertiary education expenditure is even more marked, with the USA setting aside 3% of GDP and EU countries, on average, a mere 1.4%. (Ministry of Finance, 2008).

## **5. Research results**

According to all mentioned above, the presented research is different from others. We used annual reports and surveys among taxpayers to determine the influence between investments in human resources and performance in public administration or to be precise in tax administration. The drawbacks of data collection from taxpayers are stated in the chapter about methodology. We should also stress out that performance of tax administration and citizens' satisfaction are not influenced only by investments in human resources. There are several other important determinants, i.e. IT improvement, better transparency of regulation, simplification of administrative procedures, decreased number of administrative obligations etc. Therefore we used correlation analysis which can be used only as an indicator of the variables' tendency and are shown in Table 5. Some tests showed that for more sophisticated analyses the data are not useful enough.

Performance indicators selected for research differed significantly over the observed period. The number of employee participations in training increased, the structure of employees by educational qualification moved towards a greater proportion of employees with at least a college-level education. Costs per employee, the number of documents process and the value of additional liabilities discovered by inspections all increased. Average taxpayer scores for the individual statements also improved in most cases.

Table 5 indicates that the existence of a positive correlation between training and performance indicators. The higher number of trainings had a positive impact on the value of additional liabilities/irregularities found in inspections and the number of documents processed<sup>3</sup>. Training also had a positive impact on employee educational structure, which also increases the TARS operating costs, and therefore reduces the TARS' cost efficiency. Due to the restrictions of the research, the hypothesis cannot be fully confirmed since correlations are not within permitted significance.

Table 5: Correlation between employee training in year  $t$  and indicators in year  $t+1$  (Pearson's Correlation Coefficient, 2-tailed)

	Number of employees with college-level education or higher	Value of additional liabilities discovered per inspection	Number of documents processed	Costs per employee
Number of training participations per employee	0.961**	0.526	0.625	0.903*

\*\* Correlation is significant at the 0.01 level (2-tailed)

\* Correlation is significant at the 0.05 level (2-tailed)

Source: TARS Annual reports (2000-2005)

The purpose of the second half of the analysis was to test the correlation between average measured scores for individual taxpayer statements used to measure taxpayer satisfaction and training. The results are set out in Table 6.

<sup>3</sup> The number of appeals as important indicator of performance was excluded, because of the reasons stated already in Methodology. If we would include appeals with exclusion of those connected to taxes with major changes the correlation appears statistically significant with the number of training participations per employee and the number of appeals per employee ( $R=-0.916$ ;  $p=0.05$  (2-tailed)).

Table 6: Pearson's correlation (2-tailed) coefficients between training and taxpayer satisfaction indicators

	Number of training participations per employee
A	0.978*
B	0.998**
C	0.993**
D	-0.078
E	0.474
F	0.965*
G	0.823
Average A-G	0.865

\*\* Correlation is significant at the 0.01 level (2-tailed)

\* Correlation is significant at the 0.05 level (2-tailed)

Source: TARS annual reports (2000-2005) and taxpayers' surveys

Similar limitations to those described in the first case means that this analysis also failed to produce a correlation level with a sufficiently low risk level to all indicators. Training had a positive impact on two taxpayer scores at a risk level below 0.01: duration of procedures (B) and organization of data register (C); and a positive impact on two taxpayer scores at a risk level below 0.05: efficiency of tax supervision (A) and advice and assistance with queries (F). It is of interest that taxpayers gave a lower score to information provision in the selected time period. The tax changes probably influenced also this indicator of taxpayers' satisfaction.

## 6. Conclusions

We can conclude that investments in human resources are important despite the drawbacks of presented research analysis. The presented research can be a basis for further research in this area not only in Slovenia but also in other countries. The systematic monitoring of indicators and expansion of the quality barometer survey to all public administration agencies will make more data available on one hand, and will eventually ensure sufficiently lengthy period of monitoring on the other. This means that in future, similar analyses will provide more accurate results, and the research presented may encourage further and more sophisticated research in this field in future. In other countries, where these limitations do not exist, the research presented could function as an impetus to test the hypotheses proposed. Bringing other countries into the scope of the analysis could also lead to international comparability.

Human resource development offers the opportunity to faster method of operation, which is also promoted within the administration itself. This includes methods of

working, behaviour and thought, and changes in processes and tasks that will make work within the public administration more effective and user-friendly, while at the same time also meeting standards of legality. Despite that additional training in public administration can cause higher cost, since the higher educated employees want higher wages and since training itself causes additional costs. It is obvious that investments in human resources lead to a dilemma: are the costs of investments worthwhile? Is better performance reducing costs enough to be in better financial situation? Is better performance needed to improve citizens' satisfaction or it is needed just for cost reduction? All that questions and more should be answered by policy makers, when decision about investments in human resources is taken into account. Other important decision that should be made is the right kind of training. Not all kind of trainings are necessary. Sometimes training for civil servants is even harder, since the most of training is focused on private sector and not all of elements important for private sector could be useful for public administration.

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## Unapređivanje rada javne uprave ulaganjem u ljudske resurse

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### Sažetak

U članku se istražuje da su investicije u ljudske resurse jedan od važnih činitelja unapređivanja djelovanja javnog sektora. U strateškim dokumentima slovenske vlade i tijekom reforme javne uprave, ljudski resursi ističu se kao jedan od glavnih činitelja poboljšanja djelovanja javne uprave. To je i temelj istraživanja. Glavna hipoteza istraživanja je, da ulaganje u ljudske resurse poboljšava efikasnost i uspješnost javnog sektora. Pokazatelj ulaganja u ljudske resurse oblikovan je na temelju podataka o ukupnom broju obrazovanja uz rad po zaposlenom. Za determinaciju efikasnosti i uspješnosti odabrani su pokazatelji i ankete zadovoljstva poreznih obveznika, kao korisnika usluga porezne uprave, s radom te javne institucije. Glavnu prepreku u istraživanju predstavlja kratko vremensko razdoblje provjeravanja zadovoljstva korisnika poreznih usluga porezne uprave. Zbog toga, rezultate je moguće prezentirati s visokim statističkim rizikom. Ali rezultati nagovještavaju pozitivnu korelaciju između obrazovanja uz rad zaposlenih i pokazatelja djelovanja te zadovoljstva korisnika usluga porezne uprave s radom iste. To znači, da se rad javne uprave poboljšava s obrazovanjem uz rad zaposlenih i da poboljšano djelovanje javne uprave utječe na zadovoljstvo stranaka.

**Ključne riječi:** djelovanje javne uprave, razvoj ljudskih resursa, obrazovanje uz rad, porezna uprava, Slovenija

**JEL klasifikacija:** H11, H83, J24

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