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**Evaluation of the Directive 90/270/EEC
(VDU Directive)**

The Czech National Evaluation



Prague, December 2007

The Czech national evaluation of the “Directive 90/270/EEC of May 29, 1990 on the minimum safety and health requirements for work with display screen equipment” has been initiated and performed in accord with the assignment of the Chief Public Health Officer of the Czech Republic Michael Vít, M.D., Ph.D. of March 28, 2007, No. OVZ-34.0-23.03.07/10622.

The Ministry of Health of the Czech Republic appointed Anežka Sixtová M.D. as guarantor of the project.

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Evaluation of the Directive 90/270/EEC

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1. Introduction

1.1. Background and aims of the study

In the Lisbon Strategy, the leaders of the EU articulated a need to increase the number of jobs and to improve their safety. The first step of this strategy should ensure an effective legislation, protecting workers on the one hand and not hindering EU from economic development on the other. However, without knowledge of the impact of political decisions, the decision making process cannot be efficient. Therefore, the need for the evaluation of the legislation based on systematic, thorough evidence-based analysis of objective parameters emerged. This evaluation should be performed as an ex-post study.

With the aim to assess whether the ex-post study is a sensible tool capable of ensuring an effective feedback for the political decision making process, it was decided to carry out a pilot study in six member states (Germany, The Netherlands, Denmark, Finland, UK, Czech Republic). The Council Directive 90/270/EEC of May 29, 1990, on the minimum safety and health requirements for work with display screen equipment was chosen as a subject of the ex-post evaluation. For the first time such ex-post evaluation based on empirical data obtained from all relevant target groups is performed in the EU and brings the legislation dealing with occupational health and safety issues into focus.

Each participating country performs an individual evaluation. The Chief Public Health Officer of the Czech Republic decided to perform this evaluation by his assignment of March 28, 2007, to carry out a questionnaire study aimed at evaluating the contribution of the Directive 90/270/EEC of May 29, 1990, on the minimum safety and health requirements for work with display screen equipment”.

1.2. Transposition of the VDU Directive into Czech legislation.

The paragraph 11 of the Governmental order No. 178/2001 Coll. determining conditions for occupational health protection covers the provisions given in articles No. 1 and 2 of the VDU Directive. It defines the work with VDU and emphasizes that the work station analysis should focus on eyes and eyesight related risks, mental overload and musculoskeletal disorders. Moreover, it points out possible additive effects and interactions between individual risk factors. A list of the occupational activities for which the VDU Directive shall not be applied is adopted in the paragraph 13 of the Governmental order No. 178/2001 Coll.

Comment: It is worth saying that the Czech legislation has been lacking an unambiguous definition of the VDU worker, which would be analogous to one in Article No. 2 of the VDU Directive. Regulation No. 432/2003 Coll., which sets the terms for job categorization, the limits for biological exposure tests, the terms for collecting biological samples for biological exposure testing, and the requirements for reporting jobs with asbestos and biological agents lays down the rule that the Governmental order No. 178/2001 Coll. applies for work with VDU lasting for more than 4 hours per shift.

General responsibilities of employers for the assessment of risks and the implementation of preventive measures at workplaces as they are set in article No. 3 of Directive 90/270/EEC have been incorporated in the Czech Act No. 262/2006 Coll. – “Labor Code”, in Act No. 309/2006 Coll., stipulating further requirements for health and safety at work in labour relations and concerning occupational health and safety protection in activities or services

provided outside labour relations (Act on Further Requirements on Occupational Health and Safety), and in Act No. 258/2000 Coll. – “Public Health Protection Act”.

The implementation of requirements set in articles No. 4 (Workstations put into service for the first time) and 5 (Workstations already put into service) of the VDU Directive has fallen behind expectations. In other words, in spite of the fact that the terms for the withdrawal of defects of the implementation of the VDU Directive have been set in Act No. 258/2000 Coll. there are still workplaces which do not meet these minimal requirements in the Czech Republic.

Article No. 6 of the VDU Directive about the responsibilities of employers for instructions of workers before commencing the VDU work has been incorporated in paragraph 103 of Act No. 262/2006 Coll. (Labor Code).

The provisions of article No. 7 (Daily work routine) of the VDU Directive have been transposed into § 12 of Governmental order No. 178/2001 Coll. This regulation sets the obligation to employers for providing employees with regular 5-10 min breaks in every 2 hours of continuous VDU work.

The obligation of consulting and participation of workers or their representatives on the matters covered in Article 8 of the VDU Directive is set down by paragraph 14 of Act No. 262/2006 Coll.

The implementation of Article 9 on workers' eyes and eyesight protection will be treated by the upcoming special Act on occupational health care. The way how the issue of workers' eyes and eyesight protection has been ensured at present (and up to the passing of the above mentioned act) is described and explained by the Ministry of Health of the Czech Republic in the chapter dealing with the standpoints of the major stakeholders (page 29). The new standard of the Society for Occupational Medicine of the Czech Medical Society called the “Work with video display units” represents an additional tool taking place in the prevention and early identification of VDU related health problems. This standard pays special attention to workers' eye and eyesight protection.

The whole Annex of the VDU Directive has been transposed into Annex No. 7 of the Governmental order No. 178/2001 Coll. Besides that, in the course of the harmonization process, the Czech Republic has adopted the standard CSN EN ISO 9241 on ergonomic requirements for office work with visual display terminals (VDTs). The standard CSN EN ISO 11064-4: Ergonomic designing of the operating centres – Part 4: Arrangement and dimension of working systems is also closely related to this issue.

1.3. Goals of the ex-post evaluation

This study has two pivotal ideas: First, to develop a method suitable for the ex-post evaluation of the effectiveness of the VDU Directive, and second to carry out a pilot study – quantitative surveys – demonstrating the feasibility of the suggested approach and its research potential. In general, the methodology developed addresses the following issues:

- Evaluation of the awareness of regulations specifying the VDU Directive in groups of interest, evaluation of the knowledge of these regulations.
- Evaluation of the relevance of the regulations for everyday routine. (Perception of the usefulness of the regulation in everyday practice.)

- Evaluation of the implementation of the regulations specifying the VDU Directive at workplaces and identification of problems encountered by the target groups.
- Evaluation of the perception of cost-benefit issues related to the implementation of and compliance with the regulations.
- General evaluation of the effectiveness of regulations specifying the VDU Directive.

2. Overview of methodology

The requirement of the comparability of the national data generated by all participating EU countries was the main factor guiding the choice of research methods in the Czech Republic. The applied methodology, therefore, corresponds to the approach accepted by other participating countries. Nevertheless, minor variations in the design reflecting national particularities were unavoidable. The major features of the study are

- Its observational nature.
- The unit of observation is an enterprise.
- The target groups are employers and representatives of employees.
- The inquiry is performed by means of questionnaires.

The investigation in both target groups is aimed at:

- Knowledge and awareness of regulations specifying the VDU Directive.
- Relevance and usefulness for daily work.
- The extent of implementation of the specific requirements.
- A cost-benefit approach to the implementing of and compliance with the regulations.
- Perception of the general effectiveness of the regulations.

There are two variants of the administered questionnaires. One developed for employers (representatives of management responsible for OHS agenda) and the other designed to obtain information from employees directly involved in work with VDU. The scope and the structure of questionnaires and the wording of questions are based on common terms of reference and were agreed upon during the previous coordinating meetings of the representatives of participating countries. In this context we must say that the Czech Republic joined the project somewhat later (in September 2006). Therefore, on the one hand, we could take advantage of adopting the questionnaires developed in the other countries, but, on the other hand, we had less time for performing the task.

2.1. Sampling strategy

The sampling strategy was designed and the sampling itself performed on the request of the NIPH at Prague by the Czech Statistical Office. The sampling of study subjects (the unit of investigation is an enterprise) was based on the list of all economically active subjects having at least one employee registered by the “Registry of economical subjects” in the Czech Republic in March 2007. The subjects were chosen at random and stratified according to six strata defined by the size of the enterprises (1-4, 5-9, 10-19, 20-49, 50-249, 250 and more employees). The size of the enterprises and individual strata, respectively, were determined by data maintained by “the Czech Social Security Administration”.

The number of subjects in each stratum was determined as a compromise between the sampling taking into account the proportional size of the strata described by the square root of

the number of units in each stratum, and the sampling weighing for the square root of the number of employees in the stratum. The square root was chosen as a measure of size due to the skewed distribution of underlying data. Sampling accounting only for a number of units in individual strata would overrepresent small businesses. Sampling according to the number of employees would prefer large firms and organizations. Therefore, the arithmetic mean corresponding to both points of view was calculated and the resulting quantities were used to allocate 1 500 units into six strata.

Thereafter, the required number of units was randomly selected from the “Registry of Economically Active Subjects” maintained by the Czech Statistical Office. Finally, the addresses were attached to this file to make it possible to identify each enterprise in the selected group.

With respect to the capacity of the involved cooperating institutions a sample of 1,500 subjects was selected (the sample size roughly corresponds to the number of subjects (enterprises) under study in the other participating countries). The selected enterprises were divided according to the number of employees into the following strata:

- Enterprises with 1–4 employees. The stratum consists of 368 (0.24 %) of the businesses of this size. (At the time of sampling, there were 296,108 workplaces in 155,369 enterprises with 1–4 employees registered in the Czech Republic.)
- Enterprises with 5–9 employees. The stratum consists of 226 (0.56 %) subjects selected from 40,612 enterprises with 5–9 employees (266,676 workplaces).
- Enterprises with 10–19 employees. The stratum consists of 212 (0.8 %) subjects selected from 26,634 enterprises with 10–19 employees (360,909 workplaces).
- Enterprises with 20–49 employees. The stratum consists of 213 (1.17 %) subjects selected from 18,143 enterprises with 20–49 employees (551,084 workplaces).
- Enterprises with 50–249 employees. The stratum consists of 243 (2.12 %) subjects selected from 11,441 enterprises with 50–249 employees (1 118,793 workplaces).
- Enterprises with more than 250 employees. The stratum consists of 238 (11.45 %) subjects selected from 2,079 enterprises with more than 250 employees (1 724,959 workplaces).

The list of selected enterprises was arranged according to the regional organization of the Czech Republic to correspond with areas of activities of the Regional Public Health Authorities. Based on the list of enterprises, the heads of the Departments of Industrial Hygiene or other suitable persons contacted the management of individual enterprises, explained the purpose of the study and the conditions of participation (emphasis was put on the issue of confidentiality) and arranged an appointment for the staffer(s) who were collecting the data. Trained personnel of the Regional Public Health Authorities selected the suitable persons directly in chosen enterprises and administered the questionnaires.

2.2. Selection of representatives of management

The questionnaire developed for the management was preferably administered to the OSH expert. In case that the safety expert was not available then another member of management responsible for occupational health and safety was asked to fill in the questionnaire. (The local public health officers were asked to utilize their knowledge of local conditions to administer the questionnaires to persons who were the most competent in the given enterprise).

2.3. Selection of the representatives of employees

The selection of a suitable employee followed both qualitative and quantitative criteria. With respect to the study purposes, the selected worker must have complied with the definitions used in the Decree of Government No. 178/2001 Coll., which sets the conditions for the protection of health of workers involved in work with VDU, particularly:

- § 11 of Government Order No. 178/2001 Coll.
 - ... work is performed as a common part of the daily routine on an assembly comprising of display screen equipment, which may be provided with
 - a keyboard or input device and/or software determining the operator/machine interface, optional accessories, peripherals including work chair and work desk or work surface, and immediate work environment.
- § 13 of Government Order No. 178/2001 Coll.
 - Provisions of § 11 should not apply to drivers' cabs or control cabs for vehicles or machinery, computer systems on board the means of transport, computer systems mainly intended for public use.....
- Work with VDU lasting > 4 hours per day

The size of the enterprise determined the number of selected and inquired subjects. The key for selection was as follows:

- Enterprises with 1–4 employees ...1 representative
- Enterprises with 5–9 employees ...1 representative
- Enterprises with 10–19 employees ...2 representatives
- Enterprises with 20–49 employees ...3 representatives
- Enterprises with 50–249 employees ...4 representatives
- Enterprises with 250+ – employees ...5 representatives

When the size of the enterprise was big enough then it was desirable to select approximately a half of the study participants among white-collars, and a half of them among blue-collars (on condition that the requirements of Governmental Order No. 178/2001 Coll. were met).

When the enterprise had only one employed person (self-employed) then only the questionnaire for the employer was administered.

It was demanded that typical workplaces be chosen for the survey where people work with a VDU in the enterprises. For example, the assistant of the chief executive officer was not an ideal respondent of this study, because we were looking for “an average” employee and “average” workplace respectively. To identify such respondents, the public health officers were to use their knowledge of the enterprises and their professional expertise.

2.4. Structure of questionnaires

The applied questionnaires are the most critical elements of the whole ex-post evaluation. In accord with the common terms of reference and experience of other participating countries we developed two questionnaires in Czech. One for employers and another one for employees. The full texts of both questionnaires are shown in the Annex. The meaning of the selected questions and interpretation of the responses are discussed in chapters 3–5.

2.5. Administration of questionnaires

The sampling and identification of suitable participants was followed by the administration of questionnaires. There were no time restrictions and to complete the questionnaire took no more than 20-30 min. Because of the simplicity of the questions, we supposed that the representatives of management would not require any additional information. Therefore, the public health officer was expected namely to be helping employees when needed in the filling in of the questionnaires.

As soon as the public health officer obtained the completed questionnaires, he/she had to mark them by code of district (according to the list of economical subjects) and a number indicating the order of inquired enterprise. For instance, the first inquired enterprise in the South Bohemian Region got a code 3101-1. All questionnaires obtained from one enterprise had the same unique code. The code was critical to have the opportunity to check a consistence of the answers provided by the management and employees in a given facility. (This code was crucial for subsequent data analysis. The point was to keep a track of the common origin of questionnaires not the identity of the enterprise.)

From the point of view of validity it was important to reach high response rates of selected enterprises. If the response rate declined to 75 %, then it was necessary to replace lost subjects by their surrogates selected from an enterprise of the same size and economic activity. The selection of suitable surrogate participants was done operatively by the Regional Public Health Authorities. We demanded to keep the response rate above 75 % in each stratum.

2.6. Data analysis

The NIPH carried out the digitalization of questionnaires and data analysis. The completed questionnaires were submitted to the NIPH continually (at maximally 2-week intervals) to make it possible to control the quality and completeness of data and to ensure its smooth digitalization. In this way the NIPH processed 1,366 questionnaires completed by employers (response rate = 91.1 %) and 3,358 questionnaires completed by employees by the end of September 2007.

The statistical analysis was mostly of descriptive character and dealt mostly with frequencies of phenomena of interest directly related to the study goals. The data was organized and presented with respect to the need of the integrated cross-national report.

Attention was paid to the consistency of answers obtained from employers and employees and to the identification of factors determining possible discrepancies. Furthermore, we focused on the factors associated with frequencies of selected answers or their aggregates.

The term “range”, which was used for data presentation refers to the range of arithmetical means observed within the strata of employers or employees defined according to the size of each establishment.

3. Knowledge and awareness of the VDU Directive and its instruments

In this chapter we focus on two objectives. First, we measure “awareness” of the existence of legislation regulating the work with VDU in general. It means to evaluate to which degree both employers and employees are informed about the existence of the legislation and its

provisions. Second, we carry out the detailed investigation of the “knowledge” of legislation. This term goes beyond the awareness and refers to the familiarity with the content of the VDU legislation.

In the context of awareness and knowledge it is worth to remind that the Government Order No. 178/2001 Coll. – the transposition of the VDU Directive into the Czech legislation – is obligatory for work with VDU lasting for more than 4 hours per day. The following data and discussion are, therefore, restricted only to employers and employees that may be concerned.

3.1. Knowledge and awareness of legislation in general

On average, a slight majority of employers (63.1 %) are aware of any existence of the legislation specific for the OHS at work with VDU (*Employer survey, Table for question 26a*). The awareness of the legislation is apparently dependent on the size of each establishment. The increasing size of the establishments is paralleled with the increasing level of awareness. In the small establishments with 1–9 employees, only 50.4 % of employers are aware of the existence of the VDU legislation; in contrast, the representatives of enterprises with more than 1000 employees are substantially better informed, on average 86.8 % of such employers are aware of the VDU legislation.

The awareness of how OHS at work with VDU are treated at the EU level is relatively low in the Czech Republic. On average only 15.0 % of employers reported some awareness (*Employer survey, Tab. for question 27a*). However, because of the strong correlation between the size of the establishment and the level of awareness, the average percentage is not too informative. In the smallest establishments only 4.7 % of employers gave a positive answer; in the largest establishments, 47.4 % of employers reported knowledge of the EU legislation.

The knowledge of Directive 90/270/EEC in the employers reflects the low level of awareness of the EU legislation. On average, only 7.3 % of representatives of employers stated correctly this directive as the major measure regulating the OHS issues at work with VDU (*Employer survey, Tab. for question 27c*). Again the interpretation of the average percentage of employers informed about the VDU Directive cannot ignore the strong correlation between the size of the establishment and the distribution of answers. In the smallest establishments, only 1.7 % of employers knew of the VDU Directive; however, in the largest establishments knowledge of the directive reached the level of 36.8 %.

Surprisingly, awareness of the Czech regulations imposed on work with VDU is substantially no better than the knowledge concerning relevant EU legislation. On average only 14.0 % of employers were able to name the Governmental order No.178/2001 Coll. As being the major regulation dealing with VDU work (*Employer survey, Tab. for question 28c*). The level of knowledge is, similarly as in the previous paragraph, affected by the size of the establishments, ranging from 4.0 % in the smallest to 42.1 % in the largest ones.

The VDU Directive is primarily aimed at employers. Therefore, employees are not required to know it. Nevertheless, they should be aware that some sort of legislation regulating their entitlements and duties with regard to their VDU workplace exists. Moreover, it is the duty of the employers to inform their employees on these legal provisions.

A general awareness of any legislation regulating work with VDU was reported, on average, by 37.2 % of employees (*Employee survey, Tab. for question 37a*). Of them, 18.8 % reported knowledge of the Directive 90/270/EEC (*Employee survey, Tab. for question 38a*) and the

knowledge of the Government Order No 178/2001 Coll. 16.8 % (*Employee survey, Tab. for question 39a*). Furthermore, 13.1 % of them stated that they familiarized themselves with these enactments (*Employer survey, Tab. for question 40a*). Contrary to the employer survey, there were no associations between the size of the enterprise and the distributions of answers. (The difference in favor of the knowledge of VDU Directive 18.8 % vs. 16.8 % may be explained by a low reliability of the way of measuring used.)

3.2. Conclusions

More than a half of the employers stated that they are in general terms aware that work with VDU is somehow legally regulated. However, knowledge of actual legislation, i.e. of the EU Directive 90/270/EEC as well as of Government Order 178/2001 Coll. is substantially lower. The knowledge of these documents is closely related to the size of the establishments (the probability of knowledge increases with the size of the enterprise). According to expectations, the general awareness of VDU related regulations is somewhat lower in employees than in employers. The rates of employees familiar with the EU Directive 90/270/EEC or Governmental Order 178/2001 Coll. are very similar to that observed in employers.

4. Implementation at the workplace

This chapter focuses on three key issues. First, it evaluates the degree of implementation of the specific instruments of the VDU Directive into common practice. Second, it compares the frequencies of responses given by employers and employees with the aim to estimate a potential for a bias in this part of the survey. Third, we search for characteristics of employers which are associated with the degree of implementation of the major instruments of the VDU directive in the enterprises. Particularly, we test the hypothesis that the situation at workplaces is related to the knowledge of VDU legislation. The following instruments are to be dealt with:

- Risk analysis at the workstation
- Information and training of the employees
- Implementation of daily work routine
- Protection of workers' eyes and eyesight
- Consultation and participation of employees (and/or their representatives).

4.1. Analysis of workstations

The main purpose of the workstation analysis is to check whether the workstations in an establishment are properly equipped with regard to hardware, furniture, lighting, etc. and whether the arrangement of the different elements of the workplace meets specific needs of the employee using it. The specific goals of the workstation analysis and of the risk assessment, respectively, are the assessment of the risk to eyesight and the evaluation of physical and mental stress.

The results of the employers' survey indicate that the workstation risk analyses are being carried out on average in 30.9 % of the Czech establishments (*Employer survey, Tab. for question 11a*). This is substantially a lower rate than that reported by Germany or the Netherlands (50 % and 47 %, respectively). When accounting for the strong positive association between the size of the enterprise and the implementation of risk analysis, then it is clear that among Czech small enterprises these differences are given by the low ratio of establishments carrying out risk analyses. Risk analysis was performed only in 12.8 % of the

Czech enterprises with 1-9 employees, in contrast to 44 % and 41 % of establishments in Germany and the Netherlands, respectively. However, the percentage of establishments carrying out the risk analysis increases with the size of the enterprise. So, in the largest establishments with 1,000 and more employees the ratio of 81.6 % of establishments performing risk analysis is very similar to the ratio observed in Germany and the Netherlands.

The figures based on the employee survey, however, show a different picture. According to employees, the ratio of establishments carrying out the risk analysis ranged from 19.9 % in establishment with 1–9 employees to 22.2 % in establishments with 1,000 and more employees. The risk analysis was performed on average in 20.0 % of establishments (*Employee survey, Table for question 16a*).

The differences between the employer and employee surveys are hard to explain. We can speculate about three possible causes. First, it can be explained by intentionally biased answers given by employers, who tend to look at the world with rose-colored glasses. On the other hand, the similarities in trends of the responses with other countries support the validity of the employer survey. Second, there are understandable differences in knowledge of the OHS policy of the establishment between employers and employees. Third, the differences could arise as a result of differences in motivation to participate in the survey. What can be a prestigious survey for employers may be annoying for employees.

4.2. Information and training of employees

In general terms, the European Directive 90/270/EEC prescribes the duty of informing workers on health and safety related issues with regard to work with video display units. It literally states: "... workers shall receive information on all aspects of safety and health relating to their workstation, in particular information on such measures applicable to workstation as are implemented under Article 3 (analyses of workstation), 7 (daily work routine) and 9 (protection of workers' eyesight)". This part of the VDU Directive has been transposed into the Czech Act No. 262/2006 Coll. – "Labor Code".

Similarly as in the German and Dutch studies, the fact that the national legislation imposes on employers the duty of informing and training workers at VDU, along with the consideration that employees nowadays have a lot of options to adapt the elements of their VDU workplaces to personal needs or preferences, resulted in an emphasis put on this issue in the Czech Republic. For instance, the size of the signs on the screen can usually be adjusted by the software, office chairs can be adjusted in various ways, etc. In order to use this flexibility in a health-beneficial way, it is increasingly important that employees know about the proper use of these possibilities.

In the Czech Republic, 32.3 % of employers reported that they trained most of their employees for work with VDU. An additional 4.2 % of employers reported that they trained their employees sporadically, and 55.7 % of employers admitted that they did not inform their employees at all. A relatively high proportion of subjects, 7.9 %, did not respond to this question (*Employer survey, Table for question 13b*).

In contrast, employees reported a substantially higher percentage of subjects informed by employers about the health and safety issues related to the work with VDU. The rate of instructed workers in the employee survey ranged from 42.8 % to 51.4 % with the mean of 47.2 % of informed workers (*Employee survey, Tab. for question 17a*). These figures are very similar to those reported by Germany or the Netherlands. Because of many reasons (some of them were mentioned formerly such as lower motivation of employees to collaborate in the

survey), we consider the employees' experience to be, in general, a more informative and more conservative source of information than the opinions of representatives of employers; therefore, with respect to the share of informed workers, the situation in the Czech Republic is probably very similar to the picture depicted, for example, in the German study.

Furthermore, it should be mentioned that there were no associations between the size of the enterprise and the frequency of answers.

The reasons why 55.7 % (N=714) of employers do not provide employees working with VDU with training and instructions are summarized in the Employer survey, *Tab. for questions 15a,b*. The most frequently stated reason is that the management does not consider it a necessity (mean of 45.2 %, N=323, range from 56.4 % to 20.0 %, an apparent negative association between the size of the enterprise and percentage of the answers). The second most often given reason (mean of 22.4 %, N=160, range 16.7 %–50.0 %, a positive association between the size of enterprise and the frequency of answers) is that the establishment is engaged in different priorities. A very small number of the establishments (mean=1.7 %, N=12, range 0.8 %–2.7 %) argued against the training of workers because of too high cost. From the long term perspective, it seems to be a promising fact that almost a third of these employers intend to implement the training of employees in the future (mean of 29.6 %, N=211, range 20.3 %–54.5 %).

The extent and quality of the information delivered to the employees is definitely dependent also on the information source used. From this point of view, approximately a half of the establishments (mean of 51.9 %, range 47.1 %–56.6 %) provides workers with individual instructions before commencing this type of work. Roughly a quarter of establishments (mean of 24.1 %, range 15.6 %–36.1 %) provide with individual instructions during the work, another quarter of establishments (mean of 26.7 %, range 6.0 %–34.4 %) organized some forms of group training, 14.7 % (range 6.0 %–29.3 %) establishments rely on the distribution of printed materials, and 11.5 % of establishments (range 6.0 %–18.8 %) organized another type of training (*Employer survey, Table for question 14a,b*).

The rates obtained on the training and information from the employee survey are somewhat lower than the figures reported by employers. The percentage of establishments providing with an individual training before commencing the work was on average 43.4 %, the percentage of establishments where workers took part in individual training after commencing the work was 20.6 %, and an additional 20.6 % of establishments organized a group training. Only 2.4 % of establishments relied on the internet, and 7 % on the provision of printed materials (*Employee survey, Table for question 18b*).

In spite of the slight differences between the employee and employer surveys, we can conclude that both sets of data provide a quite consistent picture. In contrast to, e.g. Germany, where employers mostly use printed materials or materials distributed via intranet, Czech employers prefer an individual training of employees. This difference in the preferred information channels can also, to a certain degree, contribute to the explanation of the differences between the total shares of informed/trained workers in these two countries.

To sum up, the requirements to inform and train employees in VDU related safety and health issues have been implemented in less than half of the establishments in the Czech Republic. Information and training take place particularly in the middle-sized and large enterprises. The share of small enterprises that meet the requirements of the VDU Directive on training and information was significantly lower. A direct comparison of the ratios of employees receiving

training and information as required by the VDU Directive is not possible with the data at hand. Nevertheless, when roughly comparing the percentages of establishments meeting these requirements, it is less than 50 % in the Czech Republic, contrary to the “old” EU countries (DE, NL, DK), where it is more than 50 % of establishments. That means that there exists a significant information and training deficit in all participating countries, and particularly in the Czech Republic.

4.3. Daily work routine

The provisions of the VDU Directive covers also the issue of mental and physical stress and obliges the employers that the work at VDU is either alternated with other types of work or that breaks have to be taken in regular intervals. In the Czech Republic it is mandatory to take a break after 4 hours of consecutive VDU work. The option is to alternate the work. The Czech legislation does not give any preference to either option.

In the employer survey we were interested in four issues:

- Inquiries whether employees are entitled to take breaks.
- Collection of data on the mode of breaks.
- Investigation of the reasons for not providing breaks.
- The length and frequency of breaks.

In general, the number of employers not providing any opportunity to take breaks is low, on average 5.3 %. A relatively high share of 9.2 % was reported by the small establishments with 1–9 employees. For the remaining enterprises, the rates ranged between 2.3 % and 3.8 % (*Employer survey, Tab. for question 16a*). These figures are in good agreement with the responses to the question on mode of breaks, when 4.1 % of employers again reported that they do not allow for breaks (range 1.8 %-7.8 %). Most often – in 77.8 % of cases – employers stated that workers are entitled to take breaks at their own discretion. An additional 7.2 % of employers allow workers to take breaks at fixed intervals (*Employer survey, Tab. for question 17a,b*).

This positive picture is confirmed by the employee survey. On average employees from 88.7 % of establishments reported that they do interrupt the work with breaks (*Employee survey, Table for question 21a*). Of them, 93.6 % take breaks at their own discretion and an additional 4.1 % of employees have an opportunity to take breaks at fixed intervals (*Employer survey, Tab. for question 22b*).

Why some establishments deny employees a break was usually explained by different priorities of the employers (30.9 %) or by other reasons (35.3 %). The character of work or pace of work was mentioned in a minor number of cases (11.8 %) (*Employer survey, Tab. for question 19b*).

A small share of 13.9 % (N=296) workers deny taking breaks. The reason why they themselves do not take breaks was that in 35.8 % of the pertinent establishments they do not feel a need for breaks. The character and pace of work do not allow for breaks in 54.7 % of the establishments and only in 4.4 % of the establishments employees are not allowed to take breaks (*Employee survey, Tab. for question 24b*).

Besides the breaks, we searched in the employee survey whether the job/employers allow for an alternative activity. According to employees, an alternative activity is a possibility in the

great majority of those establishments, on average 87.3 % of employers providing it (*Employee survey, Tab. for question 25a*).

Concerning the daily work routine, our findings do not differ from those in Germany (83 % of establishments give an opportunity to take breaks) or Denmark (75 % of establishments provide their employees with breaks). However, the comparison between the Czech Republic and other countries is very rough because of differences in the length of the period of continuous work after which a break is required. In contrast to the Czech Republic where a break is required after 4 hours of continuous work, in Germany and Denmark it is required after 2 hours of continuous work with VDU.

To sum up, only few enterprises openly deny their employees the right for breaks and this requirement of the VDU Directive is to a large degree met in the Czech Republic. The most important reasons why employees do not take breaks in some establishments are on the one hand personal habits (workers do not feel a need for breaks) and the character and pace of work on the other.

4.4. Protection of the workers' eye and eyesight

The VDU Directive prescribes that workers are entitled to an eye and eyesight test before starting display screen work, at regular intervals thereafter and whenever they experience problems with their eyes. If at the occasion of such an eye-sight test the need for specific VDU glasses should arise, costs of these must not be born by the employee.

The representatives of employers stated that on average only 16.9 % of all establishments guarantee this health service (*Employer survey, Tab. for question 22a*). Unfortunately, the wording of the question we used does not allow for distinguishing whether the employers had in mind periodic examinations or examinations at occasion of an eye or eyesight problems. The lowest share of employers providing eye and eyesight care was observed among small businesses with 1–9 employees (8.7 %). Increasing size of the enterprise was followed by increasing number of establishments providing workers with the eye and eyesight care. In establishments with more than 1,000 employees it was 50 % of enterprises.

The employees' part of this research confirmed the information given by employers. According to employees, 19 % of employers provide workers with eye and eyesight tests (*Employee survey, Table for question 26a*). It is important to emphasize that 96.3 % of establishments providing the eye and eyesight examinations provide that as a part of periodic checkups (*Employee survey, Tab. for question 27a*). Because the majority of the VDU work is not categorized as risky within the meaning of paragraph 39 of Act No, 258/2001 Coll. on public health, we assume that the tests in question are elements of the basic eye and eyesight examination performed in the scope of periodic checkups carried out within the span of 5 years, and within the span of 3 years in case of employees older than 50 years respectively.

With respect to previous figures, it is not a surprise that the number of employers covering the expenses related to corrective spectacles for VDU work is even lower (*Employer survey, Tab. for question 23a*). On average only 3.9 % of employers pay for corrective VDU glasses. According to workers this percentage is even lower – 1.9 % of all employers (*Employee survey, Tab. for question 28a*).

As far as the implementation of the provisions of the VDU Directive dealing with eye and eyesight protection is in question, then the situation found in the Czech Republic is similar to the one observed in the other participating countries, i.e. unsatisfactory. However, the relative

numbers of employers providing eye and eyesight care in the other countries are higher than in the Czech Republic, for example in Germany it is 28 %. The differences in the health insurance systems can contribute to the differences in coverage of expenses on the specific VDU corrective appliances. In the Czech Republic the corrective appliance for work with VDU should be at least partially covered by the obligatory General Health Insurance.

4.5. Consultation with and participation of employees

The VDU Directive requires that "*consultation with and participation of workers and/or their representatives shall take place (...) on the matters covered by this Directive, including the Annex*". However, the VDU Directive does not specify when and how this participation should take place and makes it somewhat difficult to assess the implementation of this instrument in practice.

Almost three quarters of all employers (73.3 %) clearly denied the consultation of the issue of VDU work with trade unions or other workers' representatives. (*Employer survey, Tab. for question 20a*) The willingness to carry out the consultations with workers was strongly dependent on the size of the enterprises. Among the small establishments with 1–9 employees, 75.9 % of employers did not discuss this issue with workers. In contrast, only 42.1 % of the large enterprises with more than 1,000 employees did not carry out such talks. The absence of consultation and participation of workers was explained by the fact, that there were no trade unions in the establishments (60.8 %) or by the simple fact that employers did not consider it necessary (25.9 %) (*Employer survey, Tab. for questions 21a,b*).

At the individual level, however, some sort of instruction and consultation did take place in 47.2 % of establishments (instruction on how to avoid health problems when working with VDU) (*Employee survey, Tab. for question 17a*). Also a positive response of employers to individual requests of workers on ergonomic equipment of their workstation speaks in favor of a presence of dialogue between workers and employers (only 17.1 % of employers denied the provision of required equipment) (*Employer survey, Table for question 24b*). This is consistent with the employee survey, where 41.9 % employees asked for ergonomic equipment (*Employee survey, Tab. for question 30a*) and in 94.7 % of cases succeeded (*Employee survey, Tab. for question 31a*).

In summary, the implementation of the requirement of a formal consultation and participation of workers on matters covered by the VDU Directive is low, partially because of lack of partners such as trade unions/workers representatives, and partially because employers do not consider this requirement to be relevant. Nevertheless, there is evidence of dialogue on VDU directive matters at the informal or individual level. We can estimate that such informal dialogue between employers and employees takes place approximately in 50 % of enterprises.

4.6. Conclusion regarding implementations of the instruments

In general, the implementation of the main instruments of the VDU Directive in the Czech Republic is dependent on the size of the company. It has been observed that there is a relatively satisfactory level of the implementation in the large establishments. The most serious deficits in the implementation of the VDU Directive are seen in smaller enterprises and particularly in those with less than 10 employees. Perhaps the best implemented provision of the VDU Directive is that dealing with breaks for workers, followed by provisions about consultation and participation of workers, training of workers and workstation analysis. The worst implemented instruments are those dealing with the eye and eyesight protection and the provisions of corrective appliances. Direct comparison with other EU countries shows that in

most of the evaluated parameters the Czech Republic falls behind the other EU countries, e.g. Germany or the Netherlands. However, direct comparison is not possible and all such comparisons must be done with great caution.

5. Effectiveness

The crucial feature of each legal provision is its effectiveness, i.e. the degree to which the goals of the provision have been reached. In the context of the Czech evaluation we interpret the term effectiveness as the degree to which the expectation of the quality of the occupational environment, physical set-up of the VDU workstation, including ergonomic aspects, following from the transposition of the VDU Directive have been accomplished. Besides physical safety and ergonomic aspects, the assessment of the effectiveness of the legislation must take into account also behavioral components of the OHS at work with VDU, particularly if employees are prevented in the performance of work in a way protecting their health.

The following analysis of the effectiveness distinguishes between two levels. The first one is focused on the individual tools of the VDU Directive and Government Order No. 178/2001 Coll. and their contribution to the specific goals. The second level of the analysis is aimed at the overall situation at workplaces. The former type of analysis is based on the data provided by employers; the latter relies on the assessment of workplace quality in the employee survey.

5.1. Effectiveness of the instruments of the Directive

Workstation analysis

The purpose of the analysis of the workstation is to find deficiencies in the VDU workstation, which can adversely influence the health of workers. The minimal requirements on a wholesome occupational environment are determined by the VDU Directive, and its national transposition respectively. Even when the requirements of legal provisions are met, the second aspect of the workstation analysis is the proper adjustment of the workstation with respect to the needs of a specific worker. If the risk analysis finds and remedies the faults, then the analysis of the workstation can be considered as an effective instrument.

The Czech evaluation did not include questions specifically dealing with the effectiveness of workstation analysis. Moreover, risk analysis has been implemented only in 30.9 % (N=397) of inquired establishments (*Employer survey, Table for question 11*). Nevertheless, based on the analysis of the spectrum of responses to the question “*who set off to carry out the risk assessment*”, we can speculate how this instrument is perceived by major players in the field. Risk analysis was initiated in 15.9 % of all establishments carrying out the risk analysis by the OHS supervising institutions such as public health authorities, the labor inspectorate, external OHS experts or employees and their representatives (*Employer survey, Tab. for question 12*). It suggests that the major institutions taking part in the enforcement of the VDU Directive/transposition rely on the work analysis as a useful tool.

Information and training of employees

The education and training is the instrument intended to modify behavior of VDU workers in the proper way. A well informed employee should be able to contribute to an appropriate arrangement of the workstation and use of the workplace in a way which is desirable from the point of view of prevention. In an ideal case, the education should not only motivate for the proper use of equipment, but also for taking additional measures beneficial to health such as physical exercises or sports to counterbalance the one sided strains of the work. Therefore, the

information and training can be considered as an effective instrument if they result in conscious, health preventive and health promoting behavior.

In the Czech evaluation, a relatively small proportion of establishments (36.5 %) stated that they train their employees, at least occasionally (*Employer survey, Tab. for question 13*). Most establishments, however, do not provide workers with information and training related to OHS issues of VDU work at all. Unfortunately, the analysis of the motivation for the application and/or non-application of this tool at the establishments level can give only a limited insight into this problem. Most of the establishments (45.2 %) do not train and educate VDU workers in OHS issues because they do not consider it necessary (*Employer survey, Tab. for question 15*). An additional 22.4 % of establishments stated that they have other priorities than training and education. Almost one third of the establishments (29.6 %) intend to introduce the training and education of VDU workers in the near future. It follows that the majority of employers do not recognize the information and training to be a relevant instrument, at least at present.

The employer survey did not collect directly data which would allow for unequivocal conclusions. Nevertheless, the available data suggest that information and training do not contribute significantly to the current accomplishments of the VDU Directive/transposition in the Czech Republic. The reason is the low implementation rate of this instrument due to the prevailing perception of information and training as the irrelevant activity. On the other hand, this fact cannot be interpreted as evidence of any low effectiveness of this instrument!

Protection of workers' eyes and eyesight

A suitable indicator for assessing the effectiveness of protecting of workers' eyes and of the effectiveness of providing eyesight tests is hard to find. Both, the employer and employee surveys have a cross-sectional character; therefore, they can, in principle, provide only prevalence indicators which are conceptually unacceptable for this type of evaluation. For example, the prevalence of identified eyesight problems in the establishments providing this health service to their employees can be interpreted as an indication of a problem (failure of preventive measure, etc.), but at the same time it can be the consequence of better healthcare resulting in identification of cases which would otherwise escape attention. Furthermore, analogously to cost benefit evaluation, this part of the study would need additional information, which practically is not available at the moment when the respondent is required to fill in the questionnaire. Therefore, the Czech evaluation of the VDU Directive does not deal with the effectiveness of this particular instrument.

Daily work routine

At first sight the provision on daily work routine is aimed at ensuring that breaks are taken or that work with VDU is alternated with other types of activities. From this perspective, it is one of the most successfully implemented instruments of the VDU Directive in the Czech Republic (only 5.3 % of employers deny their workers taking breaks) (*Employer survey, Table for question 16*). However, the implementation of breaks is only an intermediate step towards "*reducing the workload at the display screen*", as suggested in Article 8 of the VDU Directive. The possibility of breaks is definitely a desirable effect of this instrument. Nevertheless, it is not a suitable measure of alleviation from the workload. If reduction of the workload is question, then neither the frequency of breaks nor the length of breaks are useful. On the one hand, both increasing the frequency of breaks and/or increasing the length of breaks, particularly when breaks are taken at one's discretion, can indicate an occurrence of mental stress. On the other hand, for workplaces that imply a larger degree of autonomy and at the same time a high pressure of work, the effectiveness of the measure is limited, because

the breaks are often not taken and, therefore, reduction of the workload does not take place. To sum up, the implementation of breaks, however desirable, is not possible to interpret in terms of effectiveness.

5.2. Satisfaction of the employees with their workstation

If the conceptualization of a direct and unambiguous indicator of the effectiveness of the individual instruments of the VDU Directive is not feasible in the framework of ex-post evaluation, then we have to attempt to define another indicator. One of the general goals of the VDU Directive is the satisfaction of the employees with their VDU-related occupational activities; therefore, as an indicator of the effectiveness of the VDU Directive we can use the degree of satisfaction with working conditions. Moreover, it is possible to investigate which elements of the occupational environment and working conditions contribute less or more to this general satisfaction in employees.

This part of the survey does not intend to precisely assess the physical quality and arrangement of the VDU workstation and occupational environment as they are set up in the Annex of the Directive and the Czech national transposition, respectively, but it evaluates subjective feelings of the employees. The drawback of this evaluation is that responses of the individual subjects involved in the study can be heavily influenced by knowledge about how an ideal workplace should look like. The employees sensitized by a thorough knowledge might tend to be more critical than one who has never been informed about the criteria a good VDU workplace has to meet. Consequently, this indicator of effectiveness of the VDU Directive is easily feasible; however, it can be confounded either by the lack of knowledge or exaggerated expectations of employees. (An alternative to this approach is to collect "hard" data by means of carrying out formal inspections at workplaces. It was, however, beyond the scope and possibilities of this survey.)

Adjustment of the workstation

Most of the respondents among employees (77.0 %) expressed their satisfaction with the physical set-up of the workstation (optimal height of the work desk and the chair adjustment with respect to the distance from keyboard and video display screen) (*Employee survey, Table for question 129*). The level of the satisfaction with the configuration of the furniture and its adjustment was independent of the size of the establishment. The level of satisfaction in the the Czech Republic is similar to the satisfaction found in Dutch employees (65 %) and the level of satisfaction seen in German employees (78 %).

Lighting of the workplace

A great majority, 86.6 %, of workers are satisfied with the light conditions at their work station. In contrast, a relatively large number of Dutch and German workers criticized inadequate light, glare and reflections (*Employee survey, Tab. for question 32*). (The wording of the Czech question was more general; therefore, it is hard to compare these countries).

Microclimatic conditions

Somewhat lower is the satisfaction with microclimatic conditions. In the Czech Republic, 68.1 % of employees are satisfied with temperature and humidity at the workplace (*Employee survey, Tab. for question 33*). In the other countries, similar questions were not asked. An interesting feature is that we have observed an inverse relationship between the level of satisfaction and the size of enterprise.

Willingness of employers to satisfy the wishes of employees

The attitude of employers towards employees can be characterized by the way how employers react to the wishes of workers. If these wishes are directly related to the quality of workplace or occupational conditions, then the reaction of employers can be used as a measure of effectiveness of the VDU Directive/transposition. Of course, this statement implies that the employer's behavior is modified particularly by knowledge of the VDU Directive/national transposition, which may not be the case.

According to the employee survey, 41.9 % (N=891) requested supplementation with ergonomic equipment (*Employee survey, Tab. for question 30*). A positive response from the employers was reported in 94.7 % (N=844) of cases (*Employee survey, Tab. for question 31*). There were no apparent differences in rates given by small and large establishments.

5.3. Conclusions

Despite difficulties with conceptualization of exhaustive direct and indirect indicators of the effectiveness of the VDU Directive, even in the survey of a cross-sectional nature it is possible to define simple and easily obtainable indicators of this sort. The willingness of the different institutions to rely on risk analysis of the workstation speaks in favor of the usefulness of this instrument of the VDU Directive (direct measurement of the effectiveness of the VDU Directive would require additional data not easily available at the time of survey). Contrary to the positive picture of the effectiveness of the risk analysis, data on information and training of employees show that the majority of the employers do not recognize this instrument to be relevant, at least at present. As a result, information and training do not contribute significantly to the current accomplishments of the VDU Directive in the Czech Republic. Protection of workers' eyes and eyesight and the daily work routine was not recognized to be applicable in this type of evaluation. Particularly, the evaluation of the effectiveness of protecting the eyes and eyesight would require additional (cohort) data.

As far as the subjective satisfaction of employees with the workstations is concerned, then the employee survey indicates that the vast majority of workers are satisfied with their work station and occupational environment. An interesting finding is that in contrast to the lower degree of the implementation of VDU Directive instruments in small businesses, there are no substantial differences in the level of satisfaction when comparing small and large establishments. (The level of satisfaction in small establishments is sometimes even higher.) With the data on hand we can consider as an acceptable explanation at least two alternatives: First, satisfaction is influenced by other intervening variables (salary, etc.). Second, more satisfaction can be given by the possibility for informal and more efficient ways how to solve problems in small establishments. On assumption that the behavior of employers is influenced, besides other factors, also by the VDU Directive/transposition, then also the high willingness of employers to satisfy the wishes of employees regarding occupational conditions speaks in favor of the effectiveness of the VDU Directive.

6. Estimation of costs and benefits

6.1. What are the costs and benefits incurred by the Directive? (How) Can they be measured?

The estimate of expenses associated with the implementation of the VDU Directive on the employers' side is a particularly difficult task. The main reason is that the estimation of monetary costs made on a sound basis is practically impossible within the few minutes that

are disposable for answering the question in the questionnaire. It would require a substantial effort to get together the necessary data. The question remains whether such data are available at all. The study has a retrospective character and there is no requirement by law to collect relevant information. Moreover, in the case of the Czech Republic, a part of the costs is allocated not to the employers but to the social system (e.g. general health insurance).

The estimate of the direct and indirect costs of VDU Directive implementation is complicated by many problems. Similarly as the situation in the old EU member states, also in the Czech Republic it is extremely difficult to distinguish between the influence of factors such as technological progress or improvements in the organization of work on the total costs associated with the Directive. Besides that, employers' expenses and behavior were simultaneously affected by enormous changes of the whole legislative milieu, resulting from the process of harmonization of the Czech legislation with that of the EU. In this context it is worth saying that the VDU Directive has been in force in the Czech Republic since the year 2001; however, it does not mean that there were no OHS regulations imposed on work with VDU prior to 2001. At present we can only speculate, but the current costs of VDU Directive implementation can also be affected by demands of the previous legislation.

The calculation of benefits in monetary terms is even more difficult. In spite of the fact that econometric indicators of that type are published from time to time, their reliability and value are dubious. Analogously to costs estimate, the benefits usually attributed by employers also to the VDU Directive can be related to a number of other factors (e.g. labor productivity). As a result, estimates of the benefits caused by the VDU Directive itself are difficult to obtain.

With respect to these difficulties of identifying costs and benefits and of clearly attributing them to the VDU Directive, it seems to be a meaningful alternative not to restrict the cost-benefit equation solely to monetary aspects. Instead, subjective evaluation of the relevant players should take priority over the seemingly "objective" estimation of so-called "hard facts". In this survey, the only feasible option is to rely on the subjective perception of the relation between the benefits and costs in the parties interested.

6.2. The ratio of costs and benefits – an alternative, non-monetary approach

In the Czech Republic the majority of employers, on average 65.1 % (the range between 58.5 % in small establishments and 73.7 % in the largest establishments), appreciate the implementation of good practice of work with VDU for its contribution to wellbeing of employees (*Employee survey, Table for question 30*). An additional 38.4 % of employers (range from 28.3 % in small establishments to 68.4 % of large establishments) emphasize as the main contribution of good practice to be in the prevention of complaints, health problems and sickness leaves of employees. A relatively small percentage of employers (17.3 %) perceived the implementation of good practice only as a way of complying with legislation (range from 18.8 % in small businesses to 15.8 % in large businesses). The perception of the implementation of good practice in work with VDU is apparently better in the larger enterprises than in the small ones.

Figures describing perception of the cost-benefit ratio by employers are less reliable, because of the large number of subjects (61.0 %, N=782) who were not able to judge it. Nevertheless, 16 % (N=205) of respondents believed that costs and benefits are approximately balanced (range from 12.7 % in small establishments to 31.6 % in large establishments) (*Employer survey, Tab. for question 31*). An additional 8.2 % (N=105) of employers expressed the

opinion that benefits significantly exceed costs (range from 6.7 % in small establishments to 15.8 % in large establishments). In contrast, the conviction that costs are definitely higher than benefits was stated by a minority – 19.7 % (N=124) of respondents (range from 4.4 % to 11.6 %).

6.3. Conclusions

Not surprisingly, the majority of employers in the Czech Republic were not able to respond to the question aimed at the cost-benefit ratio. Nevertheless, the available data suggests that approximately one quarter of the employers perceived the costs of the implementation of the VDU Directive to be reasonable in respect to benefits (including subjects who consider benefits to be higher than costs). Only a minor number of employers, approximately one fifth, thought the costs to be significantly higher than benefits. The distribution of the opinion on the cost-benefit ratio seems to be quite consistent with the appreciation of good practice in work with VDU. In this case the overwhelming majority of employers emphasize the direct effects of good practice on the well-being of workers and their health status.

7. Enforcement

The available data suggest that provisions of the VDU Directive/transposition are implemented to various degrees in the Czech Republic. According to employers the rates of implementation are lower than 50 % for example in case of risk analysis (30.9 %), education and training (36.5 %), consultation with representatives of employees (20.1 %), provision of eye and eyesight tests (16.9 %) or provision of special corrective appliances (3.9 %) (*Employer survey, Tables for questions 11, 13, 20, 22, 23*). In spite of the fact that the enforcement strategy and practices of the VDU Directive and its national transposition, respectively, were not the aim of this research, failure to enforce the legislation can be considered to be a factor contributing to this undesirable situation.

The lack of knowledge or low comprehensibility of legislation may not be necessarily a suitable explanation for these low implementation rates. For example 67.6 % of employers who clearly denied VDU workers education and training, explained their attitude by a lack of the feeling of necessity (45.2 %) or by different priorities (22.4 %) (*Employer survey, Tab. for question 15*). These facts admit the interpretation, that despite knowledge of the legislation, employers do not put some provisions into practice because they do not recognize them to be relevant on the one hand, and because they are not afraid of the power of coercion of supervising institutions on the other. It is obvious that there are other alternatives such as failing of dissemination strategy of information which is not delivered to the small and medium size establishments, etc; nevertheless, in future research, the role of enforcement and its contribution to the implementation of any legislation should be accounted for.

8. Relevance

The relevance of a legislative measure refers to the degree to which such measure results in intended and desirable changes of reality. If the VDU Directive/transposition deals with the OHS at work with VDU, then, in general, the most important measure of its relevance would be the protection and/or improvement of VDU workers' well-being. However, the phenomenon of well-being is extremely complex, not applicable to our purposes. Therefore, we had to simplify the assessment of the relevance of the VDU Directive and restrict it to the

level of perception of impacts of the regulations and needs for a compulsory regulation of VDU in employers and employees.

8.1. Assessment of impact

The subjective evaluation of any impact of the VDU Directive/transposition in employers can be interpreted as an alternative measure of relevance. This approach is analogous to one used in estimating the cost-benefit ratio. Most of the employers, on average 65.1 %, understood the VDU Directive as being a contribution to the improvement of occupational conditions of the VDU workers (the range of rates from 58.5 % in small establishments to 73.7 % in the largest ones) (*Employer survey, Tab. for question 30*). An additional 38.4 % of employers (range from 28.3 % in small establishments to 68.4 % in the largest ones) emphasized the prevention of complaints, health problems and sickness leaves of employees.

8.2. Adequacy of the scope

The opinion of the employers about the adequacy of the scope of the provisions regulating the VDU related work can indirectly indicate the perception of the impact of the VDU Directive. The current scope of the legislations regulating work with VDU was evaluated by employers in the following way: On average, 49.2 % of employers considered the scope of the legislation to be adequate (range from 44.2 % in small businesses to 63.2 % in the largest establishments), an additional 18.5 % employers thought the legislation to be unnecessarily extensive (range from 19.0 % in small establishments to 13.2 % in the largest ones) (*Employer survey, Table for question 32*). The most interesting finding is that 7.6 % of employers considered the scope of the VDU regulation to be insufficient. This fact can be interpreted as an evidence of a positive perception of the legislative regulations concerning VDU and as an indirect expression of a need for more thorough regulations.

8.3. Need for regulation

An unequivocal interpretation with regard to relevance of the VDU Directive/transposition allows the answers of employers on the question dealing with the need for legal regulations in this area. The majority of employers (58.2 %) stated that the legal regulations are desirable (range from 48.2 % in small establishments to 84.2 % in the largest ones) (*Employer survey, Tab. for question 33*). In contrast, 34.5 % of employers do not consider it necessary (range from 38.8 % in small establishments to 15.8 % in the largest ones).

Not surprisingly, the percentage of employees who consider the legal regulations concerning VDU related work to be reasonable is higher than in employers. The prevalent opinion of employees (71.1 %) was that there was a need for regulations (range from 58.5 % in small establishments to 80.0 % in the largest ones) (*Employee survey, Tab. for question 41*). Approximately one quarter of employees (range from 36.8 % in small establishments to 15.6 % in the largest ones) disapprove these regulations.

8.4. Conclusion

The vast majority of the employers appreciate the positive impact of the VDU Directive/transposition. More than half of the employers as well as employees agreed on the need to legally regulate VDU related work. Moreover, a small fraction of employers do not consider the current scope of the legislation to be sufficient. In spite of the fact that direct measurement of the relevance is hard to obtain, we can conclude that available quantitative data support the relevance of the current regulations on VDU related work, and the VDU Directive, respectively.

9. Conclusions based on the quantitative survey (pilot study)

The major aim of the project on the evaluation of the VDU Directive was to develop a methodology suitable for an ex-post evaluation. This process included also the pilot studies carried out in all participating countries. The goal of this chapter is, therefore, the generalization of the pilot data obtained by means of quantitative surveys – the pilot study – performed in representative samples of employers and employees in the Czech Republic. Because these surveys cover many complex issues, we discuss our findings at two levels: The first one shortly summarizes an overall role of the VDU Directive for the formation of an awareness of the health risks related to work with VDU and a general perception of impacts and benefits associated with the VDU Directive. The second level deals with specific instruments of the VDU Directive. Although we have primarily attempted to interpret the quantitative results of the pilot study in this chapter, it is not possible to avoid some comments on the closely interrelated issue of methods.

9.1. General comments and conclusions

The Czech national transposition of the VDU Directive has been undoubtedly contributing to the enhanced awareness of VDU related OHS issues. Although we used a large scale of different indicators and two target groups characterized by different interests, all the time the spectrum of obtained statements contained a fraction of subjects who were affected by the national regulations concerning VDU related work. Despite certain conceptual problems with defining adequate indicators, the available evidence speaks in favor of the VDU Directive/transposition.

The majority of employers acknowledge the usefulness of the legal provisions, with about two thirds being convinced that the legislation is appropriate and approximately the same proportion of employers is convinced that it helps to improve the working conditions and well-being of employees, respectively. Most employers also acknowledge the fact that VDU work is a potential cause of health problems. The cost benefit ratio of the regulations is evaluated mostly as positive (at least by those who felt they were able to give a statement at all).

The “success” of the VDU Directive, however, is far from being a full one.

- On average 21.3 % of employers (range from 25.0 % in small establishments to 2.6 % in the largest ones) as well as 10.1 % of employees still believe that VDU related work cannot cause any health problems (Employer survey, Table for question 9; Employee survey, Tab. for question 7).
- There are indicators suggesting that aspects of mental stress and time pressure are not yet in the focus at the establishment level.
- Third, it would be an oversimplification to believe that all positive aspects observed in this study are attributable to the VDU Directive.
- Finally, sometimes it was not possible to measure the variable of interest directly and the surveys had to rely on surrogate indicators, the validation of which was not completed.

9.2. Evaluation of the specific instruments

The VDU Directive uses several instruments to intervene in different OHS areas related to work with VDU. The most important of them were the subject of the study also in the Czech Republic.

The level of awareness and knowledge of the national transposition of the VDU Directive is reasonably high in the Czech Republic and is roughly comparable to that in Denmark and Germany or the Netherlands.

As far as the implementation of the legal regulations is concerned, the results of the surveys are mixed: The numbers of employers regularly carrying out the risk analysis, offering eyesight tests (and special glasses) or providing training of employees are relatively low. The other instruments such as the obligation to guarantee employees breaks, the provision of ergonomic equipment or the consideration of software ergonomics are being implemented quite well.

Perhaps the most important reasons for the relatively low level of implementation for some of the instruments of the VDU legislation were given by the employers themselves:

- Most of them do not pay any attention to the OHS related issue of the work with VDU because they are preoccupied by other, higher priority issues. Many of them, however, are willing to introduce the respective instruments in the “near” future.
- Other employers emphasized their doubts about the effectiveness and/or relevance of the legal provisions.
- A broad group of employers do not consider some of the instruments, e.g. the requirements on information or training of employees, to be necessary.
- Roughly one third (34.5 %) of employers do not see any need for the legal regulations in this field (Employer survey, Table for question 33).

10. Evaluation of methodology

The Czech Republic joined the evaluation substantially later than the other participating countries, some of which were finishing their national reports at the time we commenced the first steps of the project. Consequently, the Czech evaluation could take advantage of applying the methodology developed in the other collaborating countries and concentrate on the feasibility of the surveys. Therefore, in this chapter we are going to discuss the research methods mostly from the point of view of our practical experience. In case of greater interest in the discussion of theoretical issues such as validity of measurements, precision, reliability, etc., then we refer to the final Cross-National Report.

10.1. Merits of the pilot evaluation

The evaluation was designed as a cross-sectional survey. This sort of survey allows for prompt obtaining of information from a representative sample of study subjects, information relevant at the time of the survey. At least in theory, the size of the sample and its structure can be chosen with respect to the required precision of the expected results. The existence of the explicit official roster of the study subjects (the enterprises economically active in the Czech Republic) makes from the selection of the eligible subjects a relatively simple task.

The use of questionnaires based on the common terms of reference directly administered to employers and employees enable to evaluate the quality of the working environment, e.g. the actual state of the workstations, as well as the perception of the problems, some of which are not easily quantifiable, in a standard manner. The consistency of the answers given by employers and employees from the same establishments further enhanced the reliability of the survey. (Statistical evaluation of the concordance and discordance of the responses will be discussed in an independent research report).

The analysis of responses from employers and employees gives an insight to which degree individual provisions/tools of the legislation (national transposition of the VDU Directive) shape the behavior both of employers and employees, and allows for a direct identification of factors associated with VDU workers' well-being. Because of the complex nature of the relationships between separate determinants of well-being, this type of analysis requires the possibility to account for a number of potentially intervening variables. The design of this evaluation easily allows for the collecting of all necessary data and the inclusion of suitable questions in the questionnaires during the design stage of the study.

Besides an array of other factors, the validity of each survey is dependent on the willingness of the selected subjects to take part in the study, in other words, on the response rate of initially selected subjects. A low response rate would diminish its validity, because it can introduce a selection bias in the study. The response rate of 91.1 % (N=1,366 including 1,283 of establishments with VDU related work lasting for more than 4 hours per day) from the sample of 1,500 enterprises observed in the Czech Republic indicates, that a suitable approach based on the involvement of the regional public health authorities, who took the responsibility for the contact with top management of the selected enterprises and performed the most difficult field part of this evaluation has led to a satisfactory result.

The last, but very important comment is devoted to the scientific value of the Czech evaluation. The descriptive analyses of the data summarized in chapter 9 and presented in detail in chapters 3-5 are organized with respect to specific needs of the integrated cross-national evaluation. However, the research potential of the data is substantially higher. A very important feature of the Czech evaluation is the possibility to link records of employers and employees from the same establishments. This fact allows not only for a vague evaluation of the consistency of responses of employers and employees, as it has been presented in the previous chapters, but also for formal statistical tests of dependence or independence of phenomena of interest within the both groups of employers and employees and between these two groups. A research report focused on data exploitation will follow in the near future (the major aim of this part of the research is to develop methods and demonstrate the feasibility of the suggested surveys).

10.2. Limitations of the pilot evaluation

The most serious drawback of the cross-sectional survey and an ex-post evaluation in general is of a philosophical nature. By means of the cross-sectional survey it is not possible to solve the most interesting question, namely what would have happened if the legislative measure to be evaluated, in this case the VDU Directive/transposition, had never been implemented. In the Czech context this issue is even more complicated by the fact, that before the implementation of the VDU Directive 90/270/EEC in 2001 and the admission of the Czech Republic in the EU in 2003, there had already existed other laws and regulations specific to work with VDU. On the other hand, research tools which would be able to tackle this problem do not exist. Still, the methods developed in the framework of the VDU evaluation allow, at

least partially, for a retrospective identification of the factors significantly associated with the current status quo at workplaces.

We have mentioned several times already the problems encountered in attempts to develop valid, unambiguous and useful indicators. The evaluation of the balance between cost and benefits can be taken as an example. However, it is not only the issue of complexity of measured phenomena, but also a problem of the availability of maybe existing data at the time of the survey and the readiness of the study participants to use it. It is unrealistic to believe that employers or employees are able to give reliable answers to questions, the extent of which goes far beyond the area of their expertise. The consequence is a high frequency of missing answers in the case of some questions.

Another limitation of the ex-post evaluation of the legislation stems from the extreme number of factors affecting the endpoints of interest. Although the VDU directive has been in force since 2001 in the Czech Republic, even during the period of 6 years so many important and hardly controllable factors have been involved (technical development, organization of work, education of workers, etc.) that it would be a gross simplification to believe that questionnaires containing a few pages can register all relevant information.

10.3. Conclusions

The Czech evaluation of the VDU Directive unequivocally demonstrated the feasibility of the study, the ability to supply meaningful data which can be easily and clearly interpreted. The major advantages of the ex-post evaluation as it was performed in the Czech Republic include:

- Provision of information on a statistically solid and reliable basis, whereby verifying (or disproving) the views of employers as well as external stakeholders.
- Objective information, applicable to a comparison between countries and suitable for cross-national integration.
- Information on the impact the instruments of the legislation have on employee and their behavior.
- Possibility to check up on potentially intervening/confounding variables.
- High response rate.
- Research potential which goes far beyond the descriptive study.

The most significant disadvantage of the ex-post evaluation of the VDU Directive/transposition is related to the insurmountable problem of the limited ability to say exactly what would have happen if the VDU Directive and its national transposition would not have been implemented. The other encountered problems are listed below:

- The problem to construct valid, unambiguous and interpretable indicators, validation of the questionnaire at the national level.
- The availability of existing data at the time of the survey.
- Time and resources available to employers to respond to the questionnaire.
- A number of potentially intervening/confounding factors affecting the endpoints of the evaluation and their suitable control.

Technical, logistic and budgetary, etc. aspects of the organization of the evaluation are not the matter of interest. This report is focused on feasibility and methodological issues of the ex-post evaluation of the VDU Directive under Czech specific conditions. The data are presented

in a way so that they be easily integrated into the cross-national report. Therefore, we omitted a substantial piece of information of local importance (e.g. data on employees working with VDU in spans of less than 4 hours). A report dealing with these aspects in detail will follow.

11. Standpoints of the key stakeholders

11.1. The standpoint of the Ministry of Health of the Czech Republic

The Ministry of Health of the Czech Republic acknowledged the high quality of the draft of the national evaluation of the Directive 90/270/EEC and appreciated the effort developed by the workers of the Center of Occupational Health.

Regarding the implementation of Article 9 of the VDU Directive, the Ministry of Health made the following comment: “Article No 9, dealing with occupational health care, and particularly with the entitlement of employees to an appropriate eye and eyesight test carried out by a person with the necessary capabilities has not been implemented by any special legal provision yet. It is given by the fact that the Act on occupational health care has not been passed up to the present time. Nevertheless, the requirements of this Article have been met in the Czech Republic. Article 9 admits that protection of workers' eyes and eyesight may be provided as part of a national health care system. Paragraph 40 of Act No. 20/1966 Coll. on protection of people’s health, as amended, imposes an obligation to ensure occupational health care on employers. Check-ups carried out in employees are an obligatory element of occupational health care. The check-ups with a special scope are carried out in the case of employees engaged in jobs classified according to the paragraph 39 of the Act No. 20/1966 Coll. as risky and common check-ups are carried out in the other employees. If the VDU work is categorized as a risky one, then the employer has to ensure pre-employment and periodic check-ups, the scope and frequency of which is determined by the public health authorities. Regular medical check-ups are performed in the span of 5 years and in employees older than 50 years in the span of 3 years. Because the eyesight examination is an integral (and *lege artis*) part of the check-ups and the occupational physician is a person with necessary capabilities, the requirements of the provisions set in item 1 of Article 9 are met not only in the case of pre-employment check-ups, but also in the case of all periodic check-ups. The requirements in item 2 of Article 9 are met in an analogous way. Each medical practitioner who suspects eyesight failing (or any other eye disorders), including occupational physicians, has to refer his/her patient to a specialized ophthalmologic examination. Our last comment addresses the issue of the necessary capabilities of the person carrying eyesight tests, which are actually not specified in the VDU Directive. It seems as though the required eye and eyesight tests could be carried out by a person without health education, trained only in the use of eye screening devices. Because of the enormous number of employees working with VDU, the ensuring of these examinations as an integral part of the pre-employment check-ups and subsequently periodic check-ups by occupational health care facilities should be understood as being a reasonable measure how to meet the requirements of the VDU Directive.”

11.2. The standpoint of the other stakeholders.

The other addressed stakeholders acknowledge the draft of the evaluation of the VDU Directive in the Czech Republic as a sound, to the point speaking, unbiased and easy to understand report, reflecting the course and results of the VDU Directive implementation in the Czech Republic (Tuček, Skotnica, Kosina). With approval they commented on the array of the expected as well as surprising findings (Kosina). The fact that the small majority of all

enterprises do not provide employees with information and training in the case of the VDU work is thought to be alarming, particularly among labor unions (Kosina). Also the statement of the majority of employers that they are aware of an existence of the OHS legislation specific for the VDU work was a surprise for the experts in the field. It is well established fact, that the employers do not know anything about substantially more important directives dealing with OHS than the VDU Directive. The stakeholders pointed out also the comparability of the collected data with other EU member states (Malý). The representatives of the Czech Statistical Office (Skotnica) commented on potential problems of the analysis. They pointed out that its weak point can be the global evaluation based on an aggregation of the data regardless the size of the enterprises. In theory, the strata should be weighted in some way. However, it is upon the reader to interpret the results which are published also with respect to the size of the enterprises. Considering the description of methods given in deep detail it is easy to recalculate the aggregated results according to the size of the strata. The Czech evaluation of the VDU Directive unequivocally demonstrated the feasibility of such studies and an ability to obtain clearly interpretable data. This study met all expected methodological and other professional expectations (Malý).

12. APPENDIX

12.1.1 Questionnaire addressed to employers

Introductory remarks

Currently, the evaluation of legislation relating to occupational health and safety is in progress in the European Union. The objective is to simplify the legislation and to make it more transparent and less bureaucratic.

We would appreciate your completing this questionnaire, which is a part of the evaluation process. The questionnaire specifically applies to the legislation regulating **occupational safety and health at work with visual display units**. Your opinion in the matter is of great importance for us and for success in the project. Completion of the questionnaire takes about 20 minutes. We thank you in advance for your time and your willingness to assist in a good case.

The survey is organized by the National Institute of Public Health in Prague and is supported by the Ministry of Health of the Czech Republic.

The questionnaire is anonymous and all information will be treated confidentially. Therefore, you can be quite open in filling it out.

Two terms are frequently used in this questionnaire - **visual display unit (VDU)** and **workstation**. They are used in the following meanings:

Visual display unit is the screen of a desktop or a laptop computer or possibly of other equipment.

Workstation is a computer system including the display screen equipment with peripherals.

Please fill in your answer or choose and mark one or more options that best reflect your opinion.

Background information on the employer

Indicate the sector of economic activity, your organization belongs to.

- Agriculture
- Mining or production of raw materials
- Manufacturing industry
- Power engineering
- Construction
- Wholesale or retail sale
- Accommodation and catering
- Transport
- Financial sector
- Other services
- Public administration, police, armed forces
- Education
- Health care

Does your enterprise belong to the public or private sector?

- Public sector
- Private sector

Approximately, how many employees are there in your enterprise?

- 1-9
- 10-49
- 50-249
- 250-1000
- 1000 or more

Do some of your employees work with VDU?

- Yes
- No

<p>Estimate the percentage of your employees regularly working with VDU.</p> <p>Less than 10 % 10-30% 30-50% 50-80% 80-100%</p>
<p>Estimate the percentage of your employees who regularly work with VDU longer than 4 hours per working day.</p> <p>Less than 10% 10-30% 30-50% 50-80% 80-100%</p>
<p>What type(s) of working activities do your employees usually do with VDU?</p> <p>Text processing Data entry and processing Using graphic software Operating machinery Technological process control Information services, call centers etc. Monitoring of events and movement of people Other</p>
<p>What types of VDU have been used in your enterprise?</p> <p>Desktop PC Portable PC (notebook, laptop) Other (e.g. screens for monitoring events)</p>
<p>Do you believe that working with VDU can cause any health problems? If yes, which ones?</p> <p>No, it cannot cause any health problems. Headache Upper and/or low back pain Pain in the upper extremities Problems with eyes and vision Tiredness Mental stress Skin problems Health damage from radiation Other adverse effects</p>
<p>Do your employees working with VDU complain of such difficulties?</p> <p>Yes, commonly. Yes, sporadically. No.</p>
<p>Indicators of good practice at work with VDU</p>
<p>In your enterprise, has a risk analysis at VDU workstations been performed in order to evaluate the safety and health conditions?</p> <p>Yes – <i>Skip to question 12.</i> No – <i>Skip to question 15.</i></p>
<p>Who has the risk analysis initiated?</p> <p>Employer Trade union Employees Other I don't know</p>
<p>Have your employees been instructed on how to organize the workstation to avoid potential health problems associated with VDU work? For instance, are they aware of the appropriate working surface height and seat adjustment that will result in the correct viewing distance to the screen?</p> <p>Mostly yes Sporadically No – <i>Skip to question 15.</i></p>

<p>How and when are your employees instructed?</p> <p>Individual instruction before commencing this type of work Individual instruction during performing this type of work Group instruction Provision of printed materials Passing a training course Other</p>
<p>If they have not been instructed, why?</p> <p>We do not consider it necessary. We are engaged in other priorities. It would be too expensive and time-consuming. We intend to introduce it in future. Other reason</p>
<p>Are your employees in a position to interrupt their work with VDU by breaks?</p> <p>Yes No – Skip to question 19.</p>
<p>If yes, describe the mode of breaks.</p> <p>Employees can take breaks at their own discretion as need may be and if possible Skip to question 20. Breaks are fixed by employer – Skip to question 18.</p>
<p>Give the usual frequency and duration of breaks.</p> <p>..... minutes per hours. Skip to question 20.</p>
<p>If not, why?</p> <p>We do not consider it necessary. The character and pace of work do not allow for breaks. Other reason:</p>
<p>In your enterprise, has the issue of work with VDU been consulted with trade unions or other workers' representatives?</p> <p>Yes – Skip to question 22. No</p>
<p>If not, why?</p> <p>We do not consider it necessary. There are no trade unions or workers' representatives in our enterprise. Other reason</p>
<p>Do you provide your employees working with VDU with the opportunity of an appropriate eye and eyesight test?</p> <p>Yes No</p>
<p>If it is necessary and if normal corrective appliances cannot be used, do you provide your employees with special corrective appliances appropriate for the work with VDU?</p> <p>Yes No</p>
<p>Do you provide your employees with ergonomic equipments such as a footrest, a document holder or a mouse pad, if they ask for it?</p> <p>Yes, commonly. Yes, for selected employees. No</p>
<p>When selecting and commissioning software, do you take into consideration ergonomic aspects?</p> <p>Yes, it is one of the most important selection criteria. Yes, we partly take account of that. No, other criteria are preferred.</p>
<p>Indicators of knowledge of the legislation</p>
<p>Are you aware that health and safety at work with VDU is regulated by legislation?</p> <p>Yes No</p>

<p>Are you aware how health and safety at work with VDU is treated at EU level?</p> <p>No</p> <p>Yes, by which instruction?.....</p>
<p>Are you aware that health and safety at work with VDU is regulated by the legislation of the Czech republic?</p> <p>No</p> <p>Yes, by which instruction?.....</p>
<p>Are you familiar with these provisions?</p> <p>Yes</p> <p>No</p>
<p>In your opinion, what is the main contribution of the implementation of good practice at work with VDU?</p> <p>We will comply with the legislation.</p> <p>It will increase the well-being of employees.</p> <p>It will prevent complaints, health problems, and sickness leave of employees.</p> <p>Other:</p>
<p>How do you estimate the cost/benefit ratio for implementation of the legislative provisions regulating work with VDU?</p> <p>Costs are definitely higher than benefits.</p> <p>Costs and benefits are approximately balanced.</p> <p>Benefits significantly exceed costs.</p> <p>I cannot judge.</p>
<p>In your opinion, is the current legislation regulating work with VDU appropriate?</p> <p>Yes.</p> <p>No, it is unnecessarily extensive.</p> <p>No, it is insufficient.</p>
<p>On the whole, do you consider it appropriate and desirable to regulate work with VDU by legislation?</p> <p>Yes, the legal regulation is desirable.</p> <p>No, it is unnecessary.</p>

Many thanks for completing this questionnaire!

12.1.2 Results for employers

Question 7: What type(s) of working activities do your employees usually do with VDU?

Absolute numbers

7. Type of the VDU activity	Size of establishment					Total
	1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
7.1. Text processing	205	253	154	119	26	759
7.2. Data entry and processing	276	300	204	146	35	962
7.3. Using graphic software	67	76	50	48	10	251
7.4. Operating machinery	5	18	24	30	10	87
7.5. Control of technologic processess	5	11	14	32	9	71
7.6. Information services, call centers etc.	66	54	49	47	15	232
7.7. Monitoring of events and movement of people	10	11	16	23	5	65

The frequencies of answers in percentage

7. Type of the VDU activity	Size of establishment					Total
	1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
7.1. Text processing	45.8%	64.1%	64.2%	74.4%	68.4%	59.2%
7.2. Data entry and processing	61.6%	75.9%	85.0%	91.3%	92.1%	75.0%
7.3. Using graphic software	15.0%	19.2%	20.8%	30.0%	26.3%	19.6%
7.4. Operating machinery	1.1%	4.6%	10.0%	18.8%	26.3%	6.8%
7.5. Control of technologic processess	1.1%	2.8%	5.8%	20.0%	23.7%	5.5%
7.6. Information services, call centers etc.	14.7%	13.7%	20.4%	29.4%	39.5%	18.1%
7.7. Monitoring of events and movement of people	2.2%	2.8%	6.7%	14.4%	13.2%	5.1%

Question 8: What types of VDU have been used in your enterprise?

Absolute numbers

8. Types of VDU used in the enterprise	Size of establishment					Total
	1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
8.1. Desktop PC	385	380	237	157	38	1199
8.2. Portable PC (notebooks, laptops)	127	133	103	101	26	491
8.3. Others (e.g. screens for monitoring of events...)	9	14	19	17	5	64

The frequencies of answers in percentage

8. Types of VDU used in the enterprise	Size of establishment					Total
	1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
8.1. Desktop PC	85.9%	96.2%	98.8%	98.1%	100.0%	93.5%
8.2. Portable PC (notebooks, laptops)	28.3%	33.7%	42.9%	63.1%	68.4%	38.3%
8.3. Others (e.g. screens for monitoring of events...)	2.0%	3.5%	7.9%	10.6%	13.2%	5.0%

Question 9: Do you believe that working with VDU can cause any health problems? If yes, which ones?

a) Absolute numbers and the percentage frequency of answer “yes”

9.1. Health problems associated with the use of VDU – It cannot cause any health problems	Size of establishment					Total
	1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
Yes	112	100	42	18	1	273
Total	448	395	240	160	38	1283
Percentage of „yes“	25.0%	25.3%	17.5%	11.3%	2.6%	21.3%

b) Absolute numbers

9. Health problems associated with the use of VDU	Size of establishment					Total
	1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
9.1. It cannot cause any health problems	112	100	42	18	1	273
9.2. Headache	152	127	114	84	17	495
9.3. Upper and/or lower back pains	177	162	124	96	24	585
9.4. Pain in the upper extremities	56	58	52	45	12	223
9.5. Problems with eyes and vision	218	214	155	116	32	735
9.6. Tiredness	138	136	115	76	22	487
9.7. Mental stress	30	23	22	21	5	101
9.8. Skin disorders	1	1		2	1	5
9.9. Health damage from radiation	12	15	10	6	2	45
9.10. Other disorders	4	4	1	1		10

The frequencies of answers in percentage

9. Health problems associated with the use of VDU	Size of establishment					Total
	1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
9.1. It cannot cause any health problems	25.0%	25.3%	17.5%	11.3%	2.6%	21.3%
9.2. Headache	33.9%	32.2%	47.5%	52.5%	44.7%	38.6%
9.3. Upper and/or lower back pains	39.5%	41.0%	51.7%	60.0%	63.2%	45.6%
9.4. Pain in the upper extremities	12.5%	14.7%	21.7%	28.1%	31.6%	17.4%
9.5. Problems with eyes and vision	48.7%	54.2%	64.6%	72.5%	84.2%	57.3%
9.6. Tiredness	30.8%	34.4%	47.9%	47.5%	57.9%	38.0%
9.7. Mental stress	6.7%	5.8%	9.2%	13.1%	13.2%	7.9%
9.8. Skin disorders	0.2%	0.3%		1.3%	2.6%	0.4%
9.9. Health damage from radiation	2.7%	3.8%	4.2%	3.8%	5.3%	3.5%
9.10. Other disorders	0.9%	1.0%	0.4%	0.6%		0.8%

Question 10: Do your employees working with VDU complain of such difficulties?

a) Absolute numbers

10. Complains of VDU workers about health problems	Size of establishment					Total
	1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
10.1. Yes, commonly	13	27	14	16	4	74
10.2. Yes, sporadically	114	125	109	67	21	437
10.3. No	282	233	113	75	13	717
n.a.	39	10	4	2		55
Total	448	395	240	160	38	1283

b) The frequencies of answers in percentage

Table Total	Size of establishment					Total
	1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
10.1. Yes, commonly	2.9%	6.8%	5.8%	10.0%	10.5%	5.8%
10.2. Yes, sporadically	25.4%	31.6%	45.4%	41.9%	55.3%	34.1%
10.3. No	62.9%	59.0%	47.1%	46.9%	34.2%	55.9%
n.a.	8.7%	2.5%	1.7%	1.3%		4.3%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Question 11: In your enterprise, has a risk analysis at VDU workstations been performed in order to evaluate the safety and health conditions?

Absolute numbers and the percentage frequency of answer “yes”

11. Risk analysis at work station in the enterprise	Size of establishment					Total
	1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
Yes	57	104	110	95	31	397
Total	448	395	240	160	38	1283
Percentage of „yes“	12.7%	26.3%	45.8%	59.4%	81.6%	30.9%

Question 12: Who has the risk analysis initiated?

Absolute numbers

12. Who set off to carry out the risk assessment?	Size of establishment					Total
	1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
12.1 Employer	50	85	96	77	29	337
12.2. Trade Union	1	1	2	2		6
12.3. Employees	2	2	1	2	2	9
12.4. Other	7	16	10	14	1	48
12.5. Resp. does not know	12	11	3	2		28
Total*	57	104	110	95	31	397

*The table total is based on the employers responding “yes” for question 11.

The frequencies of answers in percentage

12. Who set off to carry out the risk assessment?	Size of establishment					Total
	1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
12.1 Employer	87.7%	81.7%	87.3%	81.1%	93.5%	84.9%
12.2. Trade Union	1.8%	1.0%	1.8%	2.1%		1.5%
12.3. Employees	3.5%	1.9%	0.9%	2.1%	6.5%	2.3%
12.4. Other	12.3%	15.4%	9.1%	14.7%	3.2%	12.1%
12.5. Resp. does not know	21.1%	10.6%	2.7%	2.1%		7.1%

Question 13: *Have your employees been instructed on how to organize the workstation to avoid potential health problems associated with VDU work? For instance, are they aware of the appropriate working surface height and seat adjustment that will result in the correct viewing distance to the screen?*

Absolute numbers

13. Are the employees working with VDU instructed in OHS issues?	Size of establishment					Total
	1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
13.1 In most cases	74	116	105	90	29	414
13.2. Sporadically	9	16	16	9	3	54
13.3. No	305	238	111	55	4	714
n.a.	60	25	8	6	2	101
Total	448	395	240	160	38	1283

The frequencies of answers in percentage

13. Are the employees working with VDU instructed in OHS issues?	Size of establishment					Total
	1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
13.1 In most cases	16.5%	29.4%	43.8%	56.3%	76.3%	32.3%
13.2. Sporadically	2.0%	4.1%	6.7%	5.6%	7.9%	4.2%
13.3. No	68.1%	60.3%	46.3%	34.4%	10.5%	55.7%
n.a.	13.4%	6.3%	3.3%	3.8%	5.3%	7.9%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Question 14: How and when are your employees instructed?

Absolute numbers

14. Type of instruction before commencing this type of work.	Size of establishment					Total
	1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
14.1. Individual instruction before commencing this type of work.	47	70	57	52	16	243
14.2. Individual instruction during performing this work.	30	30	31	17	5	113
14.3. Group instruction.	5	39	38	32	11	125
14.4. Provision of printed materials	5	12	18	29	5	69
14.6. Other type of training in OHS issues	5	14	18	11	6	54
Total*	83	132	121	99	32	468

**The table total is based on the employers responding “in most cases” and “sporadically” for question 13.*

The frequencies of answers in percentage

14. Type of instruction before commencing this type of work.	Size of establishment					Total
	1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
14.1. Individual instruction before commencing this type of work.	56.6%	53.0%	47.1%	52.5%	50.0%	51.9%
14.2. Individual instruction during performing this work.	36.1%	22.7%	25.6%	17.2%	15.6%	24.1%
14.3. Group instruction.	6.0%	29.5%	31.4%	32.3%	34.4%	26.7%
14.4. Provision of printed materials	6.0%	9.1%	14.9%	29.3%	15.6%	14.7%
14.6. Other type of training in OHS issues	6.0%	10.6%	14.9%	11.1%	18.8%	11.5%

Question 15: *If they have not been instructed, why?*

a) Absolute numbers

15. Reasons for not providing with instructions in OHS issues related to work with VDU	Size of establishment					Total
	1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
15.1. We do not consider it necessary	172	104	34	11	1	323
15.2. We are engaged in other priorities	51	54	34	19	2	160
15.3. It would be too expensive and time consumin	6	2	3	1		12
15.4. We intend to introduce it in future	62	78	38	30	2	211
15.5. Other reason	30	18	5	5	1	59
Total*	305	238	111	55	4	714

**The table total is based on the employers responding "no" for question 13.*

b) The frequencies of answers in percentage

15. Reasons for not providing with instructions in OHS issues related to work with VDU	Size of establishment					Total
	1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
15.1. We do not consider it necessary	56.4%	43.7%	30.6%	20.0%	25.0%	45.2%
15.2. We are engaged in other priorities	16.7%	22.7%	30.6%	34.5%	50.0%	22.4%
15.3. It would be too expensive and time consumin	2.0%	0.8%	2.7%	1.8%		1.7%
15.4. We intend to introduce it in future	20.3%	32.8%	34.2%	54.5%	50.0%	29.6%
15.5. Other reason	9.8%	7.6%	4.5%	9.1%	25.0%	8.3%

Question 16: Are your employees in a position to interrupt their work with VDU by breaks?

a) Absolute numbers and the frequencies of answers in percentage

16. Are employees in a position to interrupt the work with VDU with breaks?	Size of establishment					Total
	1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
Yes	345	381	226	152	37	1143
Percentage of „yes“	77.0%	96.5%	94.2%	95.0%	97.4%	89.1%
No	41	9	11	6	1	68
Percentage of „no“	9.2%	2.3%	4.6%	3.8%	2.6%	5.3%
Total	448	395	240	160	38	1283

Question 17: If yes, describe the mode of breaks.

a) Absolute numbers

17. The mode of breaks.	Size of establishment					Total
	1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
17.1. Breaks at own discretion...and if possible	307	327	196	135	31	998
17.2. Breaks are fixed by employer	15	39	19	15	5	93
Employees are not in position to interrupt work	35	7	6	4	1	53
n.a.	91	22	19	6	1	139
Total	448	395	240	160	38	1283

b) The frequencies of answers in percentage

Table Total	Size of establishment					Total
	1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
17.1. Breaks at own discretion...and if possible	68.5%	82.8%	81.7%	84.4%	81.6%	77.8%
17.2. Breaks are fixed by employer	3.3%	9.9%	7.9%	9.4%	13.2%	7.2%
Employees are not in position to interrupt work	7.8%	1.8%	2.5%	2.5%	2.6%	4.1%
n.a.	20.3%	5.6%	7.9%	3.8%	2.6%	10.8%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Question 19: If not, why?

Absolute numbers

19. If there are no breaks, give the reasons	Size of establishment					Total
	1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
19.1. We do not consider it necessary	14	3	2	2		21
19.2. Character and pace of work does not allow for breaks	3	1	2	1	1	8
19.3. Other reason	18	3	2	1		24
Total*	41	9	11	6	1	68

**The table total is based on the employers responding “no” for question 16.*

The frequencies of answers in percentage

19. If there are no breaks, give the reasons	Size of establishment					Total
	1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
19.1. We do not consider it necessary	34.1%	33.3%	18.2%	33.3%		30.9%
19.2. Character and pace of work does not allow for breaks	7.3%	11.1%	18.2%	16.7%	100.0%	11.8%
19.3. Other reason	43.9%	33.3%	18.2%	16.7%		35.3%

Question 20: In your enterprise, has the issue of work with VDU been consulted with trade unions or other workers' representatives?

Absolute numbers and the frequencies of answers in percentage

20. Has the issue of work with VDU been consulted with trade union or other employees' representatives?	Size of establishment					Total
	1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
Yes	43	73	60	62	20	258
Percentage of „yes“	9.6%	18.5%	25.0%	38.8%	52.6%	20.1%
No	340	315	173	95	16	941
Percentage of „no“	75.9%	79.7%	72.1%	59.4%	42.1%	73.3%
Total	448	395	240	160	38	1283

Question 21: If not, why?

a) Absolute numbers

21. Reasons for not consulting with workers' representatives.	Size of establishment					Total
	1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
21.1. We do not consider it necessary	77	69	50	41	5	244
21.2. There are no trade unions in the enterprise	220	214	99	35	4	572
21.3. Other reason	23	12	17	14	4	70
Total*	340	315	173	95	16	941

*The able total is based on the employers responding "no" for question 20.

b) The frequencies of answers in percentage

21. Reasons for not consulting with workers' representatives.	Size of establishment					Total
	1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
21.1. We do not consider it necessary	22.6%	21.9%	28.9%	43.2%	31.3%	25.9%
21.2. There are no trade unions in the enterprise	64.7%	67.9%	57.2%	36.8%	25.0%	60.8%
21.3. Other reason	6.8%	3.8%	9.8%	14.7%	25.0%	7.4%

Question 22: Do you provide your employees working with VDU with the opportunity of an appropriate eye and eyesight test?

a) Absolute numbers and the percentage frequency of answer “yes”

22. Do you provide your employees with the opportunity of appropriate eye and eyesight tests?	Size of establishment					Total
	1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
Yes	39	56	55	48	19	217
Total	448	395	240	160	38	1283
Percentage of „yes“	8.7%	14.2%	22.9%	30.0%	50.0%	16.9%

Question 23: If it is necessary and if normal corrective appliances cannot be used, do you provide your employees with special corrective appliances appropriate for the work with VDU?

a) Absolute numbers and the percentage frequency of answer “yes”

23. If it is necessary, (normal corrective appliance cannot be used) do you provide employees with special corrective appliance?	Size of establishment					Total
	1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
Yes	20	14	7	8	1	50
Total	448	395	240	160	38	1283
Percentage of „yes“	4.5%	3.5%	2.9%	5.0%	2.6%	3.9%

Question 24: Do you provide your employees with ergonomic equipments such as a footrest, a document holder or a mouse pad, if they ask for it?

a) Absolute numbers

24. Provision employees with ergonomic equipment (footrest, document holders etc.) if they ask for it?	Size of establishment					Total
	1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
24.1. Yes, commonly	265	261	157	96	25	806
24.2. Yes, for selected employees	25	57	49	50	11	192
24.3. No	105	69	32	12	2	220
n.a.	53	8	2	2		65
Total	448	395	240	160	38	1283

b) The frequencies of answers in percentage

24. Provision employees with ergonomic equipment (footrest, document holders etc.) if they ask for it?	Size of establishment					Total
	1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
24.1. Yes, commonly	59.2%	66.1%	65.4%	60.0%	65.8%	62.8%
24.2. Yes, for selected employees	5.6%	14.4%	20.4%	31.3%	28.9%	15.0%
24.3. No	23.4%	17.5%	13.3%	7.5%	5.3%	17.1%
n.a.	11.8%	2.0%	0.8%	1.3%		5.1%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Question 25: *When selecting and commissioning software, do you take into consideration ergonomic aspects?*

Absolute numbers

25. Do you take in consideration ergonomic aspects of software?	Size of establishment					Total
	1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
25.1. Yes, it is one of the most important criterion	79	87	56	39	10	271
25.2. Yes, we partly take account of that	190	200	121	80	22	615
25.3. No, other criteria are preferred	130	91	52	37	4	314
n.a.	49	17	11	4	2	83
Total	448	395	240	160	38	1283

The frequencies of answers in percentage

25. Do you take in consideration ergonomic aspects of software?	Size of establishment					Total
	1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
25.1. Yes, it is one of the most important criterion	17.6%	22.0%	23.3%	24.4%	26.3%	21.1%
25.2. Yes, we partly take account of that	42.4%	50.6%	50.4%	50.0%	57.9%	47.9%
25.3. No, other criteria are preferred	29.0%	23.0%	21.7%	23.1%	10.5%	24.5%
n.a.	10.9%	4.3%	4.6%	2.5%	5.3%	6.5%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Question 26: *Are you aware that health and safety at work with VDU is regulated by legislation?*

a) Absolute numbers and the percentage frequency of answer “yes”

26. Are you aware that OHS at work with VDU is regulated by legislation?	Size of establishment					Total
	1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
Yes	226	244	171	134	33	809
Total	448	395	240	160	38	1283
Percentage of „yes“	50.4%	61.8%	71.3%	83.8%	86.8%	63.1%

Question 27: Are you aware how health and safety at work with VDU is treated at EU level?

a) Absolute numbers and the percentage frequency of answer “yes”

27. Are you aware how OHS at work with VDU are treated at EU level	Size of establishment					Total
	1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
Yes	21	47	51	56	18	193
Total	448	395	240	160	38	1283
Percentage of „yes“	4.7%	11.9%	21.3%	35.0%	47.4%	15.0%

b) Absolute numbers

27. Which provision sets requirements on OHS at work with VDU in the framework of EU.	Size of establishment					Total
	1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
Directive 90/270/EEC	7	24	22	27	14	94
Directive 89/391/EEC			1			1
Directive EU	2	1	3	5		11
Governmental order 178/2001	1	2	6	1	2	12
Governmental order 432/2003			1			1
Total*	448	395	240	160	38	1283

*The table total is based on the employers responding for question 27.

c) The frequencies of answers in percentage

27. Which provision sets requirements on OHS at work with VDU in the framework of EU.	Size of establishment					Total
	1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
Directive 90/270/EEC	1.6%	6.1%	9.2%	16.9%	36.8%	7.3%
Directive 89/391/EEC			0.4%			0.1%
Directive EU	0.4%	0.3%	1.3%	3.1%		0.9%
Governmental order 178/2001	0.2%	0.5%	2.5%	0.6%	5.3%	0.9%
Governmental order 432/2003			0.4%			0.1%

Question 28: Are you aware that health and safety at work with VDU is regulated by the legislation of the Czech republic?

a) Absolute numbers and the percentage frequency of answer “yes”

28. Are you aware that OHS at work with VDU is regulated by the legislation of the Czech Republic?	Size of establishment					Total
	1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
Yes	74	173	139	114	28	608
Total	448	395	240	160	38	1283
Percentage of „yes“	16.5%	43.8%	57.9%	71.3%	73.7%	47.9%

b) Absolute numbers

28. Which provision sets requirements on OHS at work with VDU in the Czech Republic?	Size of establishment					Total
	1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
Directive 90/270/EEC	2	2	3	1	1	9
Governmental order No.178/2001 Coll.	18	50	40	55	16	179
I do not know	34	28	17	15	3	97
Total*	448	395	240	160	38	1283

*The table total is based on the employers responding for question 28.

c) The frequencies of answers in percentage

28. Which provision sets requirements on OHS at work with VDU in the Czech Republic?	Size of establishment					Total
	1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
Directive 90/270/EEC	0.4%	0.5%	1.3%	0.6%	2.6%	0.7%
Governmental order No.178/2001 Coll.	4.0%	12.7%	16.7%	34.4%	42.1%	14.0%
I do not know	7.6%	7.1%	7.1%	9.4%	7.9%	7.6%

Question 29: Are you familiar with these provisions?

a) Absolute numbers and the percentage frequency of answer “yes”

29. Are you familiar with these provisions?	Size of establishment					Total
	1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
Yes	67	104	96	94	26	387
Total	448	395	240	160	38	1283
Percentage of „yes“	15.0%	26.3%	40.0%	58.8%	68.4%	30.2%

Question 30: *In your opinion, what is the main contribution of the implementation of good practice at work with VDU?*

Absolute numbers

30. Evaluation of positive impact of the legislation on the OHS at work with VDU.	Size of establishment					Total
	1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
30.1. We comply with the legislation.	2	1	1			4
30.2. It increases the well-being of employees.	3	10	3	9	1	27
30.3. It prevents complaints, health problems etc.	4	3	1	3	2	13
n.a.	439	381	235	148	35	1239
Total	448	395	240	160	38	1283

The frequencies of answers in percentage

30. Evaluation of positive impact of the legislation on the OHS at work with VDU.	Size of establishment					Total
	1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
30.1. We comply with the legislation.	0.4%	0.3%	0.4%			0.3%
30.2. It increases the well-being of employees.	0.7%	2.5%	1.3%	5.6%	2.6%	2.1%
30.3. It prevents complaints, health problems etc.	0.9%	0.8%	0.4%	1.9%	5.3%	1.0%
n.a.	98.0%	96.5%	97.9%	92.5%	92.1%	96.6%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Absolute numbers

30.Evaluation of impact of VDU provisions	Size of establishment					Total
	1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
30.1.Compliance with legislation.	84	74	31	27	6	222
30.2. Improvement of well-being of employees.	262	251	167	125	28	835
30.3. Prevention of complains, health problems and sickness leaves of employees	127	147	107	86	26	493
30.4. Other impact.		1				1
Total	448	395	240	160	38	1283

The frequencies of answers in percentage

30.Evaluation of impact of VDU provisions	Size of establishment					Total
	1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
30.1.Compliance with legislation.	18.8%	18.7%	12.9%	16.9%	15.8%	17.3%
30.2. Improvement of well-being of employees.	58.5%	63.5%	69.6%	78.1%	73.7%	65.1%
30.3. Prevention of complains, health problems and sickness leaves of employees	28.3%	37.2%	44.6%	53.8%	68.4%	38.4%
30.4. Other impact.		0.3%				0.1%

Question 31: How do you estimate the cost/benefit ratio for implementation of the legislative provisions regulating work with VDU?

a) Absolute numbers

31. Estimation of cost/benefit ratio for implementation of VDU legislation	Size of establishment					Total
	1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
31.1. Costs are definitely higher than benefits.	47	46	21	7	3	124
31.2. Costs and benefits are approximately balanced	57	55	39	42	12	205
31.3. Benefits significantly exceed costs	30	30	24	15	6	105
31.4. I cannot judge	268	255	148	93	16	782
n.a.	46	9	8	3	1	67
Total	448	395	240	160	38	1283

b) The frequencies of answers in percentage

31. Estimation of cost/benefit ratio for implementation of VDU legislation	Size of establishment					Total
	1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
31.1. Costs are definitely higher than benefits.	10.5%	11.6%	8.8%	4.4%	7.9%	9.7%
31.2. Costs and benefits are approximately balanced	12.7%	13.9%	16.3%	26.3%	31.6%	16.0%
31.3. Benefits significantly exceed costs	6.7%	7.6%	10.0%	9.4%	15.8%	8.2%
31.4. I cannot judge	59.8%	64.6%	61.7%	58.1%	42.1%	61.0%
n.a.	10.3%	2.3%	3.3%	1.9%	2.6%	5.2%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Question 32: *In your opinion, is the current legislation regulating work with VDU appropriate?*

Absolute numbers

32. Appropriateness of current legislation.	Size of establishment					Total
	1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
32.1. Yes, it is appropriate.	198	197	118	93	24	631
32.2. It is unnecessarily extensive	85	72	47	28	5	237
32.3. It is insufficient	26	34	17	17	3	97
I cannot judge	30	28	9	7		74
n.a.	109	64	49	15	6	244
Total	448	395	240	160	38	1283

The frequencies of answers in percentage

32. Appropriateness of current legislation.	Size of establishment					Total
	1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
32.1. Yes, it is appropriate.	44.2%	49.9%	49.2%	58.1%	63.2%	49.2%
32.2. It is unnecessarily extensive	19.0%	18.2%	19.6%	17.5%	13.2%	18.5%
32.3. It is insufficient	5.8%	8.6%	7.1%	10.6%	7.9%	7.6%
I cannot judge	6.7%	7.1%	3.8%	4.4%		5.8%
n.a.	24.3%	16.2%	20.4%	9.4%	15.8%	19.0%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Question 33: *On the whole, do you consider it appropriate and desirable to regulate work with VDU by legislation?*

Absolute numbers

33. Is there a need for legislation in this area?	Size of establishment					Total
	1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
33.1. Yes, the legal regulation is desirable	215	226	153	120	32	747
33.2. No, it is unnecessary	174	152	75	35	6	443
I cannot judge	5	3	1			9
n.a.	54	14	11	5		84
Total	448	395	240	160	38	1283

The frequencies of answers in percentage

33. Is there a need for legislation in this area?	Size of establishment					Total
	1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
33.1. Yes, the legal regulation is desirable	48.0%	57.2%	63.8%	75.0%	84.2%	58.2%
33.2. No, it is unnecessary	38.8%	38.5%	31.3%	21.9%	15.8%	34.5%
I cannot judge	1.1%	0.8%	0.4%			0.7%
n.a.	12.1%	3.5%	4.6%	3.1%		6.5%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

12.2.1 Questionnaire addressed to employees

Introductory remarks

We would like to ask you to complete this questionnaire. It is a part of the project, which is under way in the European Union and which is aimed at the evaluation of the EU legislation relating to safety and health at work.

This particular questionnaire applies to work with visual display equipments. Any work with personal computers or other appliances equipped with a monitor is considered to be the work with a visual display unit. For the sake of brevity we will use also the abbreviation "VDU".

Your opinion in this issue is very important for us and for a success in the project. The completion of the questionnaire takes about 20 minutes. We thank you in advance for your time and for your willingness to assist in a good case.

The survey is organized by the National Institute of Public Health in Prague and is supported by the Ministry of Health of the Czech Republic.

The questionnaire is anonymous and all information will be treated confidentially. Thus you may be quite open.

Please fill in your answer or choose and mark one or more options that best reflect your opinion.

Background information about employee

Are you employed in the public or private sector?

- Public sector
- Private sector

Indicate the sector of economic activity which your employer belongs to.

- Agriculture
- Mining or production of raw materials
- Manufacturing industry
- Power engineering
- Construction
- Wholesale or retail sale
- Accommodation and catering
- Transport
- Financial sector
- Other services
- Public administration, police, armed forces
- Education
- Health care

Can you estimate, how many employees are there in the enterprise where you are employed?

- 1-9
- 10-49
- 50-249
- 250-1000
- 1000 or more

What is your prevailing working activity?

- Administrative paperwork
- Manager
- Manufacturing
- Controlling
- Other

What is your gender?

- Man
- Female

<p>How old are you?</p> <p>Younger than 20</p> <p>20-40</p> <p>40-50</p> <p>50-60</p> <p>Older than 60</p>
<p>Do you believe that work with VDU can cause any health problems? If yes, which ones?</p> <p>No, it cannot cause any health problems</p> <p>Headache</p> <p>Upper and/or low back pain</p> <p>Pain in the upper extremities</p> <p>Problems with eyes and vision</p> <p>Tiredness</p> <p>Mental stress</p> <p>Skin problems</p> <p>Health damage from radiation</p> <p>Epilepsy</p> <p>Abortion and children's congenital anomaly</p> <p>Other adverse effects</p>
<p>Does your usual working activity include regular work with a computer or another type of equipment with a visual display unit?</p> <p>Yes</p> <p>No</p>
<p>How long do you on average work with VDU during a typical work shift?</p> <p>Less than 2 hours.</p> <p>2-4 hours.</p> <p>More than 4 hours.</p>
<p>What type(s) of VDU do you usually work with?</p> <p>Desktop PC</p> <p>Portable PC</p> <p>Desktop and portable PC</p> <p>Other (e.g. a screen for monitoring events)</p>
<p>What type of monitor is your VDU equipped with?</p> <p>Cathode ray tube monitor</p> <p>LCD display</p>
<p>What type(s) of work do you mostly use VDU for?</p> <p>Text editing</p> <p>Data entry and processing</p> <p>Using graphic software</p> <p>Operating a machinery</p> <p>Technological process control</p> <p>Information services in call centers etc.</p> <p>Monitoring of event and movement of people</p> <p>Other</p>
<p>Which of the following statements apply to your work?</p> <p>I work at a high pace of work.</p> <p>I work under the time pressure of deadlines.</p> <p>My work demands a high level of attention and accuracy.</p> <p>Nothing of the above</p>
<p>What is the time pattern of the work with DU during a typical work shift?</p> <p>I work on VDU continuously for spells of one hour at a time.</p> <p>I work on VDU continuously for spells of 1-2 hours at a time.</p> <p>I work on VDU continuously for spells of 2-4 hours at a time.</p> <p>I work on VDU continuously for spells of more than 4 hours at a time.</p>

<p>Have you experienced any of those health problems when working with VDU?</p> <p>No, none. Headache Upper and/or low back pain Pain in the upper extremities Problems with eyes and vision Tiredness Mental stress Skin problems Other adverse effects</p>
<p>Indicators of good practice at work with VDU</p>
<p>Has your employer performed a risk assessment at workplaces with VDU?</p> <p>Yes No I don't know.</p>
<p>Has your employer instructed you on how to arrange the workplace with VDU to avoid potential health problems?</p> <p>Yes No – <i>Skip to question 19.</i></p>
<p>How and when did your employer instruct you?</p> <p>Individual instruction before commencing the work with VDU Individual instruction after commencing the work with VDU Group instruction after commencing the work with VDU By Internet Provision of printed materials He provided me with a training course. Other</p>
<p>Did you search for the information about good practice at work with VDU on your own?</p> <p>Yes No – <i>Skip to question 21.</i></p>
<p>If yes, which source of information did you used?</p> <p>A booklet or a flyer Internet I passed a course. Other</p>
<p>Do you interrupt your work with VDU with breaks?</p> <p>Yes No – <i>Skip to question 24.</i></p>
<p>If yes, characterize the mode of breaks?</p> <p>I can take breaks at my own discretion as need may be and if possible. <i>Skip to question 25.</i> Breaks are fixed by the employer <i>Continue by question 23.</i></p>
<p>Give the usual frequency and duration of breaks.</p> <p>..... minutes per hours <i>Skip to question 25.</i></p>
<p>If you do not take breaks, explain why?</p> <p>I do not feel a need for breaks. The character and pace of work do not allow for breaks. My employer does not encourage it. Other reason:</p>
<p>Does your job description involve also activities other than work with VDU?</p> <p>Yes No</p>
<p>Does your employer provide those working with VDU with the opportunity of an appropriate eyesight test?</p> <p>Yes No – <i>Skip to question 28.</i></p>
<p>If yes, how?</p> <p>Within the frame of periodic preventive examinations Other</p>

<p>If normal corrective appliances are not sufficient, does your employer provide special corrective appliances for the work with VDU? Yes No</p>
<p>Do you think that your working station has a right adjustment? E.g. If height of your work desk and adjusting of your chair is optimal with regard to distance from screen to keyboard. Yes No</p>
<p>Did you ask your employer for some ergonomic equipments (such as a mouse pad, a document holder, a footrest)? Yes No – <i>Skip to question 32.</i></p>
<p>If yes, did your employer accord your request? Yes No</p>
<p>Are you satisfied with room lighting and spotlighting at your workstation? Yes No</p>
<p>Are you satisfied with microclimatic conditions at your workplace (temperature, humidity)? Yes No</p>
<p>Do you have a computer also at home? Yes No – <i>Skip to question 37.</i></p>
<p>Do you think that the workplace with the computer at your home is arranged correctly? Yes No</p>
<p>Please, estimate how much time do you spend at a computer out of work – at home, in an internet café etc. hours per a day – a week</p>
<p>Indicators of knowledge of the directive</p>
<p>Have you ever heard that health and safety at work with VDU is regulated by legislation? Yes No – <i>Skip to question 41.</i></p>
<p>Are you aware of the Council Directive on the minimum safety and health requirements for work with display screen equipment (Directive 90/270/EEC)? Yes No</p>
<p>Do you know that in the Czech Republic, government order No. 178/2001 Deg. (which transposed Directive 90/270/EEC in the Czech legislation) regulates health and safety at work with VDU? Yes No</p>
<p>Have you familiarized yourself with any of the above-mentioned legal enactments? Yes No</p>
<p>In your opinion, is it appropriate and desirable to regulate the work with VDU by legislation? Yes No</p>
<p>Please, explain what makes you to think so?</p>

Many thanks for completing the questionnaire!

12.2.2 Results for employees

Question 1: Are you employed in the public or private sector?

Absolute numbers

9. Length of the work with VDU	1. Public/private enterprise	Size of establishment					Total
		1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
Less than 4 hours	1.1. Public sector	31	119	59	34	4	248
	1.2. Private sector	150	245	175	117	18	705
	Total	181	364	234	151	22	953
More than 4 hours	1.1. Public sector	18	102	118	151	33	423
	1.2. Private sector	153	437	533	479	102	1704
	Total	171	539	652	630	135	2128

The frequencies of answers in percentage

9. Length of the work with VDU	1. Public/private enterprise	Size of establishment					Total
		1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
Less than 4 hours	1.1. Public sector	17.1%	32.7%	25.2%	22.5%	18.2%	26.0%
	1.2. Private sector	82.9%	67.3%	74.8%	77.5%	81.8%	74.0%
	Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
More than 4 hours	1.1. Public sector	10.5%	18.9%	18.1%	24.0%	24.4%	19.9%
	1.2. Private sector	89.5%	81.1%	81.7%	76.0%	75.6%	80.1%
	Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Question 2: Indicate the sector of economic activity which your employer belongs to.

Absolute numbers

9. Length of the work with VDU	2. Sector of economic activity	Size of establishment					Total
		1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
Less than 4 hours	2.1. Agriculture	6	25	41	8		80
	2.10. Other services	39	59	37	28	2	165
	2.11. Public administration, police, armed forces	8	6	10	19		43
	2.12. Education	21	104	39	2	2	169
	2.13. Health care	16	9	10	7	2	44
	2.2. Mining or production of raw materials	1					1
	2.3. Manufacturing industry	4	43	53	47	10	157
	2.4. Energetics	1	3	1			5
	2.5. Building industry	13	42	9	7	2	73
	2.6. Wholesale or retail sale	53	46	23	17	2	141
	2.7. Accommodation and catering	9	10	5			24
	2.8. Transport	7	13	6	16	2	44
	2.9. Financial sector	2	4				6
	n.a.	1					1
Total	181	364	234	151	22	953	
More than 4 hours	2.1. Agriculture	3	14	52	27	1	97
	2.10. Other services	50	139	112	84	36	421
	2.11. Public administration, police, armed forces	16	33	44	83	2	179
	2.12. Education	3	61	42	8	3	117
	2.13. Health care	10	9	29	30	12	90
	2.2. Mining or production of raw materials			12			12
	2.3. Manufacturing industry	8	57	160	210	35	470
	2.4. Energetics	2	5	7	18	5	37
	2.5. Building industry	12	70	49	44	7	182
	2.6. Wholesale or retail sale	54	109	99	50	17	329
	2.7. Accommodation and catering	2	4	4	5		15
	2.8. Transport	7	32	30	56	10	135
	2.9. Financial sector	4	5	12	14	6	41
	n.a.		1		1	1	3
Total	171	539	652	630	135	2128	

The frequencies of answers in percentage

9. Length of the work with VDU	2. Sector of economic activity	Size of establishment					Total
		1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
Less than 4 hours	2.1. Agriculture	3.3%	6.9%	17.5%	5.3%		8.4%
	2.10. Other services	21.5%	16.2%	15.8%	18.5%	9.1%	17.3%
	2.11. Public administration, police, armed forces	4.4%	1.6%	4.3%	12.6%		4.5%
	2.12. Education	11.6%	28.6%	16.7%	1.3%	9.1%	17.7%
	2.13. Health care	8.8%	2.5%	4.3%	4.6%	9.1%	4.6%
	2.2. Mining or production of raw materials	0.6%					0.1%
	2.3. Manufacturing industry	2.2%	11.8%	22.6%	31.1%	45.5%	16.5%
	2.4. Energetics	0.6%	0.8%	0.4%			0.5%
	2.5. Building industry	7.2%	11.5%	3.8%	4.6%	9.1%	7.7%
	2.6. Wholesale or retail sale	29.3%	12.6%	9.8%	11.3%	9.1%	14.8%
	2.7. Accommodation and catering	5.0%	2.7%	2.1%			2.5%
	2.8. Transport	3.9%	3.6%	2.6%	10.6%	9.1%	4.6%
	2.9. Financial sector	1.1%	1.1%				0.6%
	n.a.	0.6%					0.1%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	
More than 4 hours	2.1. Agriculture	1.8%	2.6%	8.0%	4.3%	0.7%	4.6%
	2.10. Other services	29.2%	25.8%	17.2%	13.3%	26.7%	19.8%
	2.11. Public administration, police, armed forces	9.4%	6.1%	6.7%	13.2%	1.5%	8.4%
	2.12. Education	1.8%	11.3%	6.4%	1.3%	2.2%	5.5%
	2.13. Health care	5.8%	1.7%	4.4%	4.8%	8.9%	4.2%
	2.2. Mining or production of raw materials			1.8%			0.6%
	2.3. Manufacturing industry	4.7%	10.6%	24.5%	33.3%	25.9%	22.1%
	2.4. Energetics	1.2%	0.9%	1.1%	2.9%	3.7%	1.7%
	2.5. Building industry	7.0%	13.0%	7.5%	7.0%	5.2%	8.6%
	2.6. Wholesale or retail sale	31.6%	20.2%	15.2%	7.9%	12.6%	15.5%
	2.7. Accommodation and catering	1.2%	0.7%	0.6%	0.8%		0.7%
	2.8. Transport	4.1%	5.9%	4.6%	8.9%	7.4%	6.3%
	2.9. Financial sector	2.3%	0.9%	1.8%	2.2%	4.4%	1.9%
	n.a.		0.2%		0.2%	0.7%	0.1%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	

Question 4: What is your prevailing working activity?

Absolute numbers

9. Length of the work with VDU	4. Prevailing working activity	Size of establishment					Total
		1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
Less than 4 hours	4.1. Administrative paperwork	88	175	139	74	10	486
	4.2. Managerial activity	20	50	40	33	5	149
	4.3. Manufacturing	16	28	18	11	1	74
	4.4. Controlling	5	13	14	18	1	51
	4.5. Other activity	50	94	22	14	5	185
	n.a.	2	4	1	1		8
	Total		181	364	234	151	22
More than 4 hours	4.1. Administrative paperwork	126	408	511	493	105	1644
	4.2. Managerial activity	12	51	61	49	14	187
	4.3. Manufacturing	5	13	24	22	2	66
	4.4. Controlling	4	12	14	17	9	56
	4.5. Other activity	24	54	41	46	5	170
	n.a.		1	1	3		5
	Total		171	539	652	630	135

The frequencies of answers in percentage

9. Length of the work with VDU	4. Prevailing working activity	Size of establishment					Total
		1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
Less than 4 hours	4.1. Administrative paperwork	48.6%	48.1%	59.4%	49.0%	45.5%	51.0%
	4.2. Managerial activity	11.0%	13.7%	17.1%	21.9%	22.7%	15.6%
	4.3. Manufacturing	8.8%	7.7%	7.7%	7.3%	4.5%	7.8%
	4.4. Controlling	2.8%	3.6%	6.0%	11.9%	4.5%	5.4%
	4.5. Other activity	27.6%	25.8%	9.4%	9.3%	22.7%	19.4%
	n.a.	1.1%	1.1%	0.4%	0.7%		0.8%
	Total		100.0%	100.0%	100.0%	100.0%	100.0%
More than 4 hours	4.1. Administrative paperwork	73.7%	75.7%	78.4%	78.3%	77.8%	77.3%
	4.2. Managerial activity	7.0%	9.5%	9.4%	7.8%	10.4%	8.8%
	4.3. Manufacturing	2.9%	2.4%	3.7%	3.5%	1.5%	3.1%
	4.4. Controlling	2.3%	2.2%	2.1%	2.7%	6.7%	2.6%
	4.5. Other activity	14.0%	10.0%	6.3%	7.3%	3.7%	8.0%
	n.a.		0.2%	0.2%	0.5%		0.2%
	Total		100.0%	100.0%	100.0%	100.0%	100.0%

Question 5: What is your gender?

a) The frequencies of answers in percentage

9. Length of the work with VDU	5. Gender	Size of establishment					Total
		1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
Less than 4 hours	5.1. Male	29.8%	39.3%	39.3%	47.7%	50.0%	39.0%
	5.2. Female	69.6%	60.4%	60.7%	51.7%	50.0%	60.5%
More than 4 hours	5.1. Male	27.5%	27.6%	28.8%	32.4%	30.4%	29.6%
	5.2. Female	72.5%	72.0%	70.9%	67.3%	69.6%	70.2%

Question 6: How old are you?

a) Absolute numbers

9. Length of the work with VDU	6. Age	Size of establishment					Total
		1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
Less than 4 hours	6.1. Younger than 20.	3	4	4			11
	6.2. 20 - 40	102	177	91	57	6	433
	6.3. 40 - 50	46	110	72	52	7	288
	6.4. 50 - 60	25	59	58	37	9	188
	6.5. Older than 60	5	14	8	5		32
	n.a.			1			1
	Total		181	364	234	151	22
More than 4 hours	6.1. Younger than 20.	2	2	2	4	2	12
	6.2. 20 - 40	113	320	342	345	78	1198
	6.3. 40 - 50	29	117	172	138	28	485
	6.4. 50 - 60	26	91	118	134	23	392
	6.5. Older than 60	1	7	17	7	4	36
	n.a.		2	1	2		5
	Total		171	539	652	630	135

b) The frequencies of answers in percentage

9. Length of the work with VDU	6. Age	Size of establishment					Total
		1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
Less than 4 hours	6.1. Younger than 20	1.7%	1.1%	1.7%			1.2%
	6.2. 20 - 40	56.4%	48.6%	38.9%	37.7%	27.3%	45.4%
	6.3. 40 - 50	25.4%	30.2%	30.8%	34.4%	31.8%	30.2%
	6.4. 50 - 60	13.8%	16.2%	24.8%	24.5%	40.9%	19.7%
	6.5. Older than 60	2.8%	3.8%	3.4%	3.3%		3.4%
	n.a.			0.4%			0.1%
	Total		100.0%	100.0%	100.0%	100.0%	100.0%
More than 4 hours	6.1. Younger than 20	1.2%	0.4%	0.3%	0.6%	1.5%	0.6%
	6.2. 20 - 40	66.1%	59.4%	52.5%	54.8%	57.8%	56.3%
	6.3. 40 - 50	17.0%	21.7%	26.4%	21.9%	20.7%	22.8%
	6.4. 50 - 60	15.2%	16.9%	18.1%	21.3%	17.0%	18.4%
	6.5. Older than 60	0.6%	1.3%	2.6%	1.1%	3.0%	1.7%
	n.a.		0.4%	0.2%	0.3%		0.2%
	Total		100.0%	100.0%	100.0%	100.0%	100.0%

Question 7: Do you believe that work with VDU can cause any health problems? If yes, which ones?

a) Absolute numbers

9. Length of the work with VDU	7. Can the work with VDU cause any health problems?	Size of establishment					Total
		1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
Less than 4 hours	7.1. Any health problems	55	84	27	29	3	198
	7.2. Headaches	74	153	95	59	11	392
	7.3. Upper and/or low back pain	66	147	121	66	10	410
	7.4. Pain in upper extremities	12	40	32	15	4	103
	7.5. Problems with eyes and vision	93	203	154	97	16	563
	7.6. Tiredness	50	117	92	51	10	321
	7.7. Mental stress	11	38	20	11	4	84
	7.8. Skin disorders	2	4	1	1		8
	7.9. Health damage from radiation	6	17	8	7	1	39
	7.10. Epilepsy		11	2	1	1	15
	7.11. Miscariages and/or malformations	1	1	1			3
	7.12. Other health disorders		2		2		4
More than 4 hours	7.1. Any health problems	28	75	58	44	10	215
	7.2. Headaches	74	272	345	364	84	1 139
	7.3. Upper and/or low back pain	89	273	368	399	86	1 215
	7.4. Pain in upper extremities	20	53	112	107	24	316
	7.5. Problems with eyes and vision	110	369	493	512	103	1 588
	7.6. Tiredness	67	214	291	288	62	922
	7.7. Mental stress	15	47	57	67	16	202
	7.8. Skin disorders	2	4	4	4	1	15
	7.9. Health damage from radiation	4	30	44	42	15	135
	7.10. Epilepsy	4	7	10	7	1	29
	7.11. Miscariages and/or malformations	2	1	5	1		9
	7.12. Other health disorders	1	4	6	5		16

b) The frequencies of answers in percentage

9. Length of the work with VDU	7. Can the work with VDU cause any health problems?	Size of establishment					Total
		1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
Less than 4 hours	7.1. Any health problems	30.4%	23.1%	11.5%	19.2%	13.6%	20.8%
	7.2. Headaches	40.9%	42.0%	40.6%	39.1%	50.0%	41.1%
	7.3. Upper and/or low back pain	36.5%	40.4%	51.7%	43.7%	45.5%	43.0%
	7.4. Pain in upper extremities	6.6%	11.0%	13.7%	9.9%	18.2%	10.8%
	7.5. Problems with eyes and vision	51.4%	55.8%	65.8%	64.2%	72.7%	59.1%
	7.6. Tiredness	27.6%	32.1%	39.3%	33.8%	45.5%	33.7%
	7.7. Mental stress	6.1%	10.4%	8.5%	7.3%	18.2%	8.8%
	7.8. Skin disorders	1.1%	1.1%	0.4%	0.7%		0.8%
	7.9. Health damage from radiation	3.3%	4.7%	3.4%	4.6%	4.5%	4.1%
	7.10. Epilepsy		3.0%	0.9%	0.7%	4.5%	1.6%
	7.11. Miscariages and/or malformations	0.6%	0.3%	0.4%			0.3%
	7.12. Other health disorders		0.5%		1.3%		0.4
More than 4 hours	7.1. Any health problems	16.4%	13.9%	8.9%	7.0%	7.4%	10.1%
	7.2. Headaches	43.3%	50.5%	52.9%	57.8%	62.2%	53.5%
	7.3. Upper and/or low back pain	52.0%	50.6%	56.4%	63.3%	63.7%	57.1%
	7.4. Pain in upper extremities	11.7%	9.8%	17.2%	17.0%	17.8%	14.8%
	7.5. Problems with eyes and vision	64.3%	68.5%	75.6%	81.3%	76.3%	74.6%
	7.6. Tiredness	39.2%	39.7%	44.6%	45.7%	45.9%	43.3%
	7.7. Mental stress	8.8%	8.7%	8.7%	10.6%	11.9%	9.5%
	7.8. Skin disorders	1.2%	0.7%	0.6%	0.6%	0.7%	0.7%
	7.9. Health damage from radiation	2.3%	5.6%	6.7%	6.7%	11.1%	6.3%
	7.10. Epilepsy	2.3%	1.3%	1.5%	1.1%	0.7%	1.4%
	7.11. Miscariages and/or malformations	1.2%	0.2%	0.8%	0.2%		0.4%
	7.12. Other health disorders	0.6%	0.7%	0.9%	0.8%		0.8%

Question 10: What type(s) of VDU do you usually work with?

a) Absolute numbers

9. Length of the work with VDU	10. What type of VDU do you usually work with?	Size of establishment					Total
		1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
Less than 4 hours	10.1. Desktop PC	154	296	203	131	17	802
	10.2. Portable PC	11	24	13	6	3	57
	10.3. Both portable and desktop PCs	12	42	15	12	2	83
	10.4. Other	4	1	2	2		9
	n.a.		1	1			2
	Total		181	364	234	151	22
More than 4 hours	10.1. Desktop PC	142	472	571	550	107	1843
	10.2. Portable PC	10	31	30	20	11	102
	10.3. Both portable and desktop PCs	18	32	42	53	17	162
	10.4. Other	1	2	5	6		14
	n.a.		2	4	1		7
	Total		171	539	652	630	135

b) The frequencies of answers in percentage

9. Length of the work with VDU	10. What type of VDU do you usually work with?	Size of establishment					Total
		1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
Less than 4 hours	10.1. Desktop PC	85.1%	81.3%	86.8%	86.8%	77.3%	84.2%
	10.2. Portable PC	6.1%	6.6%	5.6%	4.0%	13.6%	6.0%
	10.3. Both portable and desktop PCs	6.6%	11.5%	6.4%	7.9%	9.1%	8.7%
	10.4. Other	2.2%	0.3%	0.9%	1.3%		0.9%
	n.a.		0.3%	0.4%			0.2%
	Total		100.0%	100.0%	100.0%	100.0%	100.0%
More than 4 hours	10.1. Desktop PC	83.0%	87.6%	87.6%	87.3%	79.3%	86.6%
	10.2. Portable PC	5.8%	5.8%	4.6%	3.2%	8.1%	4.8%
	10.3. Both portable and desktop PCs	10.5%	5.9%	6.4%	8.4%	12.6%	7.6%
	10.4. Other	0.6%	0.4%	0.8%	1.0%		0.7%
	n.a.		0.4%	0.6%	0.2%		0.3%
	Total		100.0%	100.0%	100.0%	100.0%	100.0%

Question 11: What type of monitor is your VDU equipped with?

a) Absolute numbers

9. Length of the work with VDU	11. What type of monitor is your VDU equipped with?	Size of establishment					Total
		1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
Less than 4 hours	11.1. CRT monitor	92	173	100	60	5	431
	11.2. LCD monitor	81	170	118	86	16	471
	11.3. Both CRT and LCD monitors	4	20	12	3	1	40
	n.a.	4	1	4	2		11
	Total	181	364	234	151	22	953
More than 4 hours	11.1. CRT monitor	55	160	215	190	37	658
	11.2. LCD monitor	105	361	413	425	94	1398
	11.3. Both CRT and LCD monitors	6	11	14	7	4	42
	n.a.	5	7	10	8		30
	Total	171	539	652	630	135	2128

b) The frequencies of answers in percentage

9. Length of the work with VDU	11. What type of monitor is your VDU equipped with?	Size of establishment					Total
		1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
Less than 4 hours	11.1. CRT monitor	50.8%	47.5%	42.7%	39.7%	22.7%	45.2%
	11.2. LCD monitor	44.8%	46.7%	50.4%	57.0%	72.7%	49.4%
	11.3. Both CRT and LCD monitors	2.2%	5.5%	5.1%	2.0%	4.5%	4.2%
	n.a.	2.2%	0.3%	1.7%	1.3%		1.2%
	Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
More than 4 hours	11.1. CRT monitor	32.2%	29.7%	33.0%	30.2%	27.4%	30.9%
	11.2. LCD monitor	61.4%	67.0%	63.3%	67.5%	69.6%	65.7%
	11.3. Both CRT and LCD monitors	3.5%	2.0%	2.1%	1.1%	3.0%	2.0%
	n.a.	2.9%	1.3%	1.5%	1.3%		1.4%
	Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Question 12: What type(s) of work do you mostly use VDU for?

a) Absolute numbers

9. Length of the work with VDU	12. Type of work with VDU	Size of establishment					Total
		1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
Less than 4 hours	12.1. Text editing	85	235	146	99	17	583
	12.2. Data entry and processing	119	225	185	89	15	633
	12.3. Using graphic software	9	41	17	14	4	85
	12.4. Operating a machinery	2	3	13	5	1	24
	12.5. Technological process control		9	8	13		30
	12.6. Information services in call centres etc.	36	62	46	33	3	180
	12.7. Monitoring of events and monitoring of movement of people	5	9	5	7		26
	12.8. Other	8	11	5	3	1	28
More than 4 hours	12.1. Text editing	106	321	375	372	92	1 267
	12.2. Data entry and processing	128	419	532	498	113	1 691
	12.3. Using graphic software	33	94	76	85	12	300
	12.4. Operating a machinery	1	9	16	16	3	45
	12.5. Technological process control	2	7	18	28	5	60
	12.6. Information services in call centres etc.	38	85	105	104	24	356
	12.7. Monitoring of events and monitoring of movement of people	2	15	23	32	7	79
	12.8. Other	5	19	15	11		50

b) The frequencies of answers in percentage

9. Length of the work with VDU	12. Type of work with VDU	Size of establishment					Total
		1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
Less than 4 hours	12.1. Text editing	47.0%	64.6%	62.4%	65.6%	77.3%	61.2%
	12.2. Data entry and processing	65.7%	61.8%	79.1%	58.9%	68.2%	66.4%
	12.3. Using graphic software	5.0%	11.3%	7.3%	9.3%	18.2%	8.9%
	12.4. Operating a machinery	1.1%	0.8%	5.6%	3.3%	4.5%	2.5%
	12.5. Technological process control		2.5%	3.4%	8.6%		3.1%
	12.6. Information services in call centres etc.	19.9%	17.0%	19.7%	21.9%	13.6%	18.9%
	12.7. Monitoring of events and monitoring of movement of people	2.8%	2.5%	2.1%	4.6%		2.7%
	12.8. Other	4.4%	3.0%	2.1%	2.0%	4.5%	2.9%
More than 4 hours	12.1. Text editing	62.0%	59.6%	57.5%	59.0%	68.1%	59.5%
	12.2. Data entry and processing	74.9%	77.7%	81.6%	79.0%	83.7%	79.5%
	12.3. Using graphic software	19.3%	17.4%	11.7%	13.5%	8.9%	14.1%
	12.4. Operating a machinery	0.6%	1.7%	2.5%	2.5%	2.2%	2.1%
	12.5. Technological process control	1.2%	1.3%	2.8%	4.4%	3.7%	2.8%
	12.6. Information services in call centres etc.	22.2%	15.8%	16.1%	16.5%	17.8%	16.7%
	12.7. Monitoring of events and monitoring of movement of people	1.2%	2.8%	3.5%	5.1%	5.2%	3.7%
	12.8. Other	2.9%	3.5%	2.3%	1.7%		2.3%

Question 13: Which of the following statements apply to your work?

a) Absolute numbers

9. Length of the work with VDU	13. Which of the following statements apply to your work	Size of establishment					Total
		1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
Less than 4 hours	13.1. I work at a high pace of work.	20	67	44	28	5	164
	13.2. I work under the time pressure of deadlines.	23	66	58	41	6	194
	13.3. My work demands a high level of attention and accuracy.	75	183	117	68	9	453
	13.4. Nothing of the above..	68	85	50	31	4	238
More than 4 hours	13.1. I work at a high pace of work.	30	118	146	168	36	498
	13.2. I work under the time pressure of deadlines.	27	102	154	163	33	480
	13.3. My work demands a high level of attention and accuracy.	109	353	434	413	87	1 397
	13.4. Nothing of the above..	32	57	52	39	15	195

b) The frequencies of answers in percentage

9. Length of the work with VDU	13. Which of the following statements apply to your work	Size of establishment					Total
		1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
Less than 4 hours	13.1. I work at a high pace of work.	11.0%	18.4%	18.8%	18.5%	22.7%	17.2%
	13.2. I work under the time pressure of deadlines.	12.7%	18.1%	24.8%	27.2%	27.3%	20.4%
	13.3. My work demands a high level of attention and accuracy.	41.4%	50.3%	50.0%	45.0%	40.9%	47.5%
	13.4. Nothing of the above..	37.6%	23.4%	21.4%	20.5%	18.2%	25.0%
More than 4 hours	13.1. I work at a high pace of work.	17.5%	21.9%	22.4%	26.7%	26.7%	23.4%
	13.2. I work under the time pressure of deadlines.	15.8%	18.9%	23.6%	25.9%	24.4%	22.6%
	13.3. My work demands a high level of attention and accuracy.	63.7%	65.5%	66.6%	65.6%	64.4%	65.6%
	13.4. Nothing of the above..	18.7%	10.6%	8.0%	6.2%	11.1%	9.2%

Question 14: What is the time pattern of the work with DU during a typical work shift?

a) Absolute numbers

9. Length of the work with VDU	14. What is the time pattern during the work with VDU during a typical work shift?	Size of establishment					Total
		1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
Less than 4 hours	14.1. Continuous work for spells of 1 hour at a time.	112	191	131	76	8	518
	14.2. Continuous work for spells of 1-2 hours at a time.	42	110	68	56	10	287
	14.3. Continuous work for spells of 2-4 hours at a time.	19	48	24	17	3	111
	14.4. Continuous work for spells more than 4 hours at a time.	1	3	4	2	1	11
	n.a.	7	12	7			26
	Total		181	364	234	151	22
More than 4 hours	14.1. Continuous work for spells of 1 hour at a time.	38	100	112	77	20	347
	14.2. Continuous work for spells of 1-2 hours at a time.	45	141	191	167	38	583
	14.3. Continuous work for spells of 2-4 hours at a time.	40	141	156	188	38	563
	14.4. Continuous work for spells more than 4 hours at a time.	48	151	186	193	37	615
	n.a.		6	7	5	2	20
	Total		171	539	652	630	135

b) The frequencies of answers in percentage

9. Length of the work with VDU	14. What is the time pattern during the work with VDU during a typical work shift?	Size of establishment					Total
		1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
Less than 4 hours	14.1. Continuous work for spells of 1 hour at a time.	61.9%	52.5%	56.0%	50.3%	36.4%	54.4%
	14.2. Continuous work for spells of 1-2 hours at a time.	23.2%	30.2%	29.1%	37.1%	45.5%	30.1%
	14.3. Continuous work for spells of 2-4 hours at a time.	10.5%	13.2%	10.3%	11.3%	13.6%	11.6%
	14.4. Continuous work for spells more than 4 hours at a tim	0.6%	0.8%	1.7%	1.3%	4.5%	1.2%
	n.a.	3.9%	3.3%	3.0%			2.7%
	Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
More than 4 hours	14.1. Continuous work for spells of 1 hour at a time.	22.2%	18.6%	17.2%	12.2%	14.8%	16.3%
	14.2. Continuous work for spells of 1-2 hours at a time.	26.3%	26.2%	29.3%	26.5%	28.1%	27.4%
	14.3. Continuous work for spells of 2-4 hours at a time.	23.4%	26.2%	23.9%	29.8%	28.1%	26.5%
	14.4. Continuous work for spells more than 4 hours at a tim	28.1%	28.0%	28.5%	30.6%	27.4%	28.9%
	n.a.		1.1%	1.1%	0.8%	1.5%	0.9%
	Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Question 15: *Have you experienced any of those health problems when working with VDU?*

a) Absolute numbers

9. Length of the work with VDU	15. Have you experienced any of health problems related to work with VDU?	Size of establishment					Total
		1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
Less than 4 hours	15.1. Not any	110	185	81	52	5	433
	15.2. Headache	19	69	51	26	5	170
	15.3. Upper and/or low back pain	25	66	69	37	6	203
	15.4. Pain in upper extremities	3	15	13	7	1	39
	15.5. Problems with eyes and vision	31	87	72	60	12	263
	15.6. Tiredness	28	77	61	35	10	211
	15.7. A mental stress	4	9	7	4	1	25
	15.8. Skin disorders						
	15.9. Another health problems						
More than 4 hours	15.1. Not any	51	138	130	93	16	428
	15.2. Headache	45	175	232	237	54	743
	15.3. Upper and/or low back pain	59	189	262	282	59	851
	15.4. Pain in upper extremities	11	37	77	73	14	212
	15.5. Problems with eyes and vision	64	225	359	365	80	1 094
	15.6. Tiredness	56	174	264	250	61	805
	15.7. A mental stress	8	33	33	45	11	130
	15.8. Skin disorders						
	15.9. Another health problems		1	5	3		9

b) The frequencies of answers in percentage

9. Length of the work with VDU	15. Have you experienced any of health problems related to work with VDU?	Size of establishment					Total
		1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
Less than 4 hours	15.1. Not any	60.8%	50.8%	34.6%	34.4%	22.7%	45.4%
	15.2. Headache	10.5%	19.0%	21.8%	17.2%	22.7%	17.8%
	15.3. Upper and/or low back pain	13.8%	18.1%	29.5%	24.5%	27.3%	21.3%
	15.4. Pain in upper extremities	1.7%	4.1%	5.6%	4.6%	4.5%	4.1%
	15.5. Problems with eyes and vision	17.1%	23.9%	30.8%	39.7%	54.5%	27.6%
	15.6. Tiredness	15.5%	21.2%	26.1%	23.2%	45.5%	22.1%
	15.7. A mental stress	2.2%	2.5%	3.0%	2.6%	4.5%	2.6%
	15.8. Skin disorders						
	15.9. Another health problems						
More than 4 hours	15.1. Not any	29.8%	25.6%	19.9%	14.8%	11.9%	20.1%
	15.2. Headache	26.3%	32.5%	35.6%	37.6%	40.0%	34.9%
	15.3. Upper and/or low back pain	34.5%	35.1%	40.2%	44.8%	43.7%	40.0%
	15.4. Pain in upper extremities	6.4%	6.9%	11.8%	11.6%	10.4%	10.0%
	15.5. Problems with eyes and vision	37.4%	41.7%	55.1%	57.9%	59.3%	51.4%
	15.6. Tiredness	32.7%	32.3%	40.5%	39.7%	45.2%	37.8%
	15.7. A mental stress	4.7%	6.1%	5.1%	7.1%	8.1%	6.1%
	15.8. Skin disorders						
	15.9. Another health problems		0.2%	0.8%	0.5%		0.4%

Question 16: Has your employer performed a risk assessment at workplaces with VDU?

a) The frequencies of answers in percentage

9. Length of the work with VDU	16. Has your employer performed a risk assessment at workplaces with VDU?	Size of establishment					Total
		1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
Less than 4 hours	Yes	20.4%	25.8%	30.3%	27.8%	31.8%	26.3%
	No	36.5%	24.2%	20.5%	17.2%	9.1%	24.2%
	I do not know	42.0%	48.4%	49.1%	54.3%	59.1%	48.5%
More than 4 hours	Yes	19.9%	23.2%	17.9%	18.9%	22.2%	20.0%
	No	22.2%	21.9%	19.9%	20.2%	14.1%	20.3%
	I do not know	56.7%	53.2%	61.2%	60.3%	63.0%	58.6%

Question 17: Has your employer instructed you on how to arrange the workplace with VDU to avoid potential health problems?

a) Absolute numbers and the percentage frequency of answer “yes”

9. Length of the work with VDU	17. Has your employer instructed you on how to avoid health problems?	Size of establishment					Total
		1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
Less than 4 hours	Yes	88	194	137	71	11	502
	Total	181	364	234	151	22	953
	Percentage of „yes“	48.6%	53.3%	58.5%	47.0%	50.0%	52.7%
More than 4 hours	Yes	87	277	279	294	67	1004
	Total	171	539	652	630	135	2128
	Percentage of „yes“	50.9%	51.4%	42.8%	46.7%	49.6%	47.2%

Question 18: How and when did your employer instruct you?

Absolute numbers

9. Length of the work with VDU	18. How and when your employer instructed you?	Size of establishment					Total
		1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
Less than 4 hours	18.1. Individual instruction before commencing the work	42	88	60	23	4	218
	18.2. Individual instruction after commencing the work	26	32	26	17	4	105
	18.3. Group instruction after commencing of work	3	34	33	21	1	92
	18.4. By means of Internet	1	2	1	1		5
	18.5. Provision of printed materials	2	11	5	5		23
	18.6. Training course	7	19	7	2	2	37
	Total*	88	194	137	71	11	502
More than 4 hours	18.1. Individual instruction before commencing the work	58	127	105	112	22	424
	18.2. Individual instruction after commencing the work	20	61	62	56	8	207
	18.3. Group instruction after commencing of work	5	57	62	64	19	207
	18.4. By means of Internet	1	3	2	13	5	24
	18.5. Provision of printed materials	1	14	19	32	4	70
	18.6. Training course		11	22	11	4	48
	Total*	87	278	279	294	67	1005

*The table total is based on the employees responding "yes" for question 17.

The frequencies of answers in percentage

9. Length of the work with VDU	18. How and when your employer instructed you?	Size of establishment					Total
		1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
Less than 4 hours	18.1. Individual instruction before commencing the work	47.7%	45.4%	43.8%	32.4%	36.4%	43.4%
	18.2. Individual instruction after commencing the work	29.5%	16.5%	19.0%	23.9%	36.4%	20.9%
	18.3. Group instruction after commencing of work	3.4%	17.5%	24.1%	29.6%	9.1%	18.3%
	18.4. By means of Internet	1.1%	1.0%	0.7%	1.4%		1.0%
	18.5. Provision of printed materials	2.3%	5.7%	3.6%	7.0%		4.6%
	18.6. Training course	8.0%	9.8%	5.1%	2.8%	18.2%	7.4%
More than 4 hours	18.1. Individual instruction before commencing the work	66.7%	45.7%	37.6%	38.1%	32.8%	42.2%
	18.2. Individual instruction after commencing the work	23.0%	21.9%	22.2%	19.0%	11.9%	20.6%
	18.3. Group instruction after commencing of work	5.7%	20.5%	22.2%	21.8%	28.4%	20.6%
	18.4. By means of Internet	1.1%	1.1%	0.7%	4.4%	7.5%	2.4%
	18.5. Provision of printed materials	1.1%	5.0%	6.8%	10.9%	6.0%	7.0%
	18.6. Training course		4.0%	7.9%	3.7%	6.0%	4.8%

Question 19: Did you search for the information about good practice at work with VDU on your own?

a) Absolute numbers and the percentage frequency of answer “yes”

9. Length of the work with VDU	19. Did you search for info about good practice on your own?	Size of establishment					Total
		1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
Less than 4 hours	Yes	52	134	75	55	5	321
	Total	181	364	234	151	22	953
	Percentage of „yes“	28.7%	36.8%	32.1%	36.4%	22.7%	33.7%
More than 4 hours	Yes	62	209	240	251	53	815
	Total	171	539	652	630	135	2128
	Percentage of „yes“	36.3%	38.8%	36.8%	39.8%	39.3%	38.3%

Question 20: If yes, which source of information did you used?

a) Absolute numbers

9. Length of the work with VDU	20. If yes, which source of information did you use?	Size of establishment					Total
		1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
Less than 4 hours	Booklet or flyers.	17	49	37	15	2	120
	Internet	26	55	26	32	1	140
	Course	7	39	12	2	1	61
	Other	8	18	10	10	1	47
	Total*	52	134	75	55	5	321
More than 4 hours	Booklet or flyers.	16	65	79	79	15	254
	Internet	39	108	132	137	28	444
	Course	6	20	30	23	6	85
	Other	9	35	24	25	6	99
	Total*	62	209	240	251	53	815

*The table total is based on the employees responding “yes” for question 19.

b) The frequencies of answers in percentage

9. Length of the work with VDU	20. If yes, which source of information did you use?	Size of establishment					Total
		1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
Less than 4 hours	Booklet or flyers.	32.7%	36.6%	49.3%	27.3%	40.0%	37.4%
	Internet	50.0%	41.0%	34.7%	58.2%	20.0%	43.6%
	Course	13.5%	29.1%	16.0%	3.6%	20.0%	19.0%
More than 4 hours	Booklet or flyers.	25.8%	31.1%	32.9%	31.5%	28.3%	31.2%
	Internet	62.9%	51.7%	55.0%	54.6%	52.8%	54.5%
	Course	9.7%	9.6%	12.5%	9.2%	11.3%	10.4%

Question 21: Do you interrupt your work with VDU with breaks?

a) Absolute numbers and the percentage frequency of answer “yes”

9. Length of the work with VDU	21. Do you interrupt the VDU work with breaks?	Size of establishment					Total
		1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
Less than 4 hours	Yes	144	326	213	138	17	839
	Total	181	364	234	151	22	953
	Percentage of „yes“	79.6%	89.6%	91.0%	91.4%	77.3%	88.0%
More than 4 hours	Yes	153	490	577	546	120	1887
	Total	171	539	652	630	135	2128
	Percentage of „yes“	89.5%	90.9%	88.5%	86.7%	88.9%	88.7%

Question 22: If yes, characterize the mode of breaks?

a) Absolute numbers

9. Length of the work with VDU	22. Mode of breaks	Size of establishment					Total
		1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
Less than 4 hours	22.1. Breaks at my own discretion....if possible.	135	303	201	131	14	785
	22.2. Breaks are fixed by the employer.	2	13	11	5	3	34
	Total*	144	326	213	138	17	839
More than 4 hours	22.1. Breaks at my own discretion....if possible.	147	457	546	510	113	1774
	22.2. Breaks are fixed by the employer.	4	23	20	24	6	77
	Total*	153	490	577	546	120	1887

*The table total is based on the employees responding “yes” for question 21.

b) The frequencies of answers in percentage

9. Length of the work with VDU	22. Mode of breaks	Size of establishment					Total
		1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
Less than 4 hours	22.1. Breaks at my own discretion....if possible.	93.8%	92.9%	94.4%	94.9%	82.4%	93.6%
	22.2. Breaks are fixed by the employer.	1.4%	4.0%	5.2%	3.6%	17.6%	4.1%
	Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
More than 4 hours	22.1. Breaks at my own discretion....if possible.	96.1%	93.3%	94.6%	93.4%	94.2%	94.0%
	22.2. Breaks are fixed by the employer.	2.6%	4.7%	3.5%	4.4%	5.0%	4.1%
	Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Question 24: If you do not take breaks, explain why?

a) Absolute numbers

9. Length of the work with VDU	24. Why you do not take breaks?	Size of establishment					Total
		1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
Less than 4 hours	24.1. I do not feel a need for breaks.	41	31	14	10	4	100
	24.2. The character and pace of work do not allow for break	5	11	8	8	3	35
	24.3. I do not have permission of employer		1	1			2
	24.5. Other		4	2			6
	Total*	46	47	25	18	7	143
More than 4 hours	24.1. I do not feel a need for breaks.	8	28	35	32	3	106
	24.2. The character and pace of work do not allow for break	10	29	44	64	15	162
	24.3. I do not have permission of employer		4	5	4		13
	24.5. Other	2	1	7	5		15
	Total*	20	62	91	105	18	296

*The table total is based on the employees responding this question.

b) The frequencies of answers in percentage

9. Length of the work with VDU	24. Why you do not take breaks?	Size of establishment					Total
		1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
Less than 4 hours	24.1. I do not feel a need for breaks.	89.1%	66.0%	56.0%	55.6%	57.1%	69.9%
	24.2. The character and pace of work do not allow for break	10.9%	23.4%	32.0%	44.4%	42.9%	24.5%
	24.3. I do not have permission of employer		2.1%	4.0%			1.4%
More than 4 hours	24.1. I do not feel a need for breaks.	40.0%	45.2%	38.5%	30.5%	16.7%	35.8%
	24.2. The character and pace of work do not allow for break	50.0%	46.8%	48.4%	61.0%	83.3%	54.7%
	24.3. I do not have permission of employer		6.5%	5.5%	3.8%		4.4%

Question 25: Does your job description involve also activities other than work with VDU?

a) Absolute numbers and the percentage frequency of answer “yes”

9. Length of the work with VDU	25. Does your job allow for other activities than VDU work?	Size of establishment					Total
		1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
Less than 4 hours	Yes	170	354	229	150	22	926
	Total	181	364	234	151	22	953
	Percentage of „yes“	93.9%	97.3%	97.9%	99.3%	100.0%	97.2%
More than 4 hours	Yes	156	463	579	542	116	1857
	Total	171	539	652	630	135	2128
	Percentage of „yes“	91.2%	85.9%	88.8%	86.0%	85.9%	87.3%

Question 26: Does your employer provide those working with VDU with the opportunity of an appropriate eyesight test?

a) The frequencies of answers in percentage

9. Length of the work with VDU	26. Employer provides VDU workers with an appropriate eyesight test	Size of establishment					Total
		1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
Less than 4 hours	Yes	14.9%	20.3%	26.1%	20.5%	31.8%	21.0%
	No	82.9%	76.1%	71.8%	76.8%	68.2%	76.3%
	I do not know	0.6%	0.3%		1.3%		0.4%
More than 4 hours	Yes	9.9%	17.4%	18.3%	22.1%	26.7%	19.0%
	No	88.9%	80.5%	80.4%	77.1%	71.1%	79.6%
	I do not know			0.3%		0	0.1%

Question 27: If yes, how?

a) Absolute numbers and the percentage frequency of answer “yes”

9. Length of the work with VDU	27.1. Within the frame of periodic preventive examination	Size of establishment					Total
		1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
Less than 4 hours	Yes	26	73	62	32	8	201
	Total*	27	74	62	32	8	201
	Percentage of „yes“	96.3%	98.6%	100.0%	100.0%	100.0%	100.0%
More than 4 hours	Yes	13	93	117	135	32	390
	Total*	17	94	119	139	36	405
	Percentage of „yes“	76.5%	98.9%	98.3%	97.1%	88.9%	96.3%

*The table total is based on the employees responding “yes” for question 26.

Question 28: *If normal corrective appliances are not sufficient, does your employer provide special corrective appliances for the work with VDU?*

a) The frequencies of answers in percentage

9. Length of the work with VDU	28 Does employer provide you with special corrective appliance if needed?	Size of establishment					Total
		1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
Less than 4 hours	Yes	3.9%	1.4%	3.8%			2.2%
	No	90.1%	93.1%	91.0%	95.4%	95.5%	92.4%
	I do not know				0.7%		0.1%
More than 4 hours	Yes	4.7%	2.6%	1.4%	1.3%	0.7%	1.9%
	No	89.5%	92.0%	95.2%	96.3%	94.8%	94.3%
	I do not know		0.2%	0.6%			0.2%

Question 29: *Do you think that your working station has a right adjustment? E.g. If height of your work desk and adjusting of your chair is optimal with regard to distance from screen to keyboard.*

a) Absolute numbers and the percentage frequency of answer “yes”

9. Length of the work with VDU	29. Do you think that your working station has right adjustment?	Size of establishment					Total
		1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
Less than 4 hours	Yes	158	302	196	113	17	787
	Total	181	364	234	151	22	953
	Percentage of „yes“	87.3%	83.0%	83.8%	74.8%	77.3%	82.6%
More than 4 hours	Yes	138	442	485	470	102	1638
	Total	171	539	652	630	135	2128
	Percentage of „yes“	80.7%	82.0%	74.4%	74.6%	75.6%	77.0%

Question 30: *Did you ask your employer for some ergonomic equipments (such as a mouse pad, a document holder, a footrest)?*

a) Absolute numbers and the percentage frequency of answer “yes”

9. Length of the work with VDU	30. Did you ask your employer for some ergonomic equipment?	Size of establishment					Total
		1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
Less than 4 hours	Yes	56	130	78	62	10	337
	Total	181	364	234	151	22	953
	Percentage of „yes“	30.9%	35.7%	33.3%	41.1%	45.5%	35.4%
More than 4 hours	Yes	66	239	248	273	65	891
	Total	171	539	652	630	135	2128
	Percentage of „yes“	38.6%	44.3%	38.0%	43.3%	48.1%	41.9%

Question 31: *If yes, did your employer accord your request?*

a) Absolute numbers and the percentage frequency of answer “yes”

9. Length of the work with VDU	31. If yes, did your employer accord your request?	Size of establishment					Total
		1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
Less than 4 hours	Yes	53	121	74	59	10	317
	Total*	56	130	78	62	10	337
	Percentage of „yes“	94.6%	93.1%	94.9%	95.2%	100.0%	94.1%
More than 4 hours	Yes	66	233	226	260	59	844
	Total*	66	239	248	273	65	891
	Percentage of „yes“	100.0%	97.5%	91.1%	95.2%	90.8%	94.7%

**The tabel total is based on the employees responding “yes” for question 30.*

Question 32: *Are you satisfied with room lighting and spotlighting at your workstation?*

a) Absolute numbers and the percentage frequency of answer “yes”

9. Length of the work with VDU	32. Are you satisfied with room lighting and spotlighting at your workstation?	Size of establishment					Total
		1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
Less than 4 hours	Yes	165	324	203	129	22	844
	Total	181	364	234	151	22	953
	Percentage of „yes“	91.2%	89.0%	86.8%	85.4%	100.0%	88.6%
More than 4 hours	Yes	158	480	548	542	114	1843
	Total	171	539	652	630	135	2128
	Percentage of „yes“	92.4%	89.1%	84.0%	86.0%	84.4%	86.6%

Question 33: *Are you satisfied with microclimatic conditions at your workplace (temperature, humidity)?*

a) Absolute numbers and the percentage frequency of answer “yes”

9. Length of the work with VDU	33. Are you satisfied with microclimatic conditions at your workplace?	Size of establishment					Total
		1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
Less than 4 hours	Yes	162	295	183	101	16	758
	Total	181	364	234	151	22	953
	Percentage of „yes“	89.5%	81.0%	78.2%	66.9%	72.7%	79.5%
More than 4 hours	Yes	135	406	428	391	88	1449
	Total	171	539	652	630	135	2128
	Percentage of „yes“	78.9%	75.3%	65.6%	62.1%	65.2%	68.1%

Question 34: Do you have a computer also at home?

a) Absolute numbers and the percentage frequency of answer “yes”

9. Length of the work with VDU	34. Do you have a computer also at home?	Size of establishment					Total
		1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
Less than 4 hours	Yes	152	295	180	120	19	767
	Total	181	364	234	151	22	953
	Percentage of „yes“	84.0%	81.0%	76.9%	79.5%	86.4%	80.5%
More than 4 hours	Yes	146	439	540	519	120	1765
	Total	171	539	652	630	135	2128
	Percentage of „yes“	85.4%	81.4%	82.8%	82.4%	88.9%	82.9%

Question 35: Do you think that the workplace with the computer at your home is arranged correctly?

a) The frequencies of answers in percentage

9. Length of the work with VDU	35. Do you think that the workplace with the computer at home is arranged correctly?	Size of establishment					Total
		1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
Less than 4 hours	Yes	74.6%	72.5%	64.5%	59.6%	63.6%	68.7%
	No	6.6%	8.0%	11.1%	19.2%	22.7%	10.6%
	I do not know	0.6%	0.3%	0.4%			0.3%
More than 4 hours	Yes	71.3%	65.1%	64.3%	63.8%	65.2%	65.0%
	No	13.5%	15.0%	17.2%	17.8%	18.5%	16.6%
	I do not know			0.2%			0.0%

Question 37: Have you ever heard that health and safety at work with VDU is regulated by legislation?

a) Absolute numbers and the percentage frequency of answer “yes”

9. Length of the work with VDU	37. Have you ever heard that OHS at work with VDU is regulated by legislation?	Size of establishment					Total
		1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
Less than 4 hours	Yes	43	141	97	66	11	358
	Total	181	364	234	151	22	953
	Percentage of „yes“	23.8%	38.7%	41.5%	43.7%	50.0%	37.6%
More than 4 hours	Yes	55	205	239	240	53	792
	Total	171	539	652	630	135	2128
	Percentage of „yes“	32.2%	38.0%	36.7%	38.1%	39.3%	37.2%

Question 38: Are you aware of the Council Directive on the minimum safety and health requirements for work with display screen equipment (Directive 90/270/EEC)?

a) Absolute numbers and the percentage frequency of answer “yes”

9. Length of the work with VDU	38. Are you aware of VDU Directive (90/270/EEC)?	Size of establishment					Total
		1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
Less than 4 hours	Yes	27	74	49	29	6	185
	Total	181	364	234	151	22	953
	Percentage of „yes“	14.9%	20.3%	20.9%	19.2%	27.3%	19.4%
More than 4 hours	Yes	24	105	128	120	22	399
	Total	171	539	652	630	135	2128
	Percentage of „yes“	14.0%	19.5%	19.6%	19.0%	16.3%	18.8%

Question 39: Do you know that in the Czech Republic, government order No. 178/2001 Deg. (which transposed Directive 90/270/EEC in the Czech legislation) regulates health and safety at work with VDU?

a) Absolute numbers and the percentage frequency of answer “yes”

9. Length of the work with VDU	39. Do you know that the governmental order No. 178/2001 Coll. regulates the OHS at work with VDU in the CR?	Size of establishment					Total
		1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
Less than 4 hours	Yes	20	62	50	35	5	172
	Total	181	364	234	151	22	953
	Percentage of „yes“	11.0%	17.0%	21.4%	23.2%	22.7%	18.0%
More than 4 hours	Yes	23	83	123	111	18	358
	Total	171	539	652	630	135	2128
	Percentage of „yes“	13.5%	15.4%	18.9%	17.6%	13.3%	16.8%

Question 40: Have you familiarized yourself with any of the above-mentioned legal enactments?

a) Absolute numbers and the percentage frequency of answer “yes”

9. Length of the work with VDU	40. Are you familiarized yourself with any of the above mentioned legal enactments?	Size of establishment					Total
		1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
Less than 4 hours	Yes	20	44	35	32	6	137
	Total	181	364	234	151	22	953
	Percentage of „yes“	11.0%	12.1%	15.0%	21.2%	27.3%	14.4%
More than 4 hours	Yes	20	61	90	94	14	279
	Total	171	539	652	630	135	2128
	Percentage of „yes“	11.7%	11.3%	13.8%	14.9%	10.4%	13.1%

Question 41: In your opinion, is it appropriate and desirable to regulate the work with VDU by legislation?

a) The frequencies of answers in percentage

9. Length of the work with VDU	41. Is it appropriate and desirable to regulate the work with VDU by legislation?	Size of establishment					Total
		1 to 9	10 to 49	50 to 249	250 to 1000	1000 and more	
Less than 4 hours	Yes	51.9%	62.6%	67.9%	74.2%	86.4%	64.3%
	No	40.9%	31.9%	29.5%	21.9%	13.6%	31.0%
	I do not know	1.1%	0.3%	0.9%	1.3%		0.7%
More than 4 hours	Yes	58.5%	64.9%	69.9%	78.9%	80.0%	71.1%
	No	36.8%	31.9%	27.0%	19.4%	15.6%	26.0%
	I do not know	1.2%	0.7%	0.5%	0.5%		0.6%