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Dear readers, we are pleased to inform you that on the initiative of the Editorial Board of "Knowledge and Business" Ltd., "Knowledge and Business" is a licensed publisher of the scientific journal "Economics and Computer Science."

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Sincerely: Prof. Dr. Sc. Petko Iliev

Legal liability and claims for the hotel industry

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Abstract. The paper presents a review of various aspects of legal liability and claims to hotel management arising in the hotel industry in the context of the legal framework and possible legal consequences for hotels and other types of commercial accommodation establishments. The main reasons for accidents' occurrence in the hotel industry are chronologically traced. Possible claims to the hotel management are also presented in detail. The problem with workplace discrimination, which is considered as unrightfully actions from administration towards hospitably industry personnel and the connected consequences, is discussed. A definition is given of the various forms of discrimination and the obligations of management to provide a healthy work environment without problems for the personnel are stated, as well. Regulative measures and documents are also presented, regarding measures following possible labour law violations. Conclusions and recommendations are formulated and ways to prevent and overcome problems and accidents in various accommodation establishments and the hotel industry as a whole are shown.

Key words: tourism, hotel industry, legal liability and claims, legislation, safety and security, guests, employees, consumers.

1. Introduction

The hotel industry is above all a 'pleasure industry', characterized by providing accommodation and additional services related to physical and mental relaxation, positive emotions and entertainment. The industry develops and functions in a legal environment regulating, on the one hand, the rights, responsibilities and obligations of the employer, and on the other hand, maximum safety conditions for rest and relaxation of guests, tourists and consumers while aiming to minimize the negative consequences and impacts on them during registration, stay and consumption of various types of services, attractions and facilities.

In the process of serving guests at hotel establishments and providing services related to accommodation, food and beverage, entertainment and sporting activities, etc., problems and accidents of physical, health and psychological nature often occur, which in some cases have serious consequences for guests and extremely negative impact on the image and reputation of hotel companies and the management of individual hotels and accommodation facilities.

In principle, hotel physical facilities (buildings, premises, equipment and installations) are a subject to constant control and legal regulations, with the aim a safe

environment for the accommodation of guests and the exploitation by personnel to be provided.

The provision of safe conditions for tourists during stay, on the one hand, and the provision of healthy working conditions for the staff, on the other hand, is done according to the specifics of construction, technical and technological specification of each particular hotel building or accommodation establishment with the aim to protect the lives and health of hotel guests, visitors and staff.

At hotels and other accommodation establishments, security of consumers during registration and stay is ensured mainly by technical feasibility and proper operation and use of hotel equipment, furnishing, facilities, machinery, communication equipment, etc., which is provided through the design, construction, reconstruction and modernization and is guaranteed with opening permissions of the buildings, as well as with their permanent technical maintenance, repair and if necessary, closing.

By taking the necessary measures and applying the preliminary developed procedures in accordance with the requirements of the legal and regulatory framework, the employer (the company, the enterprise, the hotel) and management teams are obliged to provide health and safety conditions of accommodation and work to guests, visitors and staff, including:

- risks prevention;
- information and training of serving staff;
- provision of the necessary organization and resources.

In order to improve the existing situation, the employer takes into an account the changing circumstances and applies the necessary measures based on the main principle of prevention:

- risks avoidance;
- an assessment of the unavoidable risks;
- limiting the risks at the source of occurrence.

To sum up, through their organizational structures, hotel managers carry out activities, take measures and perform procedures that must exclude or minimize the possibilities for guests and consumers to become subjects of accidents and different types of incidents of various degrees of disability, mutilation or death during stay.

Despite all known and widely applied activities, methods and procedures of accident prevention during the process of operation of hotels and other types of accommodation establishments, for reasons of various nature, the living environment and the conditions for service consumption are not always safe and secure. The physical hotel facilities (buildings, premises, machinery, equipment and communication installations) are complex technical systems and considering, on the one hand, their excess operation and exploitation capacities and, on the other hand, their improper use or non-compliance with their exploitation requirements - their maintenance is not always easy and efficient.

In any case, in the event of incidents of various nature and varying degree of severity and damage due to non-compliance with the regulation and/ or safety rules, the consequences for the hotel are fines, legal claims, court cases and even deprivation of liberty - in the case of serious incidents ending with death or total disability of the injured. Therefore, it is of utmost importance that the hotel managers are familiar with the legal framework and the numerous regulatory acts the hotels are subjects to, which in practice means that hotel

management teams should have sufficient legal culture and knowledge to organize, supervise and control the work in a way that risks of occurrence of accidents and incidents with guests and consumers of hotel services are minimized and in particular, the staff are trained to act professionally in order to minimize the risks in their departments, hotel sub-units and units.

What the reasons/ causes for occurrence of incidents and accidents with hotel guests and serving staff of various natures are?

The causes are heterogeneous and numerous in numbers, but they always relate to problems of buildings, facilities and installations and/ or issues resulting from human activities or inactivates, such as:

- negligence and inattention
- hurry and distraction
- not well maintained building stock, premises and adjacent infrastructure
- technically faulty machinery, installations and equipment
- failure to comply with the rules of operation and exploitation of installations, machinery, equipment and facilities
- failure to comply with safety rules for preventing fire and incidents
- lack of instructions for work with machinery, equipment and facilities
- non-exercised or insufficient control
- no restrictions on the operation of machines and facilities by children
- lack of prevention by and training of service staff
- other factors.

In global hotel practice most complaints about damages caused at hotels are civil claims when individuals claim that they have been harmed by other individuals or by companies (legal entities). The claimant (the injured party), makes a claim where he or she describes the facts and the situation of the occurrence of the damage and seeks particular compensation.

Either punitive, or compensatory damages can be claimed, or alternatively - both.

Compensatory benefits (after proof) are awarded in order money actual material and moral damages, medical expenses, lost salaries and/ or personal injuries of varying degrees of disability or inability to work to be offset by money.

Punitive offsets are awarded in rare cases with the aim to punish offenders, when there is violence, malice or intent and when irreversible consequences have occurred.

The majority of civil cases are brought against hotels or other types of public accommodation establishments when consumers have suffered damages due to negligence by management. In order to obtain compensation in these cases, claimants must prove at least the following:

1.The hotel where they have been accommodated, stayed or consume services in any form is responsible/ obliged to ensure their safety and security in their various forms and manifestations (fire safety, personal safety and security, emergency security, etc.)

2.They should undoubtedly prove that the hotel has not secured and provided the necessary safety and security conditions, as a result of which the claimant has suffered and thus the hotel has breached its duties.

3.They should prove that the hotel has not fulfilled and violated its obligations, is the cause of the damages occurred, which it should have foreseen.

4.In order to obtain an equivalent compensation the claimants (the injured parties) should prove to the court the damages incurred.

Consequently, the management of hotels and other accommodation establishments, as well as employees at individual departments, units and jobs should fulfil their obligations responsibly and professionally enough, primarily by preventing 'predictable' damages and ensuring the safety and security of guests and visitors. In this respect, in order incidents and accidents of various nature to be prevented the crucial moment is to preliminary identify the points of conflict and possible damages that could be incurred by eradicating negligence and formalism in the operation of departments, units and individual workers concerning hotel guests and consumers.

The practice of negligence and formal fulfilment of official duties has various manifestations at different departments and units of a hotel complex. For example, a frequent practice is when the on-duty receptionist does not check hotel cards or identity documents where the names of guests are written and unintentionally gives keys or access cards of hotel rooms to persons with criminal intentions who threaten lives, health and property of guests. In that case, the hotel would be held liable for damages due to negligence of the receptionist that resulted in entry into the room and subsequent damages to guests staying at the hotel.

On the other hand, in order criminal proceedings to be held and convictions to be announced, it should be undoubtedly proven that damages caused are the result of inactivity, negligence or intent of the staff or that these are violations liberty or fined, or both.

The crimes committed on the territories of hotels, hotel complexes and other types of accommodation establishments most often occur in the forms of encroachments against property (thefts) and physical violence (beatings, rapes), which is associated with serious bodily and psychological harm, while murders occur more rarely. Such crimes are the thefts of money, goods, valuables and valuable objects, and more rarely - of 'intellectual' products. Physical violence involves threatening and beatings with the result of bodily harm and physical contact, attempted rape and actual rape, murders, etc.

Partial but not isolated practice is when security guards or body guards throw out guests at the doors of the hotels or the adjoining food and beverage facilities and/ or beat guests and visitors and thus have exceeded their on-the-job responsibilities. As a result, they fall under the penal provisions of the law because they usually have caused bodily harms of various degrees.

In addition, despite the global nature of the hotel industry, the international laws and regulations regarding individuals or hotel companies are not applied. Sentences are issued under the 'general' laws that are in force in individual countries. Only the intellectual properties regulations, such as the Paris Convention, adopted in 1883 (concerning Copyrights and Trademarks) are internationally recognized and hotel companies should comply with them. According to the Paris Convention, 1883, trademark owners (e.g. hotels) can register and protect the 'brand' in each signatory country, thereby they acquire the right to be the only users of that brand in the country in order to protect the product and the identity.

Internationally acknowledged is the Berlin Convention, adopted in 1886 which entitles signatory countries to register copyrights on literary and artistic works, some of which, such as songs, poems, lyrics or individual verses may become a focus of advertising

campaigns of hotel chains or individual hotels as a marketing strategy where the company protects songs or lyrics and prevents their use by other companies, enterprises or hotels.

Once we have revealed the liabilities of hotels and other accommodation establishments in the hotel industry regarding the guests staying there and consumers of their services, as well as the legal impacts in such cases, now we would consider the specific aspects of legal liability to consumers at hotels or hotel complexes.

The hotel buildings and adjoining areas (rooms, bathrooms, corridors, lobbies, stairs, alleys, parks, green areas, gardens, parking lots, garages, swimming pools, sporting facilities and attractions) are the scene of accidents and incidents involving guests and visitors, which consequently are a subject to claims of a various nature.

What are the conflicting and dangerous points and in terms of what guests and employees could bring legal actions against the administration and management of hotels and other accommodation facilities?

2. Claims concerning slipping and falling

Most of the claims brought to hotels and hotel companies in the world are related to injuries caused to guests and visitors due to untaken preventive measures and/ or negligence in terms of building works and ongoing repairs of pavements and indoor spaces, as well as due to slippery flooring of corridors, bathrooms and staircases.

Possible injuries in such cases like sprains, broken limbs or severe injuries and death are caused as a result of a slipping and falling on the ground or from terraces and balconies.

In these cases, the preventive measures and decisions of hotel management teams are usually related to construction of strong pavements with no missing parts and components, no shifted plates, no holes on them, as well as to their permanent maintenance. The absence of unevenness due to poor maintenance and slippery areas as a cause of treatment with cleaning and hygiene detergents or of unclean places of fallen leaves and other materials are also important. Serving hotel staff (builders, technicians, general workers and chambermaids) should regularly maintain designated areas in accordance with their technical and operational characteristics.

3. Claims related to technical issues of installation and facilities

Incidents involving children using recreational facilities and installations such as swimming pools, swings and slides are common at hotels and hotel complexes where claims for damages could be brought due to malfunctions or insufficient maintenance of facilities.

The possible damages are: an electric shock that is a common incident where a guest, a visitor or an employee may be struck by an electric shock due to malfunctions of technical equipment or installations (switches, sockets, bath dryers, lighting fixtures, etc. or a damage to recreational facilities and installations, such as swimming pools, water and dry slides, swings, climbing, attractions, etc.).

Not long ago, at the Bulgarian resort of Slanchev Briag, a child of foreign guests at a hotel, was sucked into the pool cleaner installation of the hotel (due to a missing barrier), causing the child severe internal life-threatening injuries.

Owners or operators of the facilities are liable, in all such cases, where incidents with visitors and guests of hotels occur, as well as where incidents with children that are the result of 'extremely attractive' potentially dangerous objects for children to use or to 'investigate' due to insufficient life experience and unawareness of the hazards occur or where damages due to poorly maintained facilities and installations, not complying with the technical and operational characteristics of the manufacturers are caused.

The preventive measures of management teams should include constant control and attention to the heads of maintenance departments. Technical departments and maintenance technicians should ensure that the equipment and installations are in a good condition and permanently repair the damages. Timely closing of facilities, installations and attractions that show a deviation from the technical parameters or even minor damages of a various kinds would contribute to preventing incidents with hotel guests and visitors.

Moreover, in high-rise hotels and hotels where windows could be opened a particular attention should be paid to fitting windows to open only partially, which would exclude the possibilities for children to fall or jump from hotel windows in the absence of parents. The balconies and terraces there should have dense and high enough enclosures. Thus, small children could not climb or pass through the rails and partitions of the balconies and terraces.

In this regard, the best practices are related to the attention and daily permanent control by the staff of hotel household and technical service departments, as well as the inspections of facilities and installations by external state and municipal services and institutions.

4. Claims related to security and safety

Incident related to safety and security of guests during stay at hotels and other accommodation establishments are also common, where the hotel is always a party. They are typically related to thefts of money, valuables, belongings or property of guests from the rooms and, more rarely - to severe physical assaults, such as a rape or a murder.

Possible encroachments are: personal violence related to physical manipulation of various kinds, such as robberies, beatings, rapes, murders.

From the management practice of the author of the paper at a luxury hotel: I remember how a female guest of the hotel came to me and complained of being raped at the hotel ... then only my professional experience, skills and knowledge concerning the issue led to the satisfaction of all parties, the result...

In principal, the security and safety of guests at big hotels, high-category hotels and 'close-type' complexes is ensured by body guards and security guards, as well as technical means (cameras, monitors, radio stations, etc.). For the purpose, a contract with a security company is signed or persons are hired as security guards (bodyguards). For the needs of security guards at the hotel the necessary facilities are provided depending on the size (capacity) and the functional setting. The security equipment includes surveillance cameras installed at key points at the hotel complex, which monitor and control the areas and ensure the safety of guests and visitors 24-hours a day. At big hotel complexes the security and safety of guests is also ensured by the means of external outposts (guards) guarded by 24-hour by security guards. When an incident occurs, it is responded to at the 'problem spot'.

Regardless of technical precautions taken, all hotel employees are responsible and liable for the safety of guests and visitors. In the event of security and safety incidents, the judicial authorities always check whether the reasonable care and protection for guests from foreseeable criminal risks are taken. These include preventive measures related to the frequency of attacks, the current level of crime in the area, the ability of staff to respond adequately to the situation, built facilities that prevent criminality (such as, fences, enclosures, lighting, alarm systems), etc.

From a security point of view, the hotel areas where attacks against guests and visitors take place most frequently are:

- adjacent spaces (indoor and outdoor parking lots and garages)
- hotel rooms and apartments, or
- the adjoining restaurant establishments and the surrounding areas.

From the point of view of security and safety of hotel guests, an important element is the Reception - the responsibilities of its employees or their omissions and negligence.

The practice of providing keys or magnetic cards from rooms to a person requesting access to the room, without displaying a hotel card can result in serious incidents involving violence, beatings, robberies, and even murders of hotel guests.

As a global practice, compensations due from hotels that are set by the court in these cases are enormous, if it is proven that because of negligence and/ or inattention and despite a warning, a guest of a hotel was killed in a hotel room or apartment.

Good practice of control by the Reception includes:

- A requirement for guests to identify themselves when taking room keys from the Reception, with a hotel card or if there is no ability to control the tourists (many people at the Reception in big hotels) - with an identity document.
- A requirement for not entering room numbers on the outside of hotel cards or electronic access cards.
- Not pronouncing (telling) in a loud voice the numbers of guests rooms at the Reception.
- Applying a system of hotel room access cards.
- Replacing missing or damaged room keys.
- Limiting various types of room access cards for the staff.
- Installing devices in elevators to activate room access cards.
- In a telephone call at the Reception, the name and the number of the room of the guest should not be mentioned in a loud voice, due to the danger of being heard by persons with criminal intentions located nearby.
- Without the consent of the guests staying at the hotel information about their names and rooms should not be given to other persons when asking for it.
- Making a hole in the reception desk or a special box for placing the keys and thus preventing them from being taken by third parties and the subsequent penetration into guest rooms.

Despite all precautions taken by the staff in terms of security of accommodated guests, a hotel cannot be a full guarantor of guest security. However, in an event of an

accident, the hotel has to prove to the investigating authorities and the court that it has taken the necessary measures to ensure guests safety and security and has fulfilled its obligations to ensure that the environment of accommodation and stay has been safe and secure enough.

A substantial share of the total claims to hotels and other accommodation establishments related to the safety and security involves lost or stolen belongings/ properties of guests or visitors during their stays at hotels or hotel complexes.

Here, it is right to clarify that not all cases of stolen or lost belongings/ properties of hotel guests and visitors are liabilities of hotels and therefore not always hotels would have to pay compensation.

Typically, stolen or missing properties of guests accommodated at hotels are compensated for by cash equivalents if it is undoubtedly proven that the hotels had not been taken enough preventive measures and as a result the properties of guests (money, belongings, objects, valuables, etc.) were stolen from rooms or apartments either in their absence or through violence. To prevent such incidents, all hotels have individual safes or a common safe where hotel guests can store valuable objects, items, jewelry or money. In the rooms of some hotels small safes are placed or built-in, which are opened by keys or electronic codes. However, it should be noted that the hotel is liable for stolen or missing properties from safes in rooms only in cases of breakage by burglars. The investigation practice shows that in most cases thefts from room safes are carried out by children or relatives of the guests who had learned the code or taken the key of the safe. Large and very valuable items and objects should be stored in well-kept rooms or in bank safes and vaults and the reception staff should inform guests that hotel safes can store valuables and money only up to certain values.

In practice, many guests lose or forget their properties outside the hotels and then claim for them. There are also cases of items, belongings and valuables of guests forgotten in the hotel rooms, which are then stolen by service staff, but these are rare cases. If guests have left the hotel and have forgotten properties there, the hotel staff is obliged to notify them looking for them by address registration. If the forgotten properties are not searched for several months, they would be auctioned. In many countries, there are laws regulating the search for forgotten personal properties in hotels by guests including fixed deadlines.

5. Claims related to non-compliance with contracts

The liability of hotels and hotel complexes that have not complied with previously signed contracts of which they are parties is related to claims by consumers or other business entities. These include contracts for the sale of rooms, outdoor catering services, group events (banquets, weddings, receptions, symposia, conferences, etc.) where, if one party, in that case - the hotel, fails to obey to the terms of the contract, the other party may claim a breach of the contract and seek financial compensation for damage or loss of earnings.

The preventive measures taken by management teams in these cases concern firstly, the clear and precise formulation of the obligations of the two parties reflected in the contract at its signing or in the course of ongoing adjustments in order after the final signing and entering into force of the contract, all contract terms to be unambiguous for both parties. It should be taken into an account that contracts are always interpreted against the developer - the hotel – as it is assumed that the hotel is more competent and may mislead the client.

Therefore, in a case of a breach of the contract the court is more inclined to believe to the claimer than to the hotel. Measures for not allowing legal reasons for making the hotel liable for failure to comply with a contract also include practices where staff of the sales department or managers at the time of signing the contract describe in details and precisely all the elements, parameters and values of the offer, no matter how many the details are. There are no minor matters in a contract; the more clearly and precisely the issues are presented, the less likely it is that the contract would be legally attacked.

No less important is the responsibility of hotels for service levels and quality depending on their categories. Hotels of high category and luxurious ones should offer high-quality services and service, and if they are not doing so, guests can make reasonable claims to these hotels.

Because any stay at a hotel is considered as a contract between the guest and the hotel, the terms and conditions offered by the hotel are a subject to arrangements. The guest is considered to pay a price that is in line with supply and quality levels. And if they do not meet the appropriate values, the guest has a reason to make a claim to the hotel for non-compliance with the 'accommodation contract' because supply and quality levels are guaranteed by category and stars.

Hotels that are advertised as highly-categorized or luxurious and have high room rates should offer service and services that correspond to these prices. Hotel guests should not be left deceived or dissatisfied in order to have reasons to claim compensation to the hotel for fraud and non-compliance with the contract or for misleading advertisements.

Of course, these are complex claims and case studies, but in these cases consumers have grounds for lodging compensatory claims to hotels, and hotel management should carefully assess the supply levels and quality of services and service depending on the category and prices offered.

6. Claims related to service personnel/staff

Judicial claims on hotels and hotel companies by staff mainly concern two types of dismissals (firing from work): illegal dismissal (illegal/ unlawful firing from work) and discrimination (dismissal for discriminatory reasons).

1. Illegal (unlawful) dismissal

These are claims of individuals and legal cases against hotels and hotel companies related to solutions, which resulted in the dismissal or punishment of employees of hotels or other types of accommodations in the hotel industry. In all these cases, the court examines the claims of the individuals and pronounces a verdict in accordance with the national labor law of the country. Very often the grounds for the dismissal are not lawful and the persons are brought back to work by the court and/ or are given cash as a compensation for the time they were removed from work.

The reasons for the illegal dismissal could be from an employee 'not doing work', disclosing company secrets, personal dislike, job or position rivalry, up to a decrease of the number of employees due to a decrease in the work load (job cuts), demands for better working conditions and higher wages. The reasons also include cases of systemic harassments by employers or managers, forcing employees to leave the company

'voluntarily'. In the above-mentioned cases, if it is proven that a hotel or company is guilty, the claimant (the employee) would receive a cash compensation (according to the characteristics of the case). Of course, such cases are extremely difficult to prove because mainly colleagues of the victim have to testify in the court of harassment over him or her, while they are employees of the same company or hotel and in most cases do not want to testify under the fear of 'trouble' and/ or a dismissal.

The preventive measures that the management team can adopt to prevent such claims to the hotel or the company refer firstly to obeying the legal rules concerning release of employees from work. More precisely, the reasons for dismissal should be described in the documents for cancelling work relations (employee dismissal/ release orders) according to the labour laws and a confrontational working environment within the team, department, or unit should not be tolerated. Local managers should be familiar with such policies and prepared for doing objective and impartial assessments of their subordinate employees. Senior management should systematically and most closely monitor and control the work environment in sectors, departments and units, in order to prevent subjective and familiar attitudes towards employees, which may result in illegal dismissal for various, often unreasonable and unlawful reasons resulting in conviction against the hotel, loss of funds and an arise of a negative image of the company.

The risk of violations by employers (managers and human resources departments) in connection with an unfair and unjustified dismissal of individual employees in the hotel industry, as well as the legal and financial aspects and consequences for the companies are minimized by following and enforcing the following rules of teamwork:

- The attitude towards employees should be professional and impartial.
- Employees should receive recognition when they deserve and correct assessment according to the quantity and quality of the work done.
- Employees should receive adequate payments, according to the quantity and quality of the labor.
- Employees should receive the necessary professional support and attention.
- Employees should rely on correct, legal relationships, established and observed by the management team.

To sum up, the best practice and the wisest human resource strategy is to develop and implement lawful rules and procedures for organizing and competent management of staff, detailing the reasons for dismissal and disciplinary sanctions for the hotel staff and for the hotel industry as a whole.

2. Discrimination (penalties and dismissals for discriminatory reasons)

When we talk about discrimination and related claims to the tourism sector, we have in mind first of all the unlawful actions taken by the administration to consumers or employees in hotels and hotel complexes as the most numerous and representative part of the hotel industry.

The principles of the 'Anti-Discrimination Act' that is in force in the Republic of Bulgaria define the legal environment and the forms of discrimination most commonly encountered in practice and related legal actions against employers and companies.

Discrimination is defined as any less favourable treatment of a person based on sex, race, nationality, ethnicity, human genome, citizenship, origin, religion and faith, belief, education, political affiliation, personal or social status, disability, age, sexual orientation, marital status, property status or any other feature established by a law or through an international agreement to which the Republic of Bulgaria is a party.

The forms of discrimination are:

- Direct discrimination, which is any case when a person is treated less favourably on the basis of the above-mentioned characteristics than another person is, was or would be treated in comparable similar circumstances.
- Indirect discrimination, is placing a person on the basis of the above-mentioned characteristics in less favourable position than placing other persons through a seemingly neutral provision, criterion or practice, unless that provision, criterion or practice is objectively justified in terms of law and its purpose is the means to achieve the aim to be appropriate and necessary.

Harassments based on the principles outlined above, sexual harassments, incitements to discrimination, persecutions and racial segregations, as well as the construction and maintenance of an architectural environment that hinders the access of disabled people to public places, is considered discrimination.

The prohibition of discrimination refers to all parties in the exercise and protection of the rights and freedoms provided for by the Constitution and the laws of the Republic of Bulgaria.

Everyone has right of equal access to a profession or an activity, an opportunity to practice and develop them. The breach of this fundamental principle is a subject of discrimination. The basic prerequisite for the exercise of the right is that the person considers himself/ herself discriminated against by the employer. Discrimination is possible to occur and manifest itself:

1. Before the employment relationship occurs:
 - When the vacancy is announced and the employer has imposed discriminatory requirements, except in the cases when it is preliminary provided for.
 - Before signing the employment contract, except in cases, specified by the law.
2. Upon the occurrence of the employment relationship:
 - When approving for work.
 - When hiring.
3. During the performance of work obligations the employer is obliged to ensure equal working conditions, as well as to respect the religion or belief of the worker or employee;
 - equal remuneration for equal or equivalent work;
 - equal opportunities for professional training and upgrading of professional qualification and retraining, as well as for professional development and promotion; applying equal criteria in the assessment of the activities of workers and employees;
 - a workplace adapted to the needs of a person with a disability, except when the costs of doing so are unreasonably high and would seriously hamper the employer;

- applying the same criteria to everyone when imposing disciplinary sanctions and when exercising the rights to unilaterally terminate the employment contract under the Labour Code or the employment relationship under the Civil Servants Act.

The forms of discrimination at the workplace that lead to legal claims to owners, trustees, or managers of accommodation establishments are mostly related to cases of sexual harassment, age restriction or dismissal, or physical disability.

Sexual harassment is considered as the most common form of discrimination and the claims related to it are essentially based on gender discrimination. In our country (Bulgaria) such claims are relatively few and hard to prove, except in the cases of rough violations involving physical and / or psychological injuries in which the ill-treated person is medically certified. The preconditions for sexual abuse and harassment in the hotel industry are more than in other industries. They are based on the prolonged working time and long working hours, late finishing of work shifts, opportunities for intimate meetings in hotel rooms, and alcohol abuse at work. Not only physical abuse associated with attempted or actual rape is considered as a sexual harassment at workplace. The employee may make a claim for sexual harassment to the hotel where he/ she works because of a 'hostile environment' where he/ she is subjected to pressure of persistent sexual offers, sent notes or images of sexual character, obscene emails, photos and videos, or other obscene behaviour against his/ her will, when the management of the hotel has not acted and has 'tolerated' such behaviour. Sexual harassment has also other dimensions, e.g. when the growth of an employee or the amount of his or her remuneration is related to sexual demands on him or her by an employee of a higher rank or a position.

An employer who has received a complaint from a worker or an employee at a workplace who considers himself or herself to be harassed, including sexual harassment, is required to immediately check, take measures to end harassment and pronounce a disciplinary liability if the harassment is carried out by another worker or an employee. The complaint may be verbal or written. The employer and the management team are competent to consider the complaint. The aim is effective measures to prevent all forms of discrimination at the workplace to be taken. Good practices in such cases are related to the timely disclosure and resolution of the problem by the hotel management, and not 'covering' incidents of sexual harassment over employees by other employees, regardless of the ranks and positions they occupy.

Discriminatory treatment of pregnant women, especially in the last months of their pregnancy who work or want to be employed and who are in most cases protected by law is also common.

Here we must immediately explain that 'legal' discrimination is only allowed in cases arising from the necessity of doing the business or the professional qualification and a job, although even in such cases, the court may interpret and take a decision in favour of the claimants. In principle, the law protects pregnant women, except in cases where pregnancy is considered impedance and an 'obstacle' for fulfilling professional duties. For example, a hotel may refuse to appoint a pregnant woman in the position of a receptionist or a guardian, because she cannot perform efficiently her professional duties in terms of night shifts, night duties and other heavy physical work, which should not be considered discrimination.

The law also protects against age discrimination. However, in many hotels and other types of accommodation establishments, people older than 45 years are not employed or

management is looking to get rid of such employees because it is considered that the older people work less, are less active and less productive than younger ones, while diseases increase with age. Of course, there is a need to clarify what the position is, since for some positions age is not an obstacle but an advantage.

Despite the general understanding that young and energetic staff should work at hotels and hotel consumers should enjoy young and friendly staff, no discrimination against employees aged above 40-45 years old should be allowed, especially if these people have a rich and valuable professional experience that can be passed on to young employees. In all cases, hotel management should carefully consider the reasons for refusing to appoint or to dismiss elderly people, with a view to the bringing court actions and positive judgments in favour of the claimants.

The practices of paying salaries that are below the determined minimum wage for the country or the non-payment of any remuneration to hotel workers is also discriminatory and it is not a very rare phenomenon in the tourist sector in Bulgaria. At present, the wages of hotel industry employees are significantly lower than those in other sectors of Bulgarian industry, and that trend has been going on for several years, which does not mean that hoteliers should not also pay these low wages under various pretexts, giving actual grounds for employees to bring civil claims for unpaid or partially paid wages. The requirement for equal pay for the same job of equally qualified employees means that the employer should pay employees equal pay if they do essentially the same work that is characterized by the same skills, efforts and responsibilities. The Human Resources departments should determine the essence and the main features of each job, as in the event of observing claims, the courts consider these issues when comparing jobs.

Last but not least, to obey with the legal provisions on youth work is important, which refers to many hotels, especially during the summer season, when young students (minors - teenagers) work at various positions in the hotel industry. Hospitality employers should keep in mind that the requirements of the minor's employment law state that the working youths should be at least 16 years old.

Regarding the age of the appointed person, additional requirements for the employer arise, such as:

- to inform the parents of the minor about the risks at the job or if any problems occur;
- to provide the minor with reduced working hours, namely - 35 hours per week, 7 hours a day;
- to create conditions for professional qualification for the minor worker;
- to provide annual medical examinations;
- to provide paid annual leave of a minimum of 26 working days.

Violations of Labour Code requirements concerning the recruitment of minors are strictly monitored and when there is an information in this regard - checked by the Labor Inspectorate, which can be very costly to hoteliers. If the violations are proven to be intentional and the employer-hotelier appoints minors unregulated and unlawfully, he or she would be incurred substantial costs.

The penalties that might be imposed in such cases are:

- For hiring 16-18 years old person – a prison of up to 6 months and a fine from 500 to 1000 levs.
- For re-appointment of 16-18 years old person – a prison up to 1 year and a fine from 1000 to 3000 levs.
- For the appointment of a person aged 15-16 years - a prison up to 1 year and a fine from 1000 to 3000 levs.
- For re-appointment of a person aged 15-16 years - a prison up to 3 years and a fine from 2000 to 5000 levs.

The main conclusion of the paper is that through their management structures hotels must perform systematic activities and events in order to exclude or minimize the possibilities for guests and consumers of their services to become subjects to incidents and accidents of various nature, such as disability, mutilation or death during stays or for company employees to be subjected to discriminatory practices where in turn, the hotel companies might become a subject of legal claims and legal liability.

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Initial measurement of assets produced in Bulgarian companies – current state and ways for improvement

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Abstract: The initial evaluation of the production is one of the most complex tasks that accounting specialists face in their practice. The quality of the accounting information provided to the various internal and external users depends to a great extent on the way in which this task is resolved. In this article, using the results of an undertaken research, the practice of leading Bulgarian companies will be analyzed with regard to the costing of their production. The main purpose is to make recommendations for optimizing the process of costing in Bulgarian companies and to increase the quality of the accounting information produced as a result of this process.

Key words: Costing, Initial measurement of production, Costing in Bulgaria, Costing methods applied by Bulgarian companies

1. Introduction

The initial measurement of the production is among the most complex issues the accounting specialists, scholars and regulators face in their practice. It is a problem that will never lose its topicality and is a dynamic subject both in theoretical and practical aspect. The information about the cost of production must answer to the highest demands of timeliness, thoroughness and quality.

The initial measurement of assets produced in the company is made on their cost price. IAS 2 *Inventories* points out that “A primary issue in accounting for inventories is the amount of cost to be recognized as an asset and carried forward until the related revenues are recognized. (IAS 2 *Inventories*, §1). The major part of the above mentioned standard and his parallel NAS 2 *Accounting for inventories* is dedicated to provide ways and guidance by which this primary issue to be resolved.

Measuring the cost of production has always been a controversial topic which incites the interest of many national and foreign accounting scholars. There are plenty of researches dedicated on various costing methods and techniques and the possibilities for application of those methods in the practice of manufacturing, agricultural and other producing companies (Kaplan, R., Cooper R. 1997); (Cooper, R., Slagmulder, R. 1997); (Tuncel, G. et al., 2005); (Mr. Shaban E. A. Salem, Dr. Shabana Mazhar, 2014).

The majority of researches are limited to field or case studies of practices applied by specific company or a small group of companies. Far fewer studies cover more extended

group of companies and can be used for conclusions about application of various costing methods and techniques on a wider level (business sector, national level etc.)

The **main research hypothesis** in this article is that there are possible ways to improve the quality of the accounting information regarding the cost of assets produced in Bulgarian companies, and by using these possibilities the companies may improve the decision making process and thus their competitiveness.

This article is dedicated to analyze the results of a survey undertaken among the leading Bulgarian manufacturing and agricultural enterprises. The survey reveals the practices used by these companies in the process of costing their production. The further analysis points out the weaknesses in these processes and reveals the possibilities for improvement.

2. Methodology

The survey aims to provide the necessary data for further analysis of the practice, applied by some Bulgarian companies when they measure the cost of their production. The goal is to collect enough raw data to conclude how the companies resolve the above mentioned issues regarding the initial measurement of assets produced by them.

Deduction, induction, correlation and comparative analysis are among the scientific methods used through the research process. Others are statistical methods, specifically designed queries, modeling, etc.

Questionnaires were developed and sent to leading companies which operate in the manufacturing and agricultural sector. The questionnaires were designed to be used for comparison of practices applied in the two sectors, to reflect the specifics in them, and to point out any ways for improvement of the costing process in those companies.

The data received from respondents is processed and analyzed in various sections and by using the induction method many conclusions were made about the state of the researched issues in Bulgarian practice.

Scope of the research: The survey was undertaken among one hundred manufacturing and one hundred agricultural companies. The criteria for a company to fall in to selection were as follows:

a) for manufacturing companies:

- their main economical activity as stated in the Annual activity report submitted for 2014 to the National Statistical Institute to be in the sector "C - Processing industry";
- to be among the one hundred companies from the sector who announced the highest sales revenue in section "61180" of their Revenue and Expense report, part of the Annual activity report;

b) for agricultural companies:

- their main economical activity, as stated in the Annual activity report submitted for 2014 to the National Statistical Institute to be in the sector "A - Agriculture"
- to be among the one hundred companies from the sector who announced the highest sales revenue in section "61110" of their Revenue and Expense report, part of their Annual activity report.

The reasons for choosing these criteria are as follows:

- these are the leading companies which realized the biggest value of production in the sectors they operate in;

- not following regulatory requirements about costing of production, omissions and inaccuracies in the process of measuring the self-produced assets in these companies would have the biggest negative influence over key parts of their financial reports. Thus they would reduce vastly the quality of information received by the various users of information.
- they will benefit mostly from the implementation of the newest and more effective ways to improve the process of initial measurement of self-produced assets.

Information about the companies, which met above-mentioned criteria, was received from the National statistical institute (NSI). After formal claim for statistical information, NSI gave the names and UIC of the companies (see Minev M., 2016, Appendix 1 and 2)

Subject of the research: Practices applied for initial and subsequent measurement of assets produced in the companies.

Aim of the research: Analysis and evaluation of the applied practices for initial and subsequent measurement of assets produced in the leading manufacturing and agricultural companies in Bulgaria.

Research limitations: Survey forms don't include any questions which require disclosure of exact numbers, specific methods or any other information that could be characterized as confidential for the companies.

Preparation of the survey forms, their filling by the respondents and the subsequent gathering and aggregation of the responses were made using the functionalities of the online platform – "Lime survey". The following processing of the data, the verification for statistical significance of responses and conclusions was made using the software product SPSS.

3. Summary of the results. Conclusions and recommendations

Responses were received from 25% of the manufacturing companies and 22% of the agricultural ones, or 24% in total of all the companies included in the focus group. The survey lists, aggregated data and the one-dimensional distributions of the responses received from the respondents could be found in the below cited literature (see Minev, M., 2016, Appendixes №4, 5, 6 and 7)

The test run with SPSS software showed statistical significance of the responses; therefore the conclusions made on their basis could be referred to the whole scope of the research.

Further on in the text the most significant results from the research will be presented alongside with the main conclusions and recommendations made by the author.

The majority of manufacturing entities (80%) responded positively on the question if they have distinct managerial accountant(s). This percentage is relatively lower among the agricultural companies - 63.64%. In total 72.34% of all respondents have distinct managerial accountants. This result is comparable with the findings of other authors – 70.35% (see Atanasova An., 2015, p. 52). This high percentage comes to show the extremely serious attitude and significance which the management of researched companies have towards the matter of costing and measurement of production.

The research data shows that big share (72%) of the manufacturing companies have integrated Enterprise Resource Planning (ERP) systems with separate modules for expenses

analysis and costing of production. In comparison this share for agricultural entities is only 4.55%.

This significant difference urged us to do statistical tests, using SPSS platform. The results of these tests could be seen in tables №1 and №2 below.

Table №1 Two-dimensional distribution of variables „Integrated ERP system“ and „Company sector“

		Do your company have integrated ERP (Enterprise Resource Planning) system?			Sum	
		Yes	No, but we plan to do that in the next 3 years	No, and we don't intend to do that in the next 3 years		
By Company sector	Manufacturing	Count	18	1	6	25
		% within Survey	72,0%	4,0%	24,0%	100,0%
		% within Do your company have integrated ERP (Enterprise Resource Planning) system?	94,7%	8,3%	37,5%	53,2%
		% from total of	38,3%	2,1%	12,8%	53,2%
	Agriculture	Count	1	11	10	22
		% within Survey	4,5%	50,0%	45,5%	100,0%
		% within Do your company have integrated ERP (Enterprise Resource Planning) system?	5,3%	91,7%	62,5%	46,8%
		% from total of	2,1%	23,4%	21,3%	46,8%
	Total	Count	19	12	16	47
		% within Survey	40,4%	25,5%	34,0%	100,0%
% within Do your company have integrated ERP (Enterprise Resource Planning) system?		100,0%	100,0%	100,0%	100,0%	
% from total of		40,4%	25,5%	34,0%	100,0%	

Table №2 Connection between the variables “Integrated ERP system,, and “Company sector” – hypothesis test (χ^2 - test)

	Value	df	Asymp.Sig.(2-sided)
Pearson Chi-Square	24,452 ^a	2	,000
Likelihood Ratio	29,075	2	,000
Linear-by-Linear Association	12,224	1	,000
N of Valid Cases	47		
a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 5,62.			

It can be concluded on the basis of the data shown in the above tables that the null hypothesis – *there is no connection between the sector in which the company operates and the integration of ERP system in the company* – is rejected. Thus the alternative hypothesis is

accepted – *there is a connection between the company sector and the integration of ERP system. Moreover this connection is one of a very strong correlation.*

As a result of the above data and tests it could be stated that the ERP systems and their advantages for optimizing and better controlling the processes of expenses analysis and measuring the cost of production are far better used by the leading manufacturing companies than they are by the agricultural ones.

None of the researched companies had ever been sanctioned by the government authorities as a result of omissions and/or mistakes made during the costing process. At the same time 36.84% of manufacturing and 40.91% of the agricultural companies declare that they seriously question the quality of their own information about the cost of their production. *This unambiguously states that there is a vast field for improvement of the government control procedures related to the cost of production.*

Nearly half of the researched manufacturing entities (44%) state that they do not test their production's net realizable value by the end of the year. *This at first is a violation of the requirements of the IAS 2 Inventories and its corresponding one AS 2 Accounting for inventories. Moreover it is a non-observance to one of the generally accepted accounting principles – conservatism, not only in the researched companies but most likely in the majority of manufacturing companies in Bulgaria.*

All respondents have replied that they apply the straight-line depreciation method both for financial and managerial accounting purposes. Having in mind that this method is the only one that is acceptable for taxpaying purposes (see part Ten of The Corporate Tax Law) it could be assumed that companies use this method to ease the clerical work which results from having two separate depreciation plans in their financial accounting systems. If we accept the application of the straight-line method for financial accounting purposes with some concerns, we state that this method should have very limited (if any) use in the managerial accounting. Surely the financial managers of the entities should consider the use of more complex and flexible ways to include the depreciation costs in the cost of the production. *Given the fact that depreciation costs represent vast share of the total cost of the production (between 20% and 40% of all costs for researched entities) the application of methods which better represent the real depreciations of long-term assets during the production process is one of the key tools to improve the quality of the initial measurement of production.*

It could be gladly acknowledged that the methodology for measuring the normal capacity of the production facilities, suggested by the author (Minev, 2015), received extremely positive feedback from the researched manufacturing entities. 47.37% of them answered that the methodology has some useful suggestions, 52.63% say that it is all-together useful. Moreover 89.47% of the respondents state that they will apply it, after making some alterations, when they measure the normal capacity of their production facilities.

It is interesting that 72% of manufacturing, 77.27% of agricultural companies or 74.47% from all respondents answered negatively to the question *if they consider the Specific identification method to be the most reliable and accurate method for transferring the cost of materials in the cost of production.* Despite the fact that this method is recommended by the applied accounting standards it has a very little application in researched companies. On this basis it could be stated that the wider application of this method will improve the quality of information about the cost of self-produced assets.

From researcher's point of view the answers to the question for the most often applied costing methods are interesting. The research data shows that 54.17% of manufacturing and 50% of agricultural companies use the direct costing method to measure the cost of their production. At the same time from the answers of the respondents we understand that in the cost of their production various types and amount of indirect expenses are included. This contradiction, in combination with the specifics of the production process in researched sectors brings to mind the conclusion that it is reasonable to assume the lack of understanding in some of the respondents to the characteristics of the direct costing method. Similar conclusion is made by other authors as well. (see Atanasova An., 2015, 65-66)

The outstanding dominance of one of the methods for transferring the cost of materials in the cost of production over the others makes very strong impression. The results of the research show the following data about the applied methods for the cost of materials appraisal in the focus group companies.

Table № 3 Methods for transferring the cost of materials in the cost of production

Applied method	Manufacturing		Agriculture	
	Count	%	Count	%
Weighted average	64	64.00%	64	64.00%
First-in, first-out	2	2.00%	5	5.00%
Specific identification method	3	3.00%	2	2.00%
No data available for the applied method	31	31.00%	29	29.00%
Total	100	100.00%	100	100.00%

If we exclude the companies who haven't disclosed the information about the applied method we will receive even higher dominance of companies which apply the weighted average method respectively 92.75% from the manufacturing and 90.14% of agricultural ones. *Given the relatively high share of material expenses in the total cost of production it could be stated that by using the modern technologies the companies may try to implement the Specific identification cost method to include more accurately the cost of materials in the total cost of their production.*

The most frequently applied basis for indirect expenses allocation and their inclusion in the cost of production among the surveyed agricultural companies is the amount of the acres sown (47.62% of the respondents), second in line as a choice for allocation of expenses is on the basis of the direct costs (38.10%) and after that is the allocation by the amount of the direct labor costs (in 9.52% of the companies). The manufacturing companies are most likely to allocate the indirect expenses by the amount of the direct materials (48% of the surveyed entities), next in line is the direct expenses basis (20%). The leading Bulgarian manufacturers most rarely use the direct labor costs as allocation basis – only 8% of them. This results significantly differ from the findings of other authors (Horngren, C. T., Datar, S. M. and Foster G, 2000, p. 101) who show that the direct labor costs are the most frequently used allocation basis from the manufacturing companies in USA, Australia, Ireland, Japan and United Kingdom.

Survey shows that only 10.53% of manufacturing and 18.18% of the agricultural companies apply the principles of ABC costing technique to allocate the indirect costs in the total cost of their production. This low levels are comparable with the ones found by other authors as well (see Atanasova An., 2015, p. 65) It should be pointed out that the financial managers of 21.05% of manufacturing and 9.09% of agricultural companies replied that they are not familiar with those principles. This comes to show the need of even wider representation of this technique and its advantages in the publications of the leading scholars. It must be noted that the management of every one of the companies who use the ABC technique determines the effect of the method application as extremely positive. *It could be stated on this basis that there is a significant potential for improvement and much wider spread in the use of the ABC costing in the process of cost allocation in Bulgarian companies. This will most certainly lead to refinement of the information about the cost of their production.*

The standard costing system has relatively wider use among the researched entities. It is applied by 45.83% of manufacturing and 50% of agricultural companies. Again it should be noted that the management of 20.83% of manufacturers and 18.18% of agriculture companies declare their lack of awareness and knowledge about this method. Similarly to the ABC costing the vast majority of the companies who use the standard costing technique (94.44% of them) considered it to be very helpful and to have significantly positive effect over the quality of the costing process and the information this process provides. There is a several ways in which companies apply the method. By the survey data it becomes known that 23.52% of the companies keep track to the predetermined cost standard compliance automatically during the costing period, i.e. the accounting software (and or the ERP system) keeps track and automatically alerts for every extend to any predetermined cost (surcharge). 23.52% of the companies follow and the variations from costing standards automatically after the end of the costing period, and the majority of the companies (47.06%) track the standard compliance of costs manually (and cost element by cost element) after the end of the costing period.

Negative impression is made by the small share of companies which apply the principles of the target costing technique. This method is used by only 16.67% manufacturing and 18.18% from the agricultural entities. It must be pointed out that the management of 45.83% of manufacturing and 40.91% of the agricultural companies doesn't know about the advantages of this technique. It could be positively noted that nearly a quarter from all respondents intend to start using the Target costing technique in the next three years. The vast majority (89.47%) of companies that already use the technique evaluate the effect of its application over the costing information as extremely positive. *The target costing technique has proven its usefulness in numerous cases over the years. On this basis it could be stated that its wider usage in Bulgarian companies is highly recommended. The wider application of this technique will decrease the share of companies (32.00% manufacturing and 77.27% agricultural) who suffer losses as a result of starting unprofitable productions processes.*

4. Conclusion

The most important conclusions made as a result of the research could be summarized as follows:

- Vast majority of respondents (72.34%) have distinct managerial accountants. This high percentage comes to show the extremely serious attitude and significance which the management of researched companies have towards the matter of costing and measurement of production.

- None of the researched companies have ever been sanctioned by the government authorities as a result of omissions and/or mistakes made during the costing process. At the same time 36.84% of manufacturing and 40.91% of the agricultural companies declare that they seriously question the quality of their own information about the cost of their production. On this basis it could be stated that there are possibilities for improvement of the government's and the auditor's control over the quality of the information produced by the costing process.

- The research data shows relatively low levels of application of the innovative techniques for costing the production as ABC costing, Standard costing and Target costing. Meanwhile the majority (over 90.00%) of respondents who use those techniques assess their impact over the quality of the costing information and its reliability as extremely positive. Therefore the wider application of the above-mentioned techniques in the practice of Bulgarian companies will lead to improvement and rationalization of the costing processes and on this basis it is highly recommended.

The presented results and conclusions made on the basis of them during this research confirm the main research hypothesis, as stated above. There are many possibilities to improve the quality of the accounting information regarding the cost of assets produced in Bulgarian companies. This improvement could be achieved by much wider application of the innovative costing techniques as ABC, Standard and Target costing.

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Evaluation report on intellectual output O3 (interactive books) within the DIMBI project

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Abstract. The purpose of this paper is to present the process of evaluating the intellectual output O3 (interactive books) within the DIMBI project (www.dimbi.eu). The books are “Data Warehouse” (https://activetextbook.com/active_textbooks/13535) and “Business intelligence” (https://activetextbook.com/active_textbooks/13534). Data for this paper is collected through an online questionnaire with 14 questions using Google forms. The respondents are the co-authors of the books and the administrative staff, who is engaged with the project. Using descriptive statistics, correlations, cross tabulation and manual text mining techniques the evaluation report for O3 is created.

Key words: DIMBI project, intellectual output, evaluation

1. Introduction

The DIMBI project – “Developing the innovative methodology of teaching Business Informatics” is co-funded by the Erasmus+ Programme of the European Union. The aim of the project is introducing the innovative practices leading to high quality of teaching and learning in Business Intelligence (BI) and Data Warehouse (DW). More information about the DIMBI project is available on the project web site – <http://www.dimbi.eu/>.

Intellectual outputs of the DIMBI project are divided into O1, O2 and O3. O1 concerns the preparation of Business Intelligence (BI) and Data Warehouse (DW) curricula. O2 concerns the preparation of the methodology of teaching BI and DW. O3 concerns the preparation of interactive books in BI and DW.

The research work is carried out in two scientific teams with two scientific managers assigned. They are responsible for the implementation of O1 and O2. Two researchers from the DIMBI team are responsible for O3.

2. Evaluation of intellectual output O3 (interactive books)

The evaluation of intellectual output is conducted through an anonymous online questionnaire. It is sent to 15 members of the DIMBI team – co-authors of the interactive books and administrative staff (5 from Bulgaria and 10 from Poland). 14 answers are received. The response rate is 93%.

The O3 survey was conducted during the period 25 September 2017 – 04 October 2017. The received answers are converted into an XLSX file and after that – to a SAV file for PSPP or SPSS. Coding of variables is done. Using descriptive statistics several tables with aggregated data are created.

The first question (Q1) in the survey concerns the different groups of people, who may benefit from both books (table 1).

Table 1.

Results of the question concerning different groups of people, who may benefit from both books (Q1.1 – Q1.5)

Options	Given answers (in %)	
	The option is checked	The option is not checked
Q1.1. General public	57.1	42.9
Q1.2. Students	100.0	0.0
Q1.3. Teachers	100.0	0.0
Q1.4. Researchers	85.7	14.3
Q1.5. Businessmen, practitioners	85.7	14.3

All respondents consider that students and teachers will benefit from both books. 85.7% of the respondents think that researchers, businessmen and practitioners may benefit from both books. 57.1% of the respondents are in the opinion that general public may gain profit from both books.

Since respondents had the chance to mark several groups of people, the number of groups is aggregated by the number of respondents (table 2). Most of the respondents (57.1%) think that all given groups of people will benefit from the books.

Table 2.

Results of the question concerning different groups of people, who may benefit from both books

Count of groups of people, who may benefit from both books	Number of respondents (in %)
1 (one group was marked)	0.0
2 (two groups were marked)	7.2
3 (three groups were marked)	14.3
4 (four groups were marked)	21.4
5 (five groups were marked)	57.1

The next group of questions (Q2 – Q7, Q10, Q13 and Q14) measures the respondents’ opinions regarding the contents of the books and the novelties in Business informatics (table 3).

Table 3.

Results of the questions concerning contents of the books (Q2-Q7, Q10, Q13 and Q14)

Questions	Given answers (in %)				
	1	2	3	4	5
	Strongly disagree	...	...	...	Strongly agree
Q2. The two books are written by several authors. Do the authors have consensus on the used terminology?	0.0	0.0	3.6	42.9	57.1
Q3. Most of the authors have given clear examples and explanations.	0.0	0.0	7.1	35.7	57.1
Q4. Texts in some chapters are difficult to understand.	42.9	35.7	7.1	7.1	7.1
Q5. The web site www.activetextbook.com is appropriate for uploading the PDF files of both books. The web site provides the expected functionality concerning interactivity.	0.0	0.0	14.3	64.3	21.4
Q6. Each chapter of the book contains links to online resources for further reading.	0.0	0.0	7.1	50.0	42.9
Q7. The writing style of both books is understandable.	0.0	0.0	0.0	35.7	64.3
Q10. When you read the chapters of other authors, you extended your knowledge in business informatics.	0.0	0.0	0.0	57.1	42.9
Q13. The book "Data Warehouse" contains novelties in Business informatics (new curricula, new teaching methods, new contents).	0.0	0.0	0.0	18.2	81.8
Q14. The book "Business intelligence" contains novelties in Business informatics (new curricula, new teaching methods, new contents).	0.0	0.0	0.0	18.2	81.8

Source: Own calculations

57.1% of all respondents are in the opinion that the authors of the books have consensus on the used terminology. 57.1% of the respondents are satisfied with the given examples and explanations. 42.9% of the respondents strongly disagree that texts in some chapters are difficult to understand. 64.3% of the respondents agree that the web site www.activetextbook.com is appropriate for both books and provides interactivity. 50.0% of the respondents agree that each chapter of the books contains links to online resources for further reading. 64.3% of the respondents strongly agree that the writing style of the books is understandable. 57.1% of the respondents think that reading the chapters of other authors has extended their knowledge in business informatics. 81.8% of the respondents strongly agree that the books “Data Warehouse” and “Business Intelligence” contain novelties in Business informatics.

Respondents, who are co-authors of the active books, were asked whether they are satisfied from the collaborative work as a co-author of the active books (Q8). 80% of them are satisfied from the collaboration with their colleagues (table 4).

Table 4.

Results of the question concerning the collaborative work of the active books (Q8)

Question	Given answers (in %)				
	1	2	3	4	5
	Dissatisfied	...	...	...	Satisfied
Q8. If you are a co-author of the active books, please, tell us if you are satisfied from the collaborative work as a co-author of the active books.	0.0	0.0	10.0	10.0	80.0

The next question (Q9) concerns the recommendations on the work of the co-authors. 42.9% of the respondents have no recommendations on the chapters of the other co-authors. Slightly more than 1/3 of the respondents have some recommendations on the work of their colleagues (table 5).

Table 5.

Results of the question concerning the recommendations on the work of the co-authors (Q9)

Question	Given answers (in %)				
	1	2	3	4	5
	No recommendations	...	...	...	Many recommendations
Q9. You read the chapters of other co-authors. Did you have any recommendations on their work?	42.9	14.3	0.0	35.7	7.1

Q11 is an open text question related to the book "Data Warehouse": "If there is a second edition of the book "Data warehouse", what has to be revised or extended? If a new chapter is useful, please, write your recommendations". Three people have no opinion and any recommendations. Five people wrote: "Some chapters lack examples. These examples have to be added. A new chapter "Hierarchical data warehouses" may be added in future editions of the book DW.", "Examples of exercises (task to do) should be improved. In addition, consistency of the particular chapters content should be verified.", "Chapters that have mainly theoretical concepts have to be extended with practical examples.", "Statistics about best practices when they appear.", "More practical examples."

Q12 is an open text question related to the book "Business Intelligence": "If there is a second edition of the book "Business intelligence", what has to be revised or extended? If a new chapter is useful, please, write your recommendations." Three people have no opinion and any recommendations. Five people wrote: "A new chapter about "BI methods for analyzing unstructured information" may be added in future editions of the book on BI.", "Apart of the mentioned above – content of the selected chapters should be updated.", "A

new chapter may be “BI and robotics”.”, “Statistics about best practices when they appear.”, “More practical examples.”

Since the variables Q2-Q10, Q13, Q14 are on an ordinal scale, the Kendall’s tau-b coefficients are calculated. A great number of the calculated correlations coefficients are not statistically significant ($p > 0.05$). It means that the respondents did not give one and the same answer to a great number of the questions with an answer on a scale “strongly agree” – “completely agree”. The correlation coefficient between Q10 and Q13 ($r = 0.606$, $p < 0.05$) shows a dependency.

Table 6.

Dependency between Q10 and Q13 (in % of total)

Questions	Q13 - answers			Total
	0	4	5	
Q10 – answers				
4	21.4	14.3	21.4	57.1
5	0	0	42.9	42.9
Total	21.4	14.3	64.3	100.0

It may be concluded that 42.9% of the respondents who read the chapters of other authors, extended their knowledge in business informatics strongly agree that book "Data Warehouse" contains novelties in Business informatics (new curricula, new teaching methods, new contents).

The correlation coefficient between Q10 and Q14 ($r = 0.606$, $p < 0.05$) shows a dependency.

Table 7.

Dependency between Q10 and Q14 (in % of total)

Questions	Q14 – answers			Total
	0	4	5	
Q10 – answers				
4	21.4	14.3	21.4	57.1
5	0	0	42.9	42.9
Total	21.4	14.3	64.3	100.0

It may be concluded that 42.9% of the respondents who read the chapters of other authors, extended their knowledge in business informatics strongly agree that the book "Business intelligence" contains novelties in Business informatics (new curricula, new teaching methods, new contents).

The correlation coefficient between Q13 and Q14 ($r = 1$, $p < 0.05$) shows a dependency.

Table 8.

Dependency between Q13 and Q14 (in % of total)

Questions	Q13 – answers			Total
	0	4	5	
Q14 – answers				
0	21.4	0	0	21.4
4	0	14.3	0	14.3
5	0	0	64.3	64.3
Total	21.4	14.3	64.3	100.0

All answers are situated on the diagonal of the cross table. It may be concluded that all respondents gave one and the same answer to Q13 and Q14. 64.3% of the respondents say that both books contain novelties in teaching Business informatics.

3. Conclusion

The intellectual output O3 (interactive books) is innovative and beneficial according to the opinions of the co-authors and administrative staff in the DIMBI project. Both interactive books have very good quality and contain novelties. Most of the respondents strongly agree that they are satisfied from the contents of the books. The chosen platform for uploading the interactive books provides the expected functionality (described in the project application form).

The results show that the respondents did not give one and the same answer to all questions. The open text questions give some recommendations on the future work of the research team.

The results in this evaluation report are based mainly on descriptive statistics, correlations and cross tables using the answers of an intellectual output O3 evaluation survey. Future research may focus on changing the scope of respondents.