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## **INFLUENCE OF COMMUNICATION OF MEDICAL PERSONNEL WITH PATIENTS ON HEALTH CARE UNITS MANAGEMENT PROCESSES**

Bożena Freund

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### **INTRODUCTION**

There are no doubts that management in public health care units is one of the greatest challenges for contemporary public services systems. The most important issues which appear in the management process of health care units, particularly the public ones, are: mission, vision, values and ethics. Mission of a health care organisation defines a purpose of existence and reasons for which an institution works from the patient's point of view, taking into consideration personnel's interests as well [Durlik 2008]. A social mission, in health care units, is an idea related to each aspect of an organisation's activity, aiming at improvement of health condition and quality of a society's life. Vision, in turn, defines a long-term unit's future by stating what is it now and what it desires to be in a definite perspective. Vision presents as well a set of basic moral and ethical values within which health care organisation intends to operate. Vision should be expressed in a way that enables emotional engagement of medical personnel and supporting staff, as well as patients and environment in which an institution operates [Durlik 2008]. As it was said, 'values and ethics are deeply embedded in a health care, and most of people who work in health care units present an altruistic belief regarding a social value of the pursued work' [Walshe and Smith 2011]. Vision, mission and values should be properly expressed in an organisation operation by a proper communication of medical personnel with patients, especially because "today's generation expects more of a health care that their parents. A society does not want to be a passive consumer of health care services which are served by service providers at their discretion. Patients, who are used to wide range of choice, as well as freedom of decision taking in other aspects of life (...) expect that they will be consulted, informed and included in taking decisions which concern their health" [Walshe and Smith 2011].

The basis is therefore communication of medical personnel with patients, which involves conversation techniques, motives for actions, attitudes and behaviours towards a patient which result from a professional role, and an expression role which allows understanding as well as satisfying patients' expectations and needs. Sufficiently advanced communication skills of medical personnel are vital from the perspective of a patient who has found himself/herself in a difficult situation of a sickness and hospitalisation. Situation of a medical care, particularly a hospital care involves a severe stress, what was pointed out by Holmes and Rahe, who developed the Hospital Stress Scale which involves 49 items, ranged in accordance with the increase of their impact [according to: Wojtczak 1994]. On the basis of the above mentioned scale it can be concluded how important is information to patients, and what is its impact on a level of satisfaction with communication with medical staff, which is still low. A lack of that important factor leads to disorientation as well as stresses a patient, what directly influences their condition, and so it makes longer the process of recovery and stay in a hospital, what is equally inconvenient to the patient, medical personnel, taxpayers, and a unit manager, as longer hospitalisation of a patient means a huge logistical challenge to a unit. If a proper communication with a patient was provided, not only the patient would feel much better, what would directly affect the process of recuperation, but also it would contribute to improve effectiveness of medical personnel's as well as a unit's work, and create a possibility of in-patient treatment for those who need it, thanks to which waiting time to hospitals and specialists could be reduced. When it comes to time which is given to communication, interviews made in Warsaw Oncology Centre show that 'in the time of a twenty-minutes appointment (oncologists appointment time is above the average) only one minute is set aside to patient's questions. After all, patients do not know most of the terminology which is used by doctors. As a result every second patient claims that he/she hasn't learned anything about the cause of a disease, and the same number of patients, after another equally hermetic appointment, stops to obey doctors' recommendations' [Szulc 2011]. The author addressed a very important issue which is a direct impact of communication on a therapy effectiveness, as the substantial function of an information exchange between a patient and medical personnel is to make a diagnosis, and then define further treatment in order to cure a patient. That is just one out of a few functions of communication in this complex relation, as another one, and in some cases (for instance chronic disease) an essential function is a function which involves support, emotional comfort of a fear and improving patient's psychophysical condition. A patient who finds himself/herself in such a difficult situation may be frustrated by adverse external factors which cause unpleasant feeling, i.e. anxiety, fear, dread, pain and loneliness. Dependence, strictly related to the fact that care is provided by strange persons, is as well a difficult situation to a patient. A patient feels lack of control and influence on a situation. He/she can feel lost in a maze of medical procedures, which are not understandable to him/her, or specialist language. Such a psychophysical condition results in a negative emotional attitude, specified behaviours or means of communication. A patient's attitude may vary from a defend one, by irritation, to aggression [Baum and Staszewski 2008]. The significance of communication in fear decreasing in patients is stressed by Rudawska who states that 'patient, by choosing a specialist, entrusts in him/her his/her health, therefore he/she expects signals which confirm the choice made was right. In situations which exclude discretion of making

decisions, patient's anxiety increase causing emotional tension which is often not realised. The role of communication is then even more important as apart from a persuasive function, it is a creator of trust to a services provider' [Rudawska 2006]. As a result there can be distinguished four basic dimensions of relation which decide on development of a bond between a patient and a services provider: a technical dimension, a social dimension, a moral dimension, and a cognitive dimension. A technical dimension refers to a basic and traditionally understood treatment which involves medical activities related to diagnosis and therapy. This is the core of medical professions, and in interventional specialisations (e.g. surgery) it is of an invasive character. A social dimension refers to communication sphere between parties, it is of verbal and non-verbal character. The way conversation is conducted, the way of asking questions, clearness of expression, as well as all this what is included in the code of a body language, eye contact, touch – affect quality as well as effectiveness of communication with a patient. In many conditions communication affects a mental sphere, e.g. the emotional sphere of patient's treatment. An effective communication is related to a technical dimension, as in many cases it is the basis of diagnosis and treatment, and in chronic diseases – an essential element of a therapy. A moral dimension relies on a patient's trust in medical personnel. Between trust and communication there is a feedback, as creating a relation which is based on trust supports an efficient communication. Gaining somebody's trust is a condition for moving a relation to a cognitive dimension, which refers to the level of engagement in a treatment of both a patient and a medical personnel. The engagement directly affects the quality of relations by shaping attitudes and behaviours of a relation participants, it has as well real impact on the course of treatment [Rudawska 2006]. Authors of an important handbook regarding an effective communication between doctors and patients stress out that ability of medical personnel to communicate with a patient is one of the most important factors in a treatment process [Wojtczak 1994]. It is the ground for diagnosis and treatment, and in the case of chronic diseases it is a fundamental form of therapy. The role of communication ability in the process of treatment can be put in four aspects: informing, diagnosing, psychotherapy, and integration. Communication of medical personnel with a patient is performed in various ways and in various forms. Nevertheless, it can be divided into verbal communication, i.e. verbal transmission of information, and non-verbal communication which involves so called 'codes of body language' (mimicry, gesticulation, tone and voice sound). Both of these methods are equally important and they complement each other. A competent application of both these methods makes an interaction effective [Wojtczak 1994], and a treatment – successful. 'A basis for such finding are results of empirical studies which confirm the hypothesis that a major part of a treatment effect is the result of a constructive communication between a doctor and a patient' [Rudawska 2006]. Depending on a personality, an attitude, and few other factors there can be noticed various forms of relations with a patient which are applied by a medical personnel. Bartkowiak distinguishes four basic forms of relations which can occur between a patient and a medical personnel. First of them is 'the paternalist model in which it is a doctor who decides what type of treatment is most suitable and tries to make a patient to agree; another one is the information model in which a doctor as a professional expert provides information and a patient makes a decision regarding treatment methods; another one is an interpretation model in which a doctor provides information both on a patient's condition and risks

as well as advantages related to various types of treatment (a doctor acts in this model as well as an advisor who helps a patient in making a decision regarding procedures which are most suitable to patient's personality); the other one is the model of joint consultation in which a doctor, as a teacher and a friend, starts a dialogue with a patient in order to consider all advantages and disadvantages of various methods and choose the most appropriate treatment' [Bartkowiak 2010]. The latter model is as well-supported by other authors. In practical terms it is a model of relations which is most desired and advantageous.

It is therefore shown that a contemporary patient requires from a medical personnel, apart from high professional qualifications, specialist knowledge, lifelong learning and relevant professional experience, a widely understood communication which involves both a transfer of information regarding a health condition and a lot of empathy and partner support instead of paternalist moralizing and giving orders. Medical procedures, communication, trust, and engagement may prove to be key elements in a treatment process which directly affect a therapy effectiveness, a patient's and personnel's satisfaction, and even effectiveness of a health care institution. This is also an important question, as even without it Polish health care system faces many problems. Most of them however are out of a manager's control. Nevertheless, there are many issues in particular health care units which can be improved and – by doing this – improve the quality of health care. One of the most important questions on which a manager, head or director of a health care unit has a major impact is the issue of communication between medical personnel and patients. It is essential for a manager to remember about it, as it turns out that medical students of all professions are particularly required to constant enhancement of their knowledge regarding widely understood medical sciences with some elements of ethics, which is a separate academic subject but should be also emphasised in other courses. Lectures in communication or psychology are considered as an additional element to a basic medical knowledge, and they are still marginalised. Studies performed in 2016 in which, among others, the Regulation of the Minister of Science and Higher Education of 9<sup>th</sup> May 2012 on educational standards for the fields of study: Medical Major, Dentistry, Pharmacy, Nursing and Obstetrics was analysed, proved that social sciences related courses (including medical personnel soft competences development) are required to complete as a part of a study programme only to the minimum extent. For example, 6-years Medical Major programme covers totally 5,700 hours of courses and practical placements, and only 240 hours of the total number are dedicated to lectures in social sciences, which is just 4.21% of all courses. In turn, the total number of hours at a first-cycle and second-cycle programmes in Nursing covers 6,020 hours of lectures, tutorials, and practical placements out of which only 450 hours are dedicated to workshops regarding social sciences which is 7.47% of the total time dedicated to education of nurses [Freund and Dorczak 2016].

It was not until middle 1990s, when a public debate regarding the significance as well as impact of communication on the quality of relations with a patient and a treatment process. There are still only few studies regarding a proper communication with a patient, similarly seminars and conferences. It should be stressed however that with the beginning of the new millennium interest in communication rises and consequently the issue becomes more and more significant. This time it is not only about improving relations with patients, but also about improving effectiveness of a health care unit



activity, where an effective communication not only creates a positive spirit in a health care unit, but also becomes a part of creating a positive image of a unit and an important factor of a competitive advantage. Therefore, current motives for improving quality of communication with patients are market-oriented, nevertheless they can bring real advantages not only to a health care unit and medical personnel, but also patients and the whole society. It happens more and more often that health care units managers send their staff to special trainings, seminars and conferences, aiming at effectiveness improvement, particularly knowing that there are three basic types of skills which are nowadays required from a medical personnel: intellectual skills, practical skill, and communication skills. Within the scope of intellectual skills, there are specialist knowledge as well as the ability to properly apply the knowledge. Within the scope of practical skills there are proficiency in performing medical procedures as well as constant experience acquiring. Within the range of communication skills there are in the first place empathy, sensitivity, an individual approach towards a patient, ability to react to other's needs, as well as acquiring knowledge regarding psychology, which significantly improves the communication process [Wojtczak 1994]. As it can be seen, all the three scopes of skills are indispensable for medical personnel in order to achieve professionalism. Communication is in this process as much important as knowledge and competences. The significance of communication was as well noticed in legal regulations and it was entered in ethical codes for particular professional medical groups. In the Ethical Code for Medical Doctors chapter 1 is dedicated to respect for a patient's rights. Similar recommendations in regard to communication with patients can be found in the Code of Professional Ethics for Nurse and Midwife in the Republic of Poland. Both nurses and midwives in their vow in point 4 swear to "show respect to patients, not to misuse their trust, as well as observe professional secrecy". In the specific part, which covers relations between a nurse and a patient, in point 1 it is stated that "a nurse in her professional role is obliged to (...) provide a patient with a reliable and understood information regarding a nursing process", further in point 2 it is stated that "in cooperation with a patient a nurse should act with kindness, forbearance, patience, creating the atmosphere of mutual trust and understanding" [Code of Professional Ethics for Nurse and Midwife in the Republic of Poland]. Quite similar regulations can be found in the first coherent Code of Professional Ethics for Paramedics, and in other ethical codes of medical professionals. "Numerous experiments show the significance of empathy within the scope of improving interpersonal contacts, particularly in a relation doctor-patient. (...) A therapist's ability to recognise his/her own as well as others' emotional conditions decides on a proper perception of a patient's affective sphere. (...) Therefore, the more empathy, the better perception and understanding of their own and others' emotional conditions. (...) An empathic doctor is therefore not only an efficient specialist, but also a spiritual comforter, guardian and advisor" [Wojtczak 1994]. We must be aware that empathy is necessary so that communication with patients works properly. It turns out that communication based on empathy may be an effective addition to a therapy, as thanks to empathy medical personnel may ease emotional consequences of a disease (reduction of fear, anger, feel of wrong, depression, perplexity, helplessness), and mentally strengthen a patient in his/her struggle with a disease or adjustment to a disease (raising faith and hope, self-esteem, sense of support, sense of control, sense a situation understanding,

sense of meaning, sense of internal strength and motivation for treatment) [Motyka 2012]. Communication based on ethics and empathy may have a real impact on a patient's condition. One should however remember that truly professional support may be effective only if it meets basic requirements, such as: competences, engagement, cooperation, and communication [Krzyżanowska-Łagowska 2005]. These are basic features which are necessary in order to acquire high work effectiveness of medical personnel, as well as an expected effectiveness of activities performed by health care units. It should be as well mentioned that, basing on ethical codes of particular medical professions, it is medical personnel who are responsible for the quality of communication with patients, that's why it is so important to develop proper attitudes. What's more, the relation level of complexity puts as well a great deal of responsibility for this communication in medical personnel, as complexity of this relation 'on the one hand results from disadvantageous situation in which one of the communication party found himself/herself (a patient), and on the other hand – from the specificity of the communication subject (a disease)' [Krzyżanowska-Łagowska 2005]. The above indicates as well that relation between a patient and medical personnel is of strongly asymmetric character, which means that it generally depends on a therapist whether his/her cooperation with a patient will be consonant, advantageous to both parties, or full of tensions, stresses and misunderstanding. In order to avoid the latter possibility, medical personnel should try to fulfil patient's expectations both in information and emotional sphere. Meanwhile, according to patients' opinions, medical personnel's contact with a patient regards mainly a diagnosis [Wojtczak 1994]. What are then most common irregularities? The most common mistakes in communication with patients which are made by medical personnel, are among others: blaming a patient for the course of disease (manifested by moralising, numerous accusations, raising voice, what increases patient's sense of guilt, which is without it high enough), seeing patient's problems from their own perspective and imposing their opinion (it is viewing a patient through values characteristic of medical personnel, stereotype viewing), false sympathy (which may lead to improper calming a patient, e.g. telling untruth, withholding information, promising impossible things), inaccuracy in ordering and signing recommendations [Wojtczak 1994], or misusing specialist terminology or even jargon which is not understood to people outside medical sector. Other often mentioned defaults in communication are among others: treating patients tactlessly, impersonally; lack of interest in patient's emotions and lack of attention given to patient's emotions. We should consider why do so many mistakes in communication occur. The easiest answer is to blame insensitive medical personnel, however it would be very unfair and mostly false statement. The main reason is to be found in the lack of education in communication skills during first-cycle programmes and second-cycle programmes, as well as neglecting psychological issues. Lack of proper communication may as well be a result of individual cases of low empathy of medical personnel, however – what is important – empathy is a feature which can be, and even ought to be developed and cherished throughout the whole life, that's why there is a great chance for improvement of communication processes with patients. Blaming only an educational system or individual features of some representatives of medical staff as the only reasons of improper communication with patients would be unfair, for this reason an increased level of stress under which medical staff works everyday should

be mentioned. Awareness of responsibility which lies with them is great, as everyday they deal with people's health, and even life. If such a burden is not properly alleviated (for instance because of lack of a proper system of human resources management in a facility), it can lead to a burnout, which is particularly dangerous phenomenon in a work of a public service character.

While discussing the significance of communication in health care units management, there ought to be mentioned marketing advantages related to an effective communication with patients. More and more authors emphasise a great importance of positive relations between medical personnel and patient in the promotion of a given unit. Wojtczak states that the ability to establish contact is an opinion-forming factor, what is supported by favourable opinions of patients on medical personnel of a given unit that they are not only outstanding specialists in their fields, but also approachable, kind and understanding people [Wojtczak 1994]. In turn, Rudawska points out a great importance of so called relations marketing based on trust, engagement, ethics of a medicine doctor, and efficient communication [Rudawska 2006]. It turns out that proper communication between a patient and medical personnel may bring not only individual advantages to a patient, or indicate high effectiveness of medical personnel's work, but also it may be the best, the most effective, and the cheapest form of marketing for a health care facility, letting managers use financial resources for much more urgent needs of an organisation, than expensive promotion. Thanks to this a director of a public health care unit may focus on priorities. A proper communication between a patient and medical personnel is essential for the perspective of a health care unit management also because of economic advantages. It is more precisely described by Rudawska who noticed that 'a basic condition of an exchange in a relation patient-service provider is trust which causes an engagement increase in a positive result of services providing' activity. The significance of trust goes further than a psychological and social spheres, becoming an economic category, which means that in longer periods of time it brings specific economic effects. Trust, which is a phenomenon that supports creating advantageous effects in a relation services provider-patient enables a services provider to stabilise relations with patients and increase in its competitiveness against other services providers, as relation based on trust and engagement becomes more valuable and precious than relations offered by market competition. From the perspective of a customer a real effect of trust in a relation is reduction of noticeable risk which is related to the fact of being a patient. A consequence of trust and engagement, which is substantial from both perspectives, is cooperation of parties to a relation in acquiring positive results in services related activity, what from a long-term perspective brings advantageous economic effects in the form of lower costs (reduction of number of visits and ordered drugs, reduction of hospitalisation length, reduction of the number of ordered examinations and tests)' [Rudawska 2006]. Therefore, communication which is a perfect way to develop and sustain patients' trust to medical personnel, as well as help to engage a patient in a treatment, becomes a strategic instrument in the context of health care unit management. Similarly, when communication is neglected it is very difficult to obtain trust, what results in difficulties in engagement creation, and in such situation patients will in large numbers turn to other health care units, what decreases effectiveness of a unit's activity. The above shows why it is so important to create in medical care sector employees a natural

desire to actively communicate with patients, and then constantly improve this ability. Everyone makes mistakes in communication, and they are in fact inevitable, they cannot however dominate a relation between medical staff and patients.

To sum up, the literature indicates that communication, apart from a professional medical knowledge and practical experience, constitutes an inherent element of an effective treatment and may significantly influence the management of health care institutions. As it was shown, communication is significant from various point of view, thus the decision was made to make a study inquiring how important are these competences in the process of education, as well as in work in health care facilities. In relation to the above there were stated three hypothesis:

- I: In the process of education there is only little time given to acquisition of communication skills regarding communication between a patient and medical personnel.
- II: Medical personnel is satisfied with communication with patients.
- III: Communication between medical personnel and patients may have an impact on the management of health care organisations.

## METHODS

A study material was gathered in the first quarter of 2014. Medical personnel was addressed with a questionnaire which enclosed twelve closed questions with provided answer choices. In each question only one answer should have been marked. At the end of the questionnaire there was a respondent's particulars in which medical personnel were asked to indicate their profession, number of years worked in the profession, sex, as well as entering the date and place. In the final analysis questionnaires from 113 representatives of various medical professions were taken into consideration. Significant number of questionnaires were gathered via website, as it enabled reaching as many specialist as possible. The method of analysis is quantitative.

In the three following tables there is presented characteristics of the study group, dividing it into profession pursued, seniority and sex. In the process of respondents selection the intension was to provide diversity to the highest possible level.

TABLE 1. Characteristics of the study group in division into medical professions

Medical profession	Number of questionnaires
Nurses and midwives	49
Paramedics	21
Physiotherapists	18
Medical doctors/dentists/surgeons	17
Others	5
No data	3
Total sum	113

Source: author's own study on the basis of gathered study material.

TABLE 2. Characteristics of the study group in division into seniority

Seniority	Number of questionnaires
From few months to 10 years	76
11–23 years	20
24 years and more	17
Total sum	113

Source: author's own study on the basis of gathered study material.

TABLE 3. Characteristics of the study group in division into sex

Sex of respondents	Number of questionnaires
Woman	81
Man	31
No data	1
Total sum	113

Source: author's own study on the basis of gathered study material.

## STUDY RESULTS

The first of hypothesis which were presented in the study concerned a little time which is dedicated in the process of medical staff education to develop communication skills between health care employees and patients. In order to verify the hypothesis medical personnel were asked three questions.

Answers given to the first question indicate that 49% of medical personnel believe that education concerning an effective communication with patients is in Poland insufficient and there should be more attention paid to the issue in the process of education. A detailed distribution of answers is presented in Figure 1.

To the question whether during education medical personnel attended courses in communication with a patient 65% of respondent answered yes. A detailed distribution of answers is presented in Figure 2.

Answers to another question proved that medical personnel generally do not attend trainings, conferences or read literature concerning a proper communication with patients (49%). A detailed distribution of answers is presented in Figure 3.

When summing up the first assumption that in the process of education there is only little time dedicated to acquisition of communication skills concerning communication between a patient and medical personnel, the study results confirm its correctness. Answers given by respondents show that however 65% of them during professional

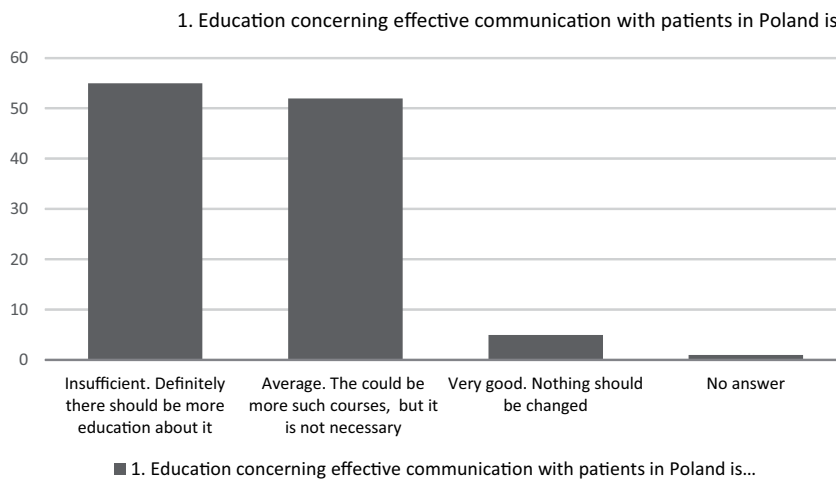


FIG. 1. Distribution of medical personnel answers to question no. 1

Source: author's own study on the basis of gathered study material.

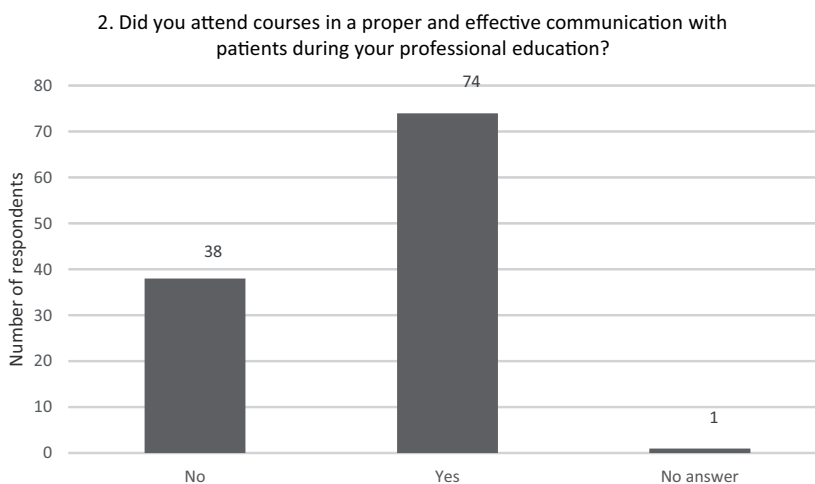


FIG. 2: Distribution of medical personnel answers to question no. 2

Source: author's own study on the basis of gathered study material.

education attended courses in a proper and effective communication with a patient, answers to two another questions show that education within the scope of effective communication with patients in Poland is insufficient (49%), and medical personnel rather do not attend trainings, conferences, or read literature concerning communication with patients (49%).

Another presented hypothesis assumed that medical personnel is satisfied with communication with patients. In regard to that assumption five questions were asked. Firstly,

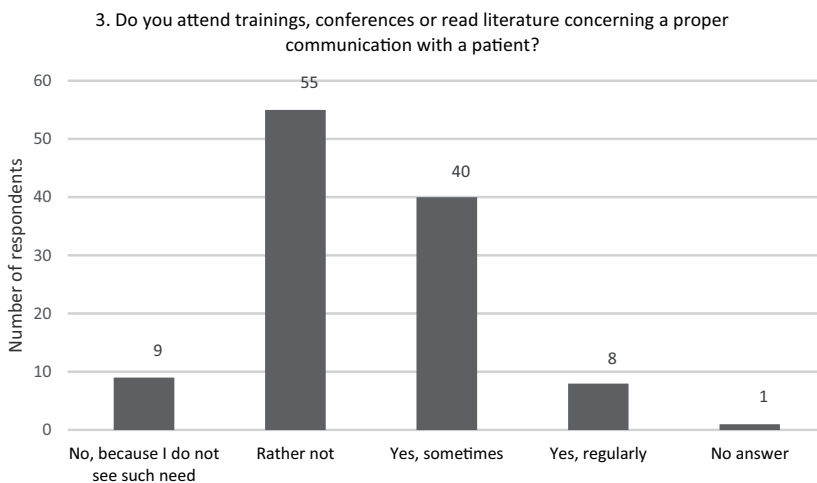


FIG. 3. Distribution of medical personnel answers to question no. 3

Source: author’s own study on the basis of gathered study material.

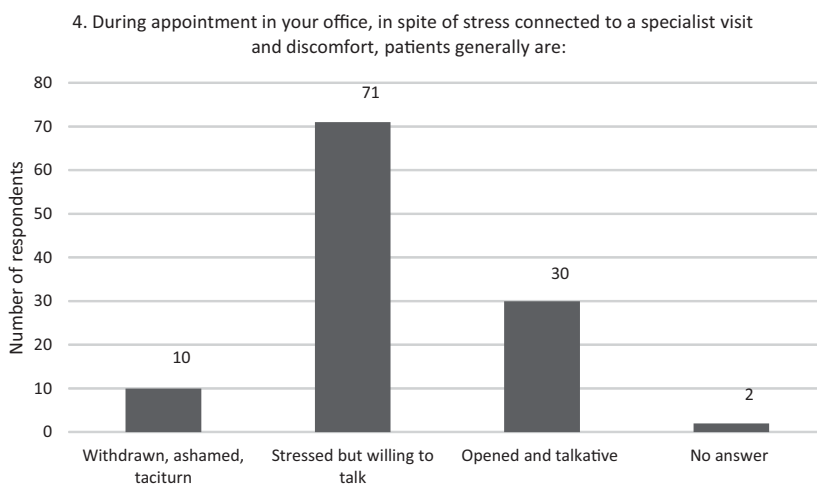


FIG. 4. Distribution of medical personnel’s answers to question no. 4

Source: author’s own study on the basis of gathered study material.

medical staff were asked about patients’ openness in communication with them. 63% of the staff answered that patients are stressed, but willing to talk to them. A detailed distribution of answers to the question is presented in Figure 4.

In another question respondents were more specifically asked whether patients passively hear recommendations or ask about certain issues. Medical personnel jointly stated (52%) that it is difficult to say, as it depends on a patient. A detailed distribution of answers to that question is presented in Figure 5.

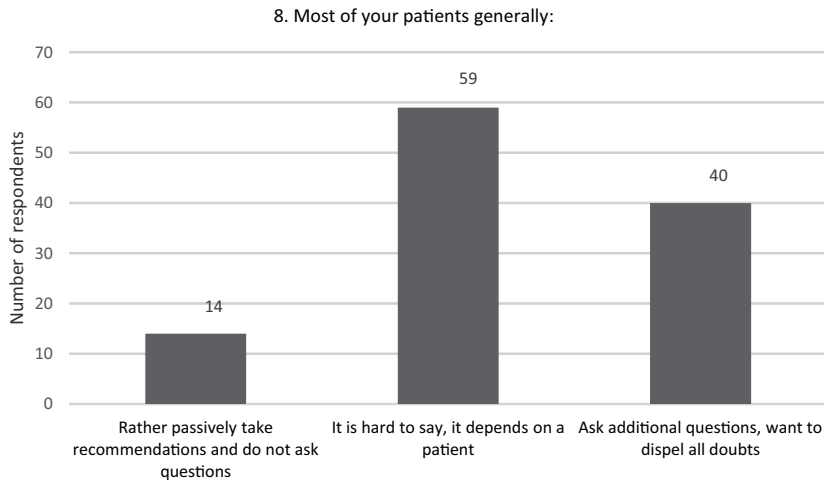


FIG. 5. Distribution of medical personnel's answers to question no. 8

Source: author's own study on the basis of gathered study material.

In the next issue medical staff were asked about patients' attitude towards their recommendations. Most of the respondents (36%) answered that patients try to observe medical recommendations, however they are not perfect in it. A detailed distribution of answers to this question is presented in Figure 6.

Answers to further questions show that more than a half of respondents (56%) believe that communication with patients is well. A detailed distribution of answers to that question is presented in Figure 7.

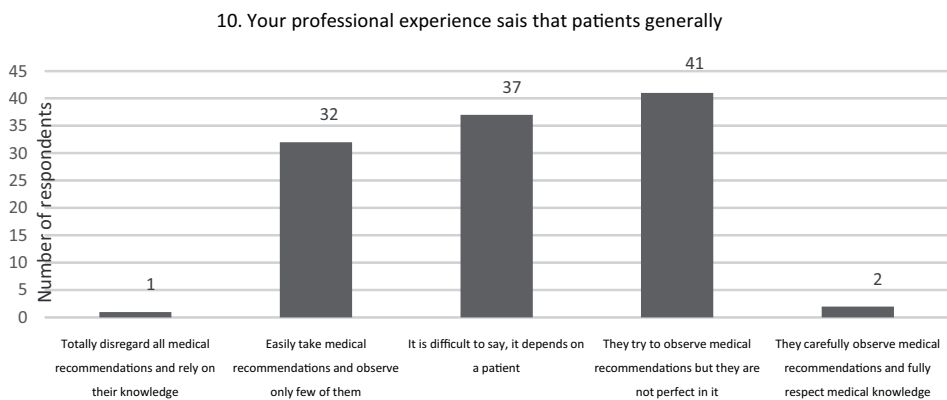


FIG. 6. Distribution of medical personnel's answers to question no. 10

Source: author's own study on the basis of gathered study material.



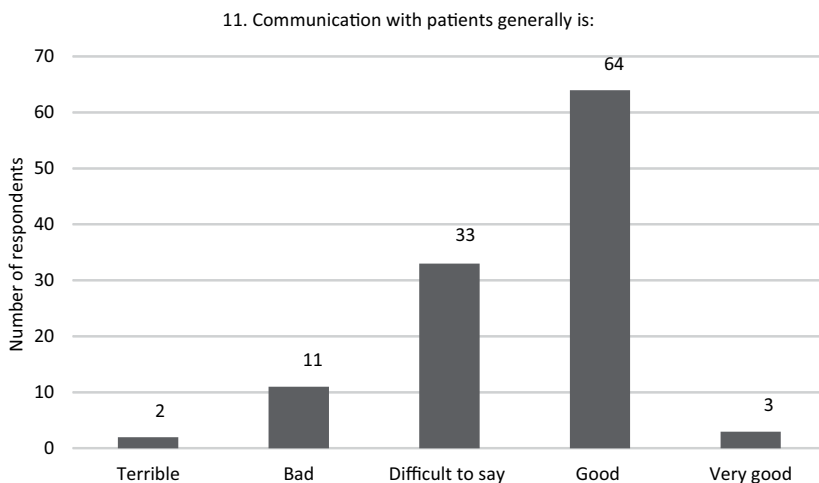


FIG. 7. Distribution of medical personnel’s answers to question no. 11

Source: author’s own study on the basis of gathered study material.

At the end medical personnel were asked directly to which extent they are satisfied with communication with patients. 69% of respondents answered that they are quite satisfied. A detailed distribution of answers to this question is presented in Figure 8.

When summing up the second hypothesis, that medical personnel are satisfied with communication with patients, the study results confirm that assumption. Respondent’s answers show that it depends on an individual case (52%) whether a patient passively

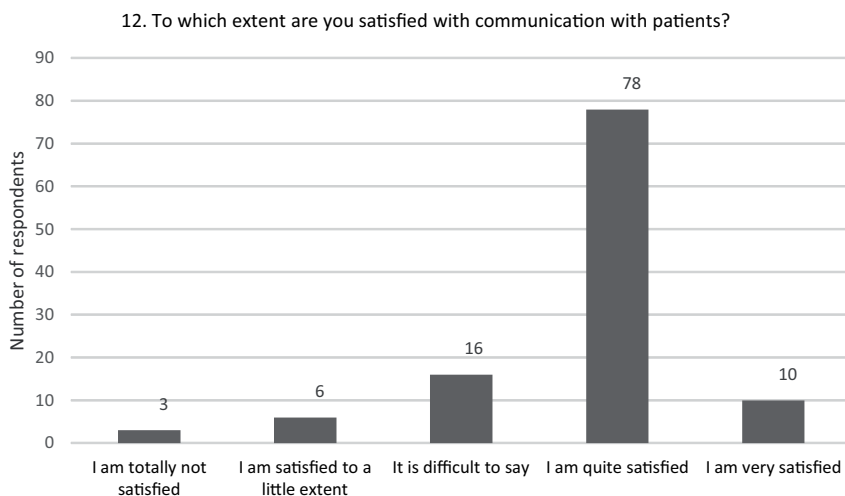


FIG. 8. Distribution of medical personnel’s answers to question no. 12

Source: author’s own study on the basis of gathered study material.

accepts medical recommendations or asks additional questions but generally, in spite of little irritation, patients are willing to enter into a conversation (63%), try to observe medical recommendations though they are not always perfect in it (36%). Medical staff believe as well that communication with patients is good (56%), and they themselves are quite satisfied with the communication (69%).

Apart from questions which refer directly to hypotheses, there were few additional issues which may be found helpful in developing conclusions and preparing recommendations. It was found that medical staff largely try to (46%), to the extent where it is possible, reduce patient's nervousness and fears. A detailed distribution of answers is presented in Figure 9.

The vast majority of inquired medical personnel claim (80%) that they try to communicate with patients in a simple, concise way, using words which are commonly understood. A detailed answers distribution is presented in Figure 10.

Respondents also claim that they try to ask patients about physical disorders as well as mental condition (47%). A detailed answers distribution is presented in Figure 11.

What's more, medical staff declare (46%) that in the case if a patient has any doubts and the time of an appointment comes to an end, respondents would answer all questions

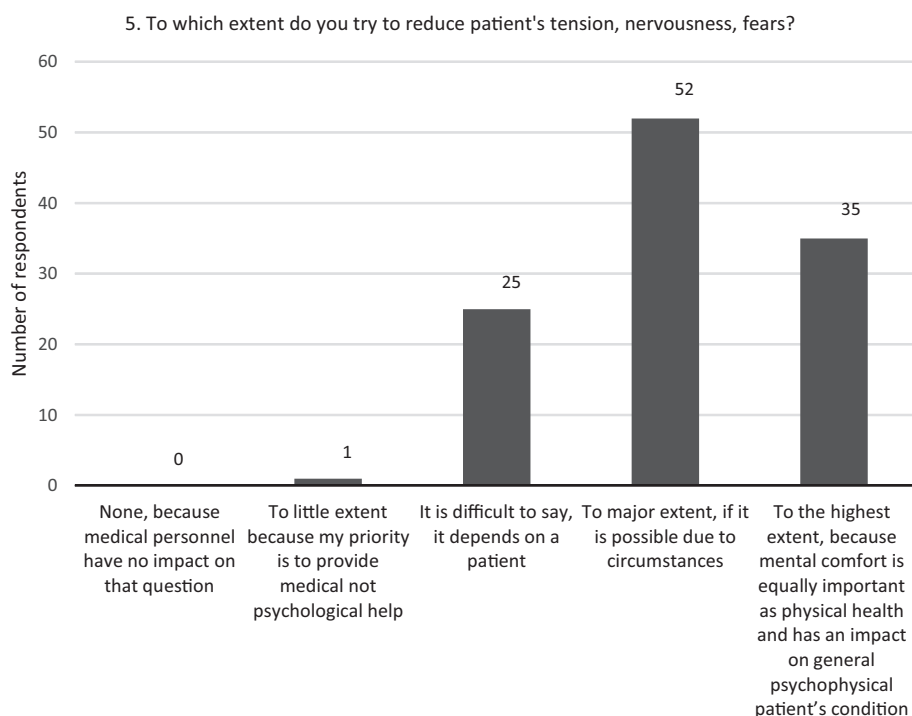


FIG. 9. Distribution of medical personnel's answers to question no. 5

Source: author's own study on the basis of gathered study material.

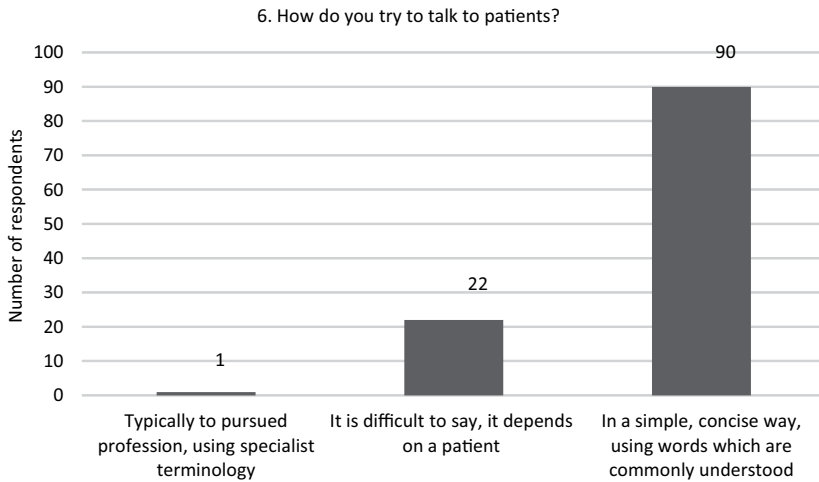


FIG. 10. Distribution of medical personnel’s answers to question no. 6  
 Source: author’s own study on the basis of gathered study material.

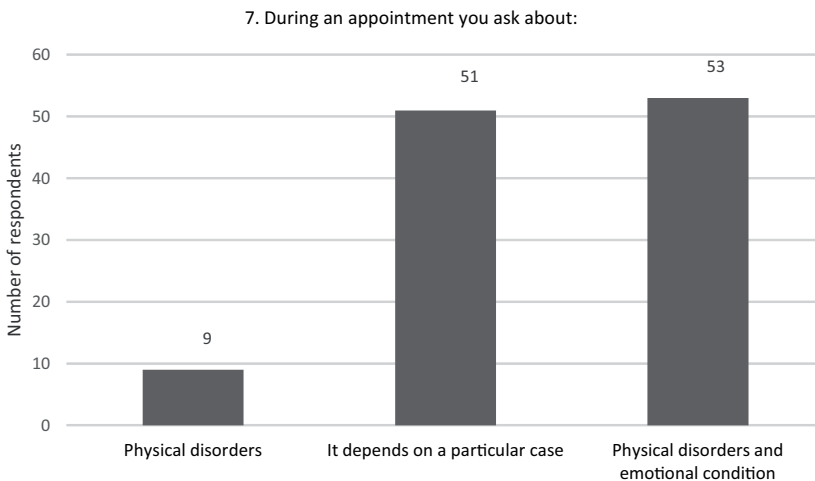


FIG. 11. Distribution of medical personnel’s answers to question no. 7  
 Source: author’s own study on the basis of gathered study material.

even if a medical consultation would last longer. A detailed answers distribution is presented in Figure 12.

To sum up, answers to the above questions show that medical personnel have good intentions towards patients. Medical staff seriously try to reduce tension which is related to a specialist appointment (46%), use a simple and understandable language (80%), ask

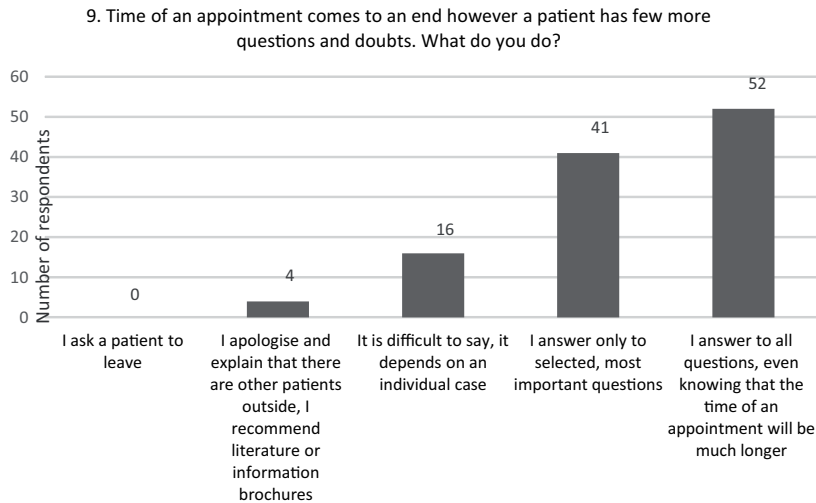


FIG. 12. Distribution of medical personnel's answers to question no. 9

Source: author's own study on the basis of gathered study material.

their patients about physical disorders as well as emotional condition (47%), answer all their questions even when the time of an appointment will be longer than it was planned (46%). This consists an enormous health care organisation developmental potential which ought to be used by a manager in order to make a facility operation more effective.

## CONCLUSIONS AND SUMMARY

Presented results support the keynote of the present article, that communication between a patient and medical personnel is important from medical staff's point of view, and may also influence the management processes in health care organisations.

Research results confirm, that during the educational process only a little of time is dedicated to acquiring communication skills regarding communication between a patient and medical personnel. It also appeared that the medical staff do not attend training courses, conferences or read literature within the scope of proper communication, while highly rating their actions towards patient, trying to answer any patients questions or doubts, and also to reduce stress related to specialist appointment. Still, some kind of paradox may be seen in this situation, as medical personnel notice the need of education in this field, however they do little in this matter, despite sincere intentions regarding contact with patients. Particular need emerges to introduce some institutional arrangements in respect of effective and empathic communication, aimed to medical personnel at the stage of degree programmes education. It should be further continued in lifelong learning, and also should be supported by managers and principals of health care facilities, as it is clearly seen that "medical personnel have substantive competences, acquiring of which in education system, trainings and practical placements is outlined in details (...) Interpersonal skills

development is poor however, and there is certain lack of systematic solutions regarding their management” [Necki and Keşy 2013]. It appears, that “both, medical doctors and nurses, claim educational needs in three branches, i.e. knowledge and skills regarding interpersonal communication, skills and knowledge concerning economics and management and actualisation of knowledge and professional medical skills” [Necki and Keşy 2013]. Recent studies revealed, that medical personnel do not read literature, participate in seminars or conferences on communication by themselves. Perhaps, the reason of all of this might be lack of time, which is usually allocated to diverse and numerous duties. However, to assure that those responsible tasks will be properly and efficiently completed, organised form of education in effective communication with a patient should be ensured. Thus, it would be good to utilise positive intensions of medical personnel, starting with organising by a unit manager proper trainings regarding communication with patients. Obviously that education in terms of interpersonal skills can take many forms. Starting with providing medical staff with proper literature concerning communication with a patient, through regular specialists meetings in order to share their remarks and experiences, up to organising seminars, exercises and conferences. A manager should as well continuously motivate medical teams, reminding them how important their work is, and that communication is an inherent element of treatment process and might give many benefits. A director ought to articulate the significance of empathy and an individual way of patients’ treatment. It is even more important, as introducing mandatory education within the scope of communication would bring desired effect only when medical personnel’s way of thinking about communication will change. It is necessary to begin with values, through attitudes, to actions. A manager should take continuous effort to motivate medical staff to more frequent use of materials concerning proper communication with patients. In turn, classes in communication cannot be perceived as an annoying duty, but as a privilege which will enable medical staff better cooperate with a patient for his/her own benefit, but also for the benefit of whole health care unit.

It must not be forgotten, that contemporary, fast developing society struggles with numerous, progressing diseases of affluence. It is indisputable, that need for health care together with population ageing might get higher and more specialist. This means as well increasing social expectations towards health care facilities and medical staff itself. Relation between medical personnel and patients as well slowly changes. “In the traditional model relation between a doctor and a patient was asymmetric, the first influenced the other, gave advises, treated, prevented his/her diseases and ailments. Current conceptions emphasise a different nature of doctor–patient relation, considering it as mutual, reciprocal influence, and the result of this interaction may contribute to therapeutic success” [Necki and Keşy 2013]. It is even more important, as the communication between medical staff and patients may influence the way health care organisations are managed. Having true, mutual dialogue with a patient, medical staff easier and faster will give a correct diagnosis, what can directly impact patients’ satisfaction from provided medical services, and this in turn can cause higher effectiveness of a given health care facility. A patient, to whom sufficient time would be devoted, who will be treated individually, probably will feel respected, heard and understood. Furthermore, when it would be necessary, he/she will return to this health care facility, and maybe will recommend a given institution to his/her own family, friends and acquaintances. He/she will do it, because, as Necki and

Kęsy noticed, current positive image of a health care facility will be mainly based on quality of relations and communication perceived from patients point of view [Nęcki and Kęsy 2013]. Apart from continuous extending of knowledge and improving medical staff qualifications, interpersonal skills will result in successful treatment, therefore in the success of a given facility. With highly qualified medical staff, interpersonal abilities of medical personnel might be a significant factor for competitive advantage. It appears that 'interpersonal abilities, alongside with medical staff professional competences, are currently the factor that might significantly influence the success of whole organisation. These competences, understood as ability to social interaction, play a significant role for medical personnel, revealing themselves in relations with patients' [Nęcki and Kęsy 2013]. Therefore, the role of a manager should be broadly defined assistance to medical services staff education within this scope. Those types of activity are in the interest of whole organisation, because they might significantly increase effectiveness and improve the quality of provided services, and as a result – they might influence the management of health care facility.

Summarising, communication skills are fundamental for functioning in a society, but they appear similarly important in matters of health care and its improvement. They give us ability to give a fast diagnosis and an effective action. However, the communication process between medical personnel and patients is more important as it might appear. Communication skills might also significantly influence on the way health care units are managed. The study showed, that in the course of medical staff education small attention is paid to learn communication with patients, even though medical personnel are satisfied with their relation with patients, and also present a will to support patients in healing process. Analysis of available studies enables to state, that answers to some important issues can be given. However, those issues open wide field for further research. In the future specific aspects of communication should be studied. It is all important not only because of the need for improving the level of soft skills in medical staff, what can significantly influence the level of patients' satisfaction from provided services, but also might influence the way health care facilities are managed.

Last but not least, it should be emphasised, that communication in health care is a very interesting, nevertheless complex issue, to which more interest and attention should be paid in order to improve operation of health care facilities and concerning social health. Medical facilities managers should be obliged not only to maximise the utilisation of staff capabilities, but also to effective management of health care units. They should particularly emphasise comprehensive development of medical staff, as systematic and consequent improvement in medical personnel skills (including i.a. interpersonal abilities), might be a key to successful management of health care units.

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**Summary.** A health care is characterised of creating an individual, specific relation between representatives of health care units and patients, which means that not only medical staff professionalism but also an empathetic attitude towards patients are important questions. Literature regarding the issue of communication with patients is growing, there are as well workshops in an effective communication, nevertheless the topic is still of minor importance. Meanwhile, relations between medical personnel and patients may put a major impact on the quality of health care as well as patients satisfaction with medical services, what is important from a management point of view. A proper way of patients' treatment by medical personnel may result not only in better attitude towards therapy, but also it may influence a more efficient management of health care facilities, as patient satisfied with medical services may recommend an organisation, which may have a positive impact on an institution's image, allowing a manager to focus on more important aspects of an institution management. For the above reasons it is important to get to know medical personnel's attitude to developing as well as improving communication skills in order to provide a holistic patients care, what can significantly influence a health care units management. Medical staff communication skills are important not only from a treatment perspective, but they can also be significant from the perspective of health care organisations management. The study material was gathered in the first quarter of 2014. In the final analysis questionnaires from 113 representatives of various medical professions were taken into consideration. The study results show that in the process of medical professionals education there is only a little attention paid to acquiring communication skills regarding communication between a patient and medical personnel. Also, the hypothesis according to which medical personnel is satisfied with communication with patients was confirmed. Furthermore, medical staff agree in stating that they care for a proper communication with patients. Conclusions coming from the study results may define a specific way of health care units management, which should comprise, among others, financial resources for trainings in medical personnel soft skills improvement.

**Key words:** communication, health care, patients, medical personnel, management

**JEL:** I1, I19, M1, M12

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## **MULTI-LEVEL MARKETING. FEATURES AND CONTROVERSY**

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### **INTRODUCTION**

The idea of multi-level marketing is still relatively new on the Polish ground but is very popular in Western countries, where this model of business is still gaining supporters [Gregor and Wadlewski 2013]. The knowledge of the functioning this kind of business model is still insufficient among theorists and practitioners. The purpose of this article is to show what Multi-Level Marketing (MLM) is and what the mechanism of functioning is, if we talk about this kind of business model. To accurately present the MLM theoretical side, the reflections were based primarily on existing literary studies and on a case studies basis in practical application, to show how the business adopters of this strategy operate on the market.

The purpose of this paper is the introduction of problems of Multi-Level Marketing (MLM). Considerations are based primarily on studies of existing literature and an analysis of specific cases. Not enough knowledge of MLM is stopping the development of this form of activity, information gap may deepen erroneous interpretations of the same model, by presenting it as a pyramid schemes or as a categories of parabusiness. However, despite all these barriers conditioned by the lack of less knowledge on this subject, it can be observed increasing activity of companies in this kind of industry. More often MLM becomes strategy, which companies want to use and get competitive advantage.

## FUNCTION OF MLM

Multi-Level Marketing differently named network marketing or Network Marketing is an exceptionally interesting strategy for the distribution of goods and services. Don't fail considers it is one of the fastest growing and still the least understood methods to market [Failla 1996]. The barrier based on the lack of information on this topic and an incomprehensibility of the business model; cause a false association of MLM with direct sales, sales pyramidal or a financial pyramid. Charles W. King defines the phenomenon of Multi-Level Marketing as "it does not require significant investment, technologically advanced business model, reliant on building your own business, generating the highest revenue and income in the long term by the sale of products and services directly to consumers and the transfer to others to do the same" [King and Robinson 2000]. André Blanchard defines the phenomenon of MLM and emphasis on establishing and using contacts. The author says that this business model is based on distribution of goods and services by a network created through contacts and ties of persons concerned and participatory in the activities all members of the network [Blanchard 1993]. Moreover, the main mechanism for the functioning of the phenomenon is the construction of a personal sales on the basis its own network of contacts. The network is growing with the influx of new customers who are motivated by the additional benefits they actively participate in the process of promoting and selling products [Blanchard 1993]. The effect of the so-called network is possible to achieve by the MLM model assumptions, i.e. on building strong relationships with customers. These ties are the result of a sense of satisfaction with the benefits that customers receive when purchasing specific products and additional bonuses which reward for sharing your positive opinions about them [Otto 2004]. To sum up, the development of network marketing companies is possible only thanks to their customers who assume the role of distributors of products or services that they previously used. For activities related to the distribution of products or services, distributors receive appropriate compensation provided for in the compensation plan.

The idea of Multi-Level Marketing should be considered from two perspectives: the point of view of the originator and the point of view of distributor. The point of view of the originator, the person for whom the Multi-Level Marketing is one of the possible options the launch of a new product without incurring huge costs caused by its promoting [Failla 1996]. The second perspective is the point of view of an independent distributor. Multi-Level Marketing is a business model for him, which does not require an idea, nor bear the risks arising from capital investments. Distributor accesses to business, which is devoid of largely risk, as is the case even in the franchise or other typical business.

Multi-Level Marketing can be also defined as a method of product distribution. MLM assumes bear the costs of advertising and marketing at the moment of sales made. The sales will be powered by the company's customers, who use their network of contacts, start up the system of recommendation to purchase selected products. The recommendation for ending the actual sales, the company provides for monetary gratification, commissions accrued on the basis set out in a company's marketing plan. Properly drawn up a marketing plan makes it possible to obtain unlimited income and eliminating an investment risk.

## **MULTI-LEVEL MARKETING COMPANY AND TRADITIONAL MARKETING COMPANY**

In today's highly developed economy creating a product is not a problem situation. The whole process of development and production is only a small section of the road, that product must travel to reach a customer's hands. The most important is a distribution system, that is, all activities that must be performed to good went from the manufacturer to the direct buyer [Lenar 2013]. The distribution represents the largest share of the price of the final product.

The old business model centred on optimizing the production process and reduces related costs. Entrepreneurs conducting their business in the current highly competitive market need to be aware of the costs they incur for their activities. In many industries the cost of production is only 2 to 10% of the price of the final product. The remaining 90% of this expenditure on promotion, advertising, and distribution path [Lenar 2013]. This percentage distribution creates tremendous opportunities to make just to create the right distribution channel.

In the traditional distribution model to reach customers should invest in advertising and to create a network of intermediaries, such as wholesalers, warehouse and retail stores, which consumes considerable resources. Moreover, the shop owner leading his own business must regulate many other charges. The main expenses – for example: rent, utilities, employee compensation, compulsory insurance of employees, taxes or the sums spent on advertising. A significant part of the expenditure must be paid every month, regardless of the condition of the business. In the classic distribution all these costs and overheads of individual agents are added to the final price of the product [Lenar 2013]. Therefore, the path of the product from the manufacturer to the customer is very long, and the level of sales depends largely on the effectiveness of advertising campaigns.

On the other hand, in many companies of network marketing route product to the customer looks much different, and what is the most important difference is shorter. Furthermore, MLM companies often decide not to traditional advertising, so we usually do not see advertising products on TV or in the press, and we will not hear about them in the advertising. Distribution System of Multi-Level Marketing operates on different principles than this is done in the traditional sense. The product is supplied from the manufacturer by the distributor directly to the customer [Lenar 2013]. Here, the distributor is a person related with the company agreement. Distributor under that agreement can order products directly from the company. In MLM a network of distributors is responsible for the process of delivery of the product to the customer. In MLM the advertising takes a different form, namely it is powered by the oral product recommendations. The amounts that you can save on advertising are spent on salaries for distributors [Warzecha 2012].

The Table 1 summarizes the characteristics of traditional marketing and MLM in a business.

TABLE 1. Key features of the company which operating within the multilevel marketing and traditional company

Traditional company	MLM company
Financial benefits depend on the company's current turnover	The financial benefits will create a current turnover of the company and passive income
Efficient management of the company and market conditions determine the success of the company	The degree of cooperation with partners and the degree of commitment are conditions of the success of the company.
Need to involve high initial capital to start a business	The possibility to have a small financial capital to start a business
Company have to hire more and more employers	Company don't have to hire more employers
Creating the image of own-brand product or service on the market	Use best practices of know-how and proven brand image
High costs of the marketing and commercial	Low costs of the marketing and commercial
The ability to inherit a business	The ability to give a ready business
High costs of training employers	The main company offers support in the field of training and consultancy
This kind of business is very risky	This kind of business is not so risky
The owner's knowledge is the main source of the company functioning	Building a business based on knowledge, skills and experience of employers
Salary is obligatory	Salary is not obligatory
Promotion depends on the opinion of the others people in the company	Promotion is automatic, clearly defined and is independent of the opinions of other people in the company
The market share of relatively is small	The market share is unlimited

Source: [Warzecha 2010].

## CONTROVERSY AROUND MLM

Like was said in previous part MLM is a one of opportunity to quickly earn some money. Nowadays a lot of people are looking for a job which will give bigger satisfaction and let earn really big money. There could be many reasons, the most popular is that we don't like present job because we don't earn enough, or we hate what we do because is our obligation. A very often people need some extra money. We don't think about big extra money, we talk about regular income which will help strengthen household budget. MLM gives people a chance to earn fast and regular money but sometimes it is considered as an illegal pyramid scheme, where a few of people made real big money. There is much controversy regarding the MLM which should take a closer look [Failla 1996].

People who entered into the structure of MLM and earn don't think that this way of income is illegal. That was definitely one person (or more) was under the second, but no one does not believe it has been dragged into some sort of illegal network. In the picture number 1, we can see famous pyramid scheme. How it works? It's simple. It powered by itself, because it not only makes money on the side, the money flow down from earnings of persons below the level of the pyramid possessed. Such pyramids are cut in some countries because government want to protect people against loss of money. Many distributors

are building fantastic visions on the effectiveness of this type of system sales, promising new entrants mountains of gold. Organizers MLM Network premium on attracting new distributors, so they are not uncommon ensure that just half an hour of work a day, it's enough to make fast fortunes. On the other hand, they fail to ensure that profit is a sure but only for those hard-working, this division of opinion means that they are unreliable. Systems of direct sales are effective, under certain conditions, even very effective. Ensuring the success that is waiting for each participant is abuse, which discourages potential applicants [Failla 1996].

Very often around the sales techniques which are used by the distributors is created unnecessary mystery. Indeed, instead of effective distributors whose success depends on hard work and determination to the network are attracted to those who are its followers. This raises a very big controversy because many people are starting to believe that they will gain a fortune. They believe that product which they sell is wonderful and unique. Unfortunately truth is different. On the top of it, companies which deal with MLM tempt big business Gaul, which are usually held once a year, where the prizes are awarded for the best sellers for example exclusive cars or costly trips. This is an excellent hook for potential new vendors. Very often faith in the magical power of sale systems that make everyone a millionaire disappears quickly. Follower after a short period quit, doesn't any activity and in the best case sourcing products for their own use.

Many people find it difficult to imagine that the sale can make them happy. Give products more important meaning than they are, provides incentives for greater activity. The literal interpretation of certain phrases leads to many misunderstandings. The belief that sales of vitamin pills or shower gel can be associated with anyone's happiness leads to accusations that, network vendors are sectarian. This view still come back and builds stereotypical ideas about this form of trade.

In Poland for example might be an article by Father Andrew Wolpiuk entitled *Gos-samer economic sects*, which in 2007 was published on the website Ministry of Entrepreneurs and Employers *Talent*. The article outraged many people who are treating multi-level marketing as a source of honest and reliable earnings [WWW 1]. Confusion with this article keeps coming back, and multiple discussions arise on trade portals and online forums. Users of portals think that it's hard to be considered Sect as a business structure adjustable for earning profits. On the other hand, it is quoted government definition of a sect that is "A sect can be any group which have a highly developed structure of authority, characterized by a significant disparity purposes declared and implemented and hides standards significantly regulating the life of the members, which violates fundamental human rights and principles of social intercourse and its effect on members, supporters, family and society is destructive" [WWW 2].

In Poland, there were a lot of negative feedback about MLM that drive stereotypical threads and their strength manages to outlast ages. Accusations of hiding intentions directly result from the absurd assurances that there are sales techniques that are able to give full effect, known by the members of the network. Typically, this type of announcement was accompanied by charging a fee for membership. Secret knowledge contained in several clichés reflected on photocopying, and in the organizer of the project who treated it as a pyramid and run out with money. It is worth remembering those years, when today there are accusations of sectarianism. This is the price for almost a widespread lack of

ethics in the pioneer days. On the other hand, the dogmatic treatment above definition of sects can lead to surprising discoveries.

Each manufacturing facility has a highly developed structure of authority, sometimes a discrepancy of purposes declared and implemented, and there are not exposed to the public any standards significantly governing corporate life. The ethical issues concerning the environment of network marketers still have left a lot to be done. Myths can always come back like a boomerang, causing a lot of damage in the perspective of time. It's easy to hear assurances that the work in multilevel marketing is nice, likeable and easy, and that the profits are created the same, even if we devote to the work little time.

Interesting would be a report containing an in-depth analysis dedicated to this, how members of the network MLM recruit members, what they promise them and what tricks they apply. A superficial analysis make us think about the reasons why they hide the main objectives and principles of operation of the network and by covering the business Newspeak simply lie. Everyone knows that a goal of the multi-level marketing is the sale of goods and services. For everyone, it is clear and legible, in addition to those who are encouraging us to participate in the project. It would appear that the sale is on the list.

In the network, no one sells, but "informs about the product", "gains market space", "builds a relationship", "recommends solutions". As a result, reasonable people are starting to wonder how it is, that there are invented formulations such as to cover only and main goal, without which there would be no network, no premium for the acquisition of new members and no earnings. They arise from the percentage of sales made by new members that joined the network. In this way, no one has to sell anything. All that needs to be done is to encourage many new sellers to participate in the network, and your account will appear digits long economic effects. Such an opinion is, unfortunately, very popular in various forums or pseudo-guides MLM. Unfortunately, this is not true and it is reasonable to think about what would happen if all new members will only join the new cell and wait for profits? Such treatments cause the opinions that the participants of the network lie, in order to attract new members. An accusation that behind the activities of the network marketing companies lurks organizers of pyramid schemes also has its origins in the 90s of last century. The paradox is that in the 70s of the last century, the company's industry MLM in the United States beat to an alarm indicating the threat posed by various pyramid schemes and chain letters that were feeding on the popularity of network marketing. For more than three decades, there are provisions to allow precise separation of the pyramid scheme from network marketing, but for many people it is still insufficient argument.

We often hear opinions that accuse the organizers of the multi-level marketing of the fraudulent activities and exploitation of people. The confirmation of this statement is the fact that people higher up in the hierarchy earns more money compared to people who are in the hierarchy lower. It's hard to argue with such charges when it is hard to find any company in which the director earns less from the manager and the manager less than the employee. The hierarchical organizational structure, and consequently, the net wage is a general principle of organization of both small companies and large corporations. The paradox is the fact that only some MLM systems have designed marketing plans in which differences in wages are not due to the position in the hierarchy of the network, but the effectiveness of sales [WWW 2].

The problem of network marketing lies in the fact that it accumulated a lot of myths around it. It turns out that many of them are the results of the little ethical behaviour of people associated with this form of sales organization. Using half-truths in describing reality, MLM are surprised that these opinions come back to them later and are twisted, distorted and affect the efficiency of the whole sector. MLM industry is so large that it takes places many various processes in it. In this regard there aren't any differences from any other business. Some succeed, others hatch. There are ones who have earned a fortune in the network and the ones who do their best and can barely make ends meet. Network marketing is not a miraculous creation of a business that guarantees exorbitant profits in exchange for half an hour of work a day. It isn't also a sect that teaches members the secret sales techniques. This is a normal economic activity, which consists of a specific organization of direct selling products. As in any business you have to work a lot and have a little luck [WWW 2].

### **ENTERPRISES APPLYING MLM**

The most famous and popular example of enterprises operating in MLM is the auction company Zeekler, which allow high income, after investing and waiting for the first two months. Money flowed into the account after approval required notices on websites. There were advertising of online auction hardware. After half a year of the company, which many people gave a lot of money, and after the first payments for Solid Trust Pay or Payza (?), there was a big crash and Zeekler went bankrupt. Numerous calls to the prosecutor of Northern Carolina in the USA, about strange form of earning on the network, were the result of the proceedings instituted against the Zeekler company. The objections had also stock exchange. There were some irregularities in the registration of the company. According to lawyers, it was not a very big infringement. However, the system of MLM used in this company was declared an illegal financial pyramid.

Despite the many petitions to the prosecutor, the company did not return to the previous function. Zeekler company did not return to its former place on the web. Around 2 million people from all over the world were cooperating with Zeekler. They were in the structure of the company, which was earning for itself. The one was recommending Zeekler the other, and they were investing their savings with pleasure. People from the company were participating in the interior meetings twice a week. There were situations where it was difficult to get to the conference room because of the large number of willing people. Just before the solution Zeekler was having a planned to dedicate percent earned at auction money for poor children. There were proposals of meetings in greater cities, in the symposia form of a financial nature, in order to strengthen acquaintance. Recommending of Zeekler usually concerned immediate people. Many people were from the notice, which members of Zeekler company were publishing up as part of theirs work on the American websites.

In Poland, the most popular company, which is using MLM, is founded in 1994 by Arthur Trawiński FM Group. Three years later, it founded FM Group World. The company is selling mostly cheap and "miraculous" cosmetics and dietary supplements. Both companies generate millionth revenue. Once a year in Wroclaw is a great gala for em-

ployees of the FM Group. In one article the journalist Katarzyna Dębek described the gala as a great festival, which ran through the streets of Wrocław lane of 100 Mercedes escorted by the police and you could look at the latest model of class A. Later, there were sales training and championships in football and finally nail of the program - giving cars and diplomas for the best sales results. The words "success" and "Mercedes" in all possible cases were oozing from the speakers, and the happy traders were reclaiming the keys to a new car and were thanking and asserting that everyone can land their place. FM Group company takes new traders with pleasure, tempting that the unemployed day by day can become a millionaire and pick the coveted Mercedes up.

While working for a long time on similar principles international stars of direct sales: Amway or Avon, they slowed, the company of Arthur Trawiński is like a storm. For his success are working more than half a million people worldwide. In 2012, he joined to the ranks of the richest Poles. The company producing cheap perfume within six months of implementation by junior clan of system MLM doubled revenues and is constantly growing. In 2007, it sold cosmetics for 46.5 million PLN and at the end of 2010 for 93 million PLN. The idea of selling perfumes produced by the father in the direct system was born in Australia.

The owner of FMG company was there to improve his English. On the homebred market of direct sales valued at 2.6 billion PLN (only 0.5% of the whole internal trade) 70% comes from the sale of cosmetics. Trawiński had an access to the products. To start recruiting of dealers, he needed catalogues and his own marketing system of MLM, i.e. a tree of final settlements and commissions and a relationship between distributors and safeguards against abuse of associates. The ready computer programs to manage this type of project you can buy for 50 thousand PLN. However, Artur Trawiński created his own IT system. Consultants supporting is the essence of this business model. However, the system must maintain a balance between a profit for the owner and for the sellers.

They need a constantly motivation and we shouldn't regret for the loyalty programs. The rules of cooperation with FM company define the so-called marketing plan. For purchasing of products the distributor will get points and if he builds a profitable structure, he can earn the additional commissions. On the first part of the plan – the so-called magnolia club, the distributor can achieve levels of efficiency from 3 to 21%. On the second – the orchid club – apart from the commission, he receives a certain percentage from the scoring turnovers of FM Group World. The well-wrought incentive system, the rewarding for good results, a lot of luck and people – Trawiński says [Dąbek 2012].

## CONCLUSIONS

In Poland business concept based on the pillars of Multi-Level Marketing is still not so popular as a form of product distribution. The reasons for this we could find in the non-exhaustive topic achievements of literature and in popular stereotypes. It is the lack of reliable knowledge caused curvature of the true image of MLM and scepticism about the effects presented by independent distributors. Moreover, unfair business practices, conducted by the company they considered to be network marketing, led to a large distance consumers to these practices, causing stagnation in the industry.



The idea of Multi-Level Marketing is not always well understood and confused with pyramid schemes, gathered a lot of negative feedback, and as a result the obverse from the public. People who are working in this sector have to work hard to contribute to the restoration of confidence among the public and show the better side of this business. Therefore, it is a space for business people determined, conscientious and organized able to work, are ready for daily challenges.

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**Summary.** Multi-Level Marketing is a kind of novelty in the business reality. The greatest popularity gained in Western countries, where it functions as a kind of hybrid method in distribution of the goods with the design of the sales network. It is one of the most secure business models. In Poland the awareness of this type of activity is still small and remains a wide spectrum of scientific research. This situation has led to the creation of this article. The aim of the publication is to highlight the problems of Multi-Level Marketing, an indication of the essence of this phenomenon, and show how far is different than traditional marketing. The article presents the system of functioning of this kind of business, how it works a system of charging commissions and indicated a practical example of this system. Considerations based on literature studies and case studies.

**Key words:** marketing, network of connections, commission system, business model.

**JEL:** M00, M10, M31

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**SYNERGY AND DIVERSITY OF THE RESOURCES  
OF AN ENTERPRISE. KNOWLEDGE MANAGER –  
MODEL APPROACH**

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„All our knowledge has its origins in our perceptions.”

Leonardo da Vinci

**INTRODUCTION**

Shaping the development of an enterprise<sup>1</sup> in a market economy based on competition requires multi-faceted view on the management of an economic operator. The manager and his subordinates, who are the human resource of an organisation, are some of the basic problems connected with the management of an enterprise. The managers together with the subordinates, and especially the positive relations among them, build constructive foundation for the future of the company. What distinguishes managers and subordinates is the knowledge they have and the skills to use that knowledge [Mikuła and Pietruszka-Ortyl 2007]. From the point of view of the process of management it is the manager (decision-maker) who is the person leading the organisation on the “roads” of operational and strategic development. The knowledge for a manager – using a metaphor – is like “water driving the mill wheel”. The manager and knowledge should be treated as a complementary and synergistic system in an organisation. Each organisation which

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<sup>1</sup> In the following study the term “enterprise” is used interchangeably with terms: “economic operator”, “organisation”, “firm” in order to avoid frequent repetitions.

wants to be an active participant of the competitive market should have a knowledge manager within its ranks, for whom the synergy and diversity of the resources are permanently inscribed in the development of the company.

The aim of the study is to present the problem of synergism and diversity of the resources of an enterprise with the presentation of the original concept of the model of knowledge manager. The following hypotheses were adopted in the study: knowledge manager is the creator of synergy and diversity of the resources of an enterprise; objectiveness of a manager is created by the knowledge and the ability to use it; knowledge manager can manifest himself in the form of material and immaterial concept. The study is conceptual nature and is based on the method of interpretation of literature.

## PEOPLE IN AN ENTERPRISE THAT IS MANAGER AND SUBORDINATES

Enterprise management structure in a volatile environment force the employees to be flexible and open to new challenges. The employees undergo permanent process of learning (knowledge acquisition). According to the guru of management, Peter Drucker, organisation, which consolidates the current level of vision, performance and achievements, loses the ability to adapt and will not be able to survive in the changing tomorrow, as change is the only destiny of a human being [Drucker 1994].

The answer of management to people (human) in an organisation (enterprise) is the management of human resources, which is defined as the activity of an organisation aimed at the achievement, development and maintenance of the manpower functioning effectively [Griffin 2005]. An enterprise is for the human and an economic operator would not be able to function without him. It can be said that man is the basic, primal resource of an organisation (enterprise) [Leśniewski 2014]. Man is different in every aspect, range of his functioning, including, inter alia: needs, sensations, interpretations, intuition or skills and abilities etc. People are different just as different are the resources and situations, because no situation can be repeated twice, as it involves different people with different abilities and skills. Each situation, moment is inimitable and unique. If we approach each employee always in the same way, we will not give a chance to develop, to learn and to use one's abilities – neither to us, nor to him.

The existence of a man in an organisation [Oczkowska 2014] is related to a work, which should not be determined only by such factors as: material and family factors. The selection of work should think through and matched to the skills and abilities of each person, as well as to the level of his commitment. Then we can talk about the development and growth of knowledge, which may affect the increase of efficiency of work or other achieved measurands (i.e. increase of the level of education).

Knowledge concerns every person in the organisation regardless of whether he is a manager or a subordinate. Human resources in an organisation are divided into two systems<sup>2</sup>: managers' system and subordinates' system. Each of these systems is to represent a specified level of knowledge. The knowledge of a manager is not only the substantive

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<sup>2</sup> Each of these systems is homogeneous or uniform consisting only of managers at different levels of management (system of managers) and subordinates (system of subordinates).

knowledge (i.e. in the field of corporate finance, marketing or logistics, etc.), but also the knowledge in the scope of the process [Sułkowski 2012] of impact on subordinates which is a part of the overall process of human resources' management [Pocztowski 2003] in a given enterprise<sup>3</sup>. Whereas, the knowledge of a subordinate is mainly the substantive knowledge connected with a given job position, work done. Both the manager and the subordinate are to be a complementary link of values [Romanowska 2001, Jaki 2012] of an enterprise. The manager and the subordinate may be defined as a task group<sup>4</sup>.

The issue of the level of appreciation of knowledge requires commitment and will to take challenges and achievements from the manager and the subordinate. A manager who works with a subordinate (task team) successfully and effectively requires full commitment from both sides. A task team is to contribute to the positive effect of synergy. In a task team, mutual understanding, when the employees understand the managers and the managers understand the employees, is very important. The task of the managers in the task force is to understand the needs and the intensity of occurrence of these needs in workers, the hierarchy of values, as well as the skills of the employees. The ability of the recognition and matching the employees to the work in a task team is a proof of the size of substantive level of a manager [Juchnowicz 2009].

## **RESOURCING AND THE RESOURCES IN AN ENTERPRISE – THE VARIETY OF RESOURCES**

The basis of the enterprise's functioning are its resources, thanks to which the economic operator may shape its competitiveness [Przybytniowski 2013] (resource competitiveness) and competitive advantage (resource competitive advantage).

The resources of an enterprise are inseparably connected to the process [Cyfert 2006] of resourcing. In order for the resources and the resourcing to successfully and efficiently shape the competitiveness and the competitive advantage of an enterprise they must be of complementary nature to each other. Resourcing is a qualitative and quantitative process of obtaining and shaping the resources by an organisation. Obtaining is understood as acquiring, purchasing resources by an organisation. Shaping is understood as creating goods (products/services) from the acquired resources by an organisation [Leśniewski 2014]. It can be argued that resourcing and resources contribute to the development of competitiveness and competitive advantage of the company. Starting with an analysis of resources and resourcing of an economic operator, one must start from the resourcing, as the quality and quantity of resources in the organisation depend on it. Considering the quality and quantity of resources, one should focus more on the quality of resources, because by the quality of the resources the organisation will shape the quality of their goods (products/services).

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<sup>3</sup> In this case, psychological or sociologic knowledge is also used.

<sup>4</sup> In task team a manager and a subordinate create various interactions between each other. One of the manifestations of a task team is management through aims or management through partner relations. A manager and a subordinate are to be a well-matched par of people in an organisation, who understand each other.

The resources of an enterprise are the assets of differential nature, that is to say a set of available factors controlled by a given enterprise. Resource approach stems from an interest in resources as a key centre of business activity. Since the 1990s it has been dominating approach towards the management of an enterprise, which the development of this theory known today come from, such as: the concept of key competences, learning organisation, knowledge management. Equipped with the unique resources the company is able to achieve a competitive position on the market, to obtain certain income, as well as to increase its value [Skowronek-Mielczarek 2012]. The development and market success are not guaranteed by only having the resources by the organisation, but by the ability of their rational use in changing environmental conditions [Leśniewski 2014].

The enterprises use various resources in their development, among which general resources include: human, monetary (financial), physical, information, knowledge and relational resources. Human resources are the people (employees) and what they stand for, financial resources refer to the financial capital, physical resources are the raw materials, buildings, machines, devices, etc., whereas information and knowledge resources are the news (information) and objectiveness (knowledge) of the employees, which are used by the organisations to the decision-making process. Relational resources refer to the relations among the employees in an organisation (endogenous relations) and the relations of an organization with other organisations operating in the external environment (exogenous relations).

General division of the resources may be also supplemented by natural environment resources and organisational culture resources. Natural environment resources are concerned with not only the natural resources or the atmosphere, hydrosphere and lithosphere, but also the approach (relation) of an organisation (enterprise) towards the natural environment, which is expressed by: environmental awareness and “eco-developmental” awareness<sup>5</sup>. Environmental awareness stands for the approach of an organisation to nature (organisation – natural environment) whereas “eco-developmental awareness” is simultaneous perception of the relationship between the organisation and systems: social – economic – natural environment (organisation – society – economy – natural environment). Environmental awareness is the foundation of “eco-developmental awareness”. Organisational culture resources are the norms and values of the employees, which are shaped by the internal and external environment of an organisation<sup>6</sup>.

The general division of the resources of an enterprise is presented in Figure 1.

In order for the resources presented in Figure 1 to shape the competitiveness of an enterprise efficiently and successfully they need to be complementary towards one another, they must generate positive effect of synergy, that is to say, they must interact with each other. Undoubtedly, the relationship between resources will contribute to the synergy and complementarity of resources. It should be kept in mind that it is the people (employees) in an enterprise who are the creators of the resources of an enterprise. Thanks to the employees, that is to say the human resources, the remaining resources have the nature and sense assigned in an enterprise. The human resource is the primary resource and the

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<sup>5</sup> The author of the term and definition of “eco-developmental awareness” is Michał A. Leśniewski “Eco-developmental awareness” was first published in Leśniewski 2013.

<sup>6</sup> Other: internal and external surroundings.

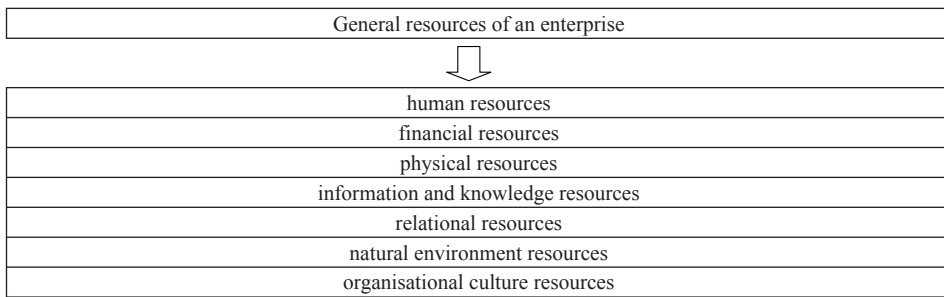


FIG. 1. General division of the resources of an enterprise  
 Source: the authors based on Skowronek-Mielczarek 2012, Leśniewski 2014.

remaining resources are secondary resources [Leśniewski 2014]. The quality of other resources depends from the quality of human resources.

In the literature there are many divisions of the resources of an organisation. These resources are divided into not only i.e. “material” and “intangible” or “primary” and “secondary”<sup>7</sup>, but also into “measurable” and “immeasurable”. The division of the resources into measurable and immeasurable was created by K. Haanes and B. Lowendahl. They classify the immeasurable resources into competence [Wojtczuk-Turek 2008, Kozina 2014] and relations, and then they divide competence into individual and organisational, whereas relations are seen as: reputation, loyalty of a client, loyalty of the employees. The division of the resources into measurable and immeasurable is presented in Figure 2.

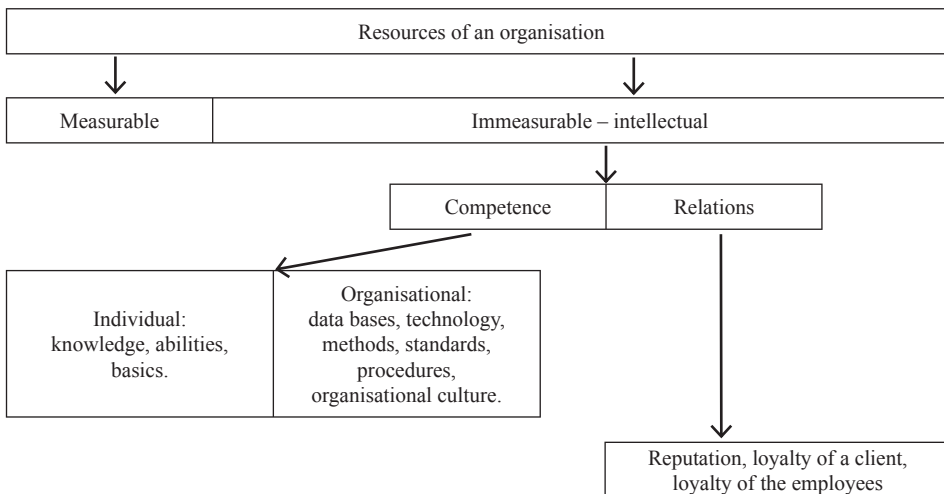


Figure 2. Division of the resources into measurable and immeasurable  
 Source: own elaboration based on Dobija 2003.

<sup>7</sup> The division of the resources into “primary” and “secondary resources” was created by Michał A. Leśniewski. This division was first published in the study [Leśniewski 2014].

The resources in an enterprise may be seen as measurable and irrational which is shown in figure 2. The measurability may be perceived as “something” that one can give a specific dimension to (it can be measured, can subject to dimensioning). The financial (monetary) assets are an example of measurability. In this case, the measurability may be included into the quantitative aspect of the resources, whereas the irrationality may be understood as “something” that cannot or is very difficult to be given a specific dimension. In this case, the irrationality may be included into the qualitative aspect of the resources. Intuition is an example of irrationality.

The literature provides a lot of divisions of resources which enhance the value of organisation’s functioning. Multi-faceted approach to resources creates a view that enterprises cannot function without resources whereas having resources does not guarantee the achievement of success by an economic operator. To complete happiness one needs resources and abilities to use them rationally (resources + abilities = rational use of resources, rationality of an organisation)<sup>8</sup>.

One of the issues, problems connected with the functioning of resources in an enterprise is term diversity, which refers to everything that surrounds on the outside and which lies within and which contributes to the development of an organisation. “Diversity may be generally defined as distinctness, otherness, differentiation, which may refer to the human (employee) located in different situations and to an organisation having to deal with changing market conditions”<sup>9</sup>. Human traits that differ him from other people are, inter alia: sex, age, race, ethnicity, disability, sexual orientation, skills, education, work experience, life attitude, lifestyles, learning styles, human behaviourism or type of properness. The issue of diversity can be transposed from a general, wide grasp to the field of enterprise resources. “Diversity of resources may be defined as distinctness, otherness, differentiation of particular resources in comparison to other resources within a given organisation and/or in relation to other organisations within the external surroundings (external environment)”<sup>10</sup>. Some of the examples which confirm the diversity of resources are divisions, classifications of resources, i.e. division of the resources into material and intangible resources. Such division introduces the resources into the issue of diversity, because each resource has different features, attributes etc. It can be said that, how different is the staff so different are the resources; how different managers are so different are the styles of interaction etc. The diversity can be managed, therefore one can talk about diversity management. Diversity is very important for shaping the knowledge, because each enterprise has to deal with different knowledge.

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<sup>8</sup> Entry in brackets was formulated by Leśniewski Michał Adam.

<sup>9</sup> Definition of the term “diversity” was formulated by Michał A. Leśniewski and was first published in this elaboration.

<sup>10</sup> Definition of the term “diversity of resources” was formulated by Michał A. Leśniewski and was first published in this elaboration.



## **KNOWLEDGE AS A MANIFESTATION OF OBJECTIVENESS OF EMPLOYEES AND GENERATING ENTERPRISE'S RESOURCES**

One of the aspects of functioning of resources in an enterprise is, *inter alia*, knowledge [Mikuła 2006], which is the objectiveness of the employees (managers and subordinates) and the objectiveness of the whole organisation.

Knowledge [Pacholarz 2016] as a resource can be divided, classified which leads to the fact that knowledge may be divided into “formal” and “informal knowledge”<sup>11</sup>. “Formal knowledge” is knowledge set and saved (settled in paper elaborations and electronic studies). “Informal knowledge” is not fixed and not saved, it is the opposite of formal knowledge. “Informal knowledge” may be called unofficial or gossip knowledge. This knowledge is passed on the principle of: „I’ve learned from a conversation with..., that...” and/or „I’ve found out informally that...” etc.

Development of effective methods of management of appreciation of the value of knowledge in the company has its reflection not only in competitiveness, but also in the competitive advantage of an economic operator. Organisational creation of knowledge is an ability of a corporation as a whole to produce new knowledge, to spread it in an organisation and to incorporate it in products, services and systems of an organisation [Nonaka and Takeuchi 2000]. Human knowledge is an available knowledge and a hidden knowledge [Nonaka and Takeuchi 2000]. Available knowledge is a knowledge which we have access to, which can be measured, studied, passed on in a formalized form. Hidden knowledge is difficult to formalize, it includes intuition, premonition, sensation and individual activity and experience [Nonaka and Takeuchi 2000]. The value of knowledge in an organisation may be reduced to the statement that people do not achieve new knowledge in a passive way: they interpret it and adapt it to their own situation and perspective [Nonaka and Takeuchi 2000].

At the beginning of the analysis of knowledge in the organization one must first answer the question: What way does the knowledge emerges in? According to the concept of the authorities in the field of knowledge, Nonaka I. and Takeuchi H., the process of knowledge creation is presented in six stages: “dimension of knowledge creation, types of knowledge, ways of knowledge conversion, spiral of knowledge, the essence of knowledge created in four ways and spiral of organizational knowledge creation” [Nonaka and Takeuchi 2000].

**Dimension of knowledge creation.** Nonaka and Takeuchi propose two dimensions of knowledge creation: “epistemic” and “ontologic”. “Epistemic” dimension is a result of separating the object and subject of perception, in other words, separation of the available knowledge from the hidden knowledge. “Ontologic” dimension refers to organisational intensification and including individual knowledge in the system of organisation’s knowledge. This process begins with a single member of an organisation, through group interaction reaches with its size to the processes inside an organisation, and then to international processes.

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<sup>11</sup> It is one of main divisions of knowledge in an organisation.

Within these two dimensions of knowledge it can be stated that each man (employee) receives and transmits the acquired knowledge in such a way in which he picked it up and interpreted it in his own way. Interpretation is a very important component of generating knowledge in both business science and practice.

**Types of knowledge.** Nonaka and Takeuchi divide knowledge into hidden knowledge (subjective), which is a practice created simultaneously, that is to say “here and now”, and “available knowledge” (objective), which is based on created theories and mind. The analysis of this knowledge indicates that in the process of knowledge creation there is a process of transformation which is based on creating available knowledge – rational (in the mind) through the hidden knowledge – experimental (in the body).

**Ways of knowledge conversion.** Through a process of social conversion the hidden and available knowledge grow, both in terms of qualitative and quantitative sense [Nonaka and Takeuchi 2000]. The process of conversion takes place when it happens between various people, not inside an individual.

**Spiral of knowledge.** It is based on the fact that interactions, which take place in the process of creating knowledge, are shaped by the movements happening between various types of conversion, which in turn are initiated by four forces, that is to say: building ground, dialogue, connecting available knowledge and learning in action. It is a dynamic process between the hidden and available knowledge. This process is followed by another – creating the knowledge in four ways [Nonaka and Takeuchi 2000].

**The essence of knowledge created in four ways.** Created knowledge is diverse. Each of its processes provides different knowledge, that is to say “process of socialization” provides co-felt knowledge; “externality” – conceptual knowledge; “internalisation” – operational knowledge, and “combination” – structured knowledge [Nonaka and Takeuchi 2000].

**Spiral of organisational knowledge creation.** The knowledge of each individual man that is to say the hidden knowledge of individuals is the basis of creating the knowledge resource in an enterprises. The task of an organisation is to gather such knowledge, mobilising it and turning it into knowledge available to each employee. The spiral of organisational knowledge creation is concerned with coincident growth of knowledge at the ontologic level with the increase of the range of interaction between available and hidden knowledge.

Knowledge [Perechuda 2005, Rzepka 2015] accompanies a man (employee) and an organisation (enterprise) not only in shaping the competitiveness, but also in achieving the competitive advantage on the market. Taking into account the level of an employee and of an organisation, knowledge may be divided into: “employee knowledge” and “organisational knowledge”.

“Employee knowledge” is a theoretical knowledge and the knowledge of work experience with the abilities to use these two types of knowledge together in the practice of functioning of an employee in an organisation. “Employee knowledge” is also the theoretical knowledge with the ability to further use it by an employee of an organisation. Taking such presentation of “employee knowledge” it can be stated that the employee knowledge with the advantage of knowledge of work experience (practical) over the theoretical knowledge may be defined as “practical employee knowledge” and employee knowledge with the advantage of theoretical knowledge over practical knowledge (or the lack of practical knowledge) may be defined as “theoretical employee knowledge”. What

connects the practical and theoretical employee knowledge is “the ability to use knowledge” in an organisation. Each employee must be able to create his own “bridge”, notice the dependency between the knowledge (types of knowledge) he has and the effects of that knowledge (these types of knowledge). Both theoretical and practical (work) knowledge must be complementary in order to generate positive effect of synergy.

“Organisational knowledge” is knowledge of all the employees used for operational and strategic functioning of an organisation on the market. Taking into account the fact that organisational knowledge is concerned with the knowledge of the employees and the organisation cares for it to be developing qualitatively, the organisation must employ and try to keep qualitative employees, because they are the proof of the whole organisation (enterprise) being substantial. A substantive employee is the core of the quality of an organisation. Such employee matches the organisational structure and the specificity of an enterprise. It can be stated that a substantive employee is a substantive organisation. “Organisational knowledge” may be divided into “practical organisational knowledge” and “theoretical organisational knowledge”. “Practical organisational knowledge” is the advantage of practical knowledge over the theoretical knowledge of all the employees of an organisation. “Theoretical organisational knowledge” is the advantage of theoretical knowledge over the practical knowledge of all the employees of an organisation. In Figure 3 the division of knowledge into employee and organisational knowledge was presented.

The analysis of the division of knowledge presented in Figure 3 states that in order for the employee and organisational knowledge to contribute to the development of an organisation, they must take form of “integrated knowledge” (cumulative knowledge), in other

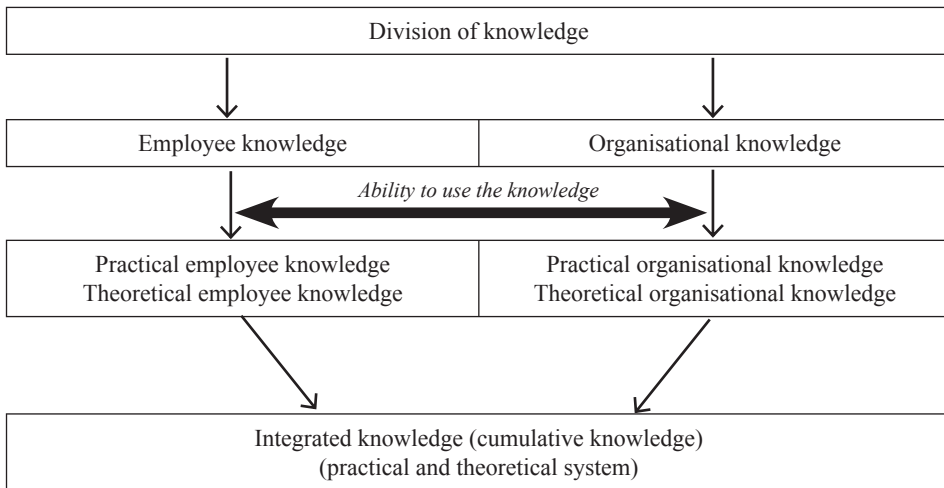


FIG. 3. Employee and organisational knowledge – the division of knowledge<sup>1</sup>.

Source: own elaboration based on Mikula 2006, Mikula and Pietruszka-Ortyl 2007, Leśniewski 2015.

<sup>1</sup> This division was first published in the following study. The author of this division is Michał A. Leśniewski.

words a “practical and theoretical system”. This system assumes that an organisation (enterprise) is of practical nature (practical knowledge) of functioning on the market whereas the development of an organisation is supported by the theory of learning (theoretical knowledge) transformed into practice (practical knowledge). It should also be taken into account that the practice of an organisation also supports the development of the theory of learning (theoretical knowledge). The use both of theoretical and practical knowledge requires the possession of appropriate skills, which should be treated as a transformer of theoretical knowledge into practical knowledge and vice-versa. It can be stated that the abilities are an adhesive which binds theoretical knowledge with practical knowledge, as well as employee knowledge with organisational knowledge. Mutual interpenetration of knowledge may be described as integrated knowledge.

Knowledge is the basis of existence of each organisation. Knowledge contributes to generating the resources of an enterprise. In the literature, the multitude of divisions of business resources origins, *inter alia*, from the development of the theory of learning (particularly economic sciences in the field of economics, economic sciences and humanities in the field of management), that is to say theoretical knowledge and practice – practical knowledge. Having the theoretical knowledge, practical knowledge or integrated knowledge give full grounds to generate new resources of an organisation. The result of generating is the generator as a new resource of an organisation. “Generating” is a process of creating new resources of an organisation, whereas the “generator” is understood as the result of generating, in other words the new resource of an organisation<sup>12</sup>. Qualitative employees and qualitative organisation form a strong basis for the use of knowledge in the process of generating resources of an organisation.

## **SYNERGISM AND SYNERGY VERSUS THE RESOURCES OF AN ENTERPRISE**

In order for an enterprise to fulfil current and potential needs of the customers, it must be an active participant of the competitive market, it must have not only the resources, which are very important, but it also must be able to implement the process of synergism with a positive effect of synergy. “Synergism” may be defined as a process of cooperation, interaction of all the elements of an organisation in order to provide higher effectiveness and efficiency as a whole<sup>13</sup>. The result of synergism is synergy as “something” which is, which became a fact that it exists. Synergism and synergy must complement each other, because in such relations they will contribute to the growth of the value of an enterprise. In synergism and synergy, the knowledge plays a fundamental role, because the successes of an organisation is the knowledge that “something” can be done better than others do it

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<sup>12</sup> The term and definition of “generating” and “generator” in the context of knowledge was created by Michał A. Leśniewski and first published in the following study.

Knowledge used in the process of “generating”. Generator as the result of generating. An example of a generator may be a resource, a factor, etc., which did not exist earlier, but exists now.

<sup>13</sup> The definition of the term “synergism” was created by Michał A. Leśniewski This definition was first published in this publication.

and that “somebody” achieves better results than others. Without knowledge, it would be impossible to consider synergism and synergy.

Griffin states that good interpersonal relations in the whole organisation may also be the source of synergy. People who support each other and who cooperate well may achieve much more than people who do not support each other and who do not know how to cooperate [Griffin 2005].

It can be said that each aspect of functioning of an organisation may be a source of synergy. Each synergism which is to generate a positive effect of synergy must have its source in a positive potential of an organisation.

A manager, who must be comprehensively oriented in the sources which can create positive effect of synergy, is of great importance to the synergism. It may be stated that a manager is to be a mentor of the implementation of synergism in an organisation. A manager who is a mentor may be presented as a knowledge manager.

The literature provides a lot of examples of achieving a positive effect of synergy both in terms of qualitative research and quantitative research. One of the examples is the fact that [Romańczuk 2003]:

- sharing knowledge enabled to solve practical problems and to achieve business profits,
- staff are aware of the connection between the knowledge-sharing and business objectives, hence the initiative of the creation of teams of experts and discussion groups have had significant successes,
- knowledge-sharing is closely related to the core value of the company and enables its implementation,
- style of knowledge-sharing is matched to the style of work of the organisation,
- the managers promoted cooperation and knowledge,
- the practice of sharing knowledge is integrated into the daily rhythm of work,
- the level of involvement of managers is closely related to the overall level of commitment of the organisation to knowledge-sharing,
- in organisations, which are thought to be the best, a process of informal human networks takes place, which have huge impact on organisations. The scope of their expertise knowledge refers to the relevant areas of the company,
- formal or informal teams have a moderator who cares for everyone to actively participate in the work of the team,
- the best companies see the need to link the system of awards and accolades knowledge-sharing.

The above examples are the proof that synergism and synergy cannot function without knowledge. Knowledge may be defined as the source of synergism. In this case, a manager is justified as a manager coordinating various sources, which eventually are to generate a positive effect of synergy.

The resources of an enterprise are connected with knowledge, which marks the resources into the issue of synergism. Complementary and synergetic approach to the resources provides full grounds to talking about “complementary-synergetic resources”. It can be stated that the resources which contribute to the development of an enterprise must be based on the complementarity and synergism. “Complementary-synergetic resources are the relations between the resources, which contribute to the mutual complementing of the resources and that the cooperation of several resources together give

better benefits for an organisation than each separate resource”<sup>14</sup>. The resources seen in that way introduce an organisation into the “road” of dynamic look on an enterprise in changing surroundings.

## CONCEPTUAL MODEL OF KNOWLEDGE MANAGER

Knowledge is inextricably linked with man (employee). Taking into account the relations in the organisations, including enterprises, we have to deal with managers and subordinates. One of the features, which characterize the employees is the fact that each of them has a different level of knowledge. While working together, the managers and the subordinates contribute to the synergism and the diversity of the resources of an economic operator. It is important to have such a level of knowledge which will enable the managerial staff to create the concept of mechanism contributing to the generating of synergism and the diversity of resources. Each enterprise is moving in the direction of being unique and unrepeatable on a competitive market. The knowledge constitutes the substance of both the manager and the subordinate.

Considering knowledge in the context of a manager [McKeen and Staples 2003] one can attempt to define the “concept of knowledge manager”, which may be a “material concept”, in other words, which concerns the physical, material position in an enterprise (included in the organisational structure – the position of knowledge manager having the scope of his responsibilities etc.), but it also may be an “immaterial concept” (there is no position in the organisational structure of an enterprise – there is no position of knowledge manager in an enterprise). Therefore, the concept of knowledge manager appear to be a dichotomous concept, that is to say, it has both material and immaterial form. Regardless of the adopted concept of the leading role of a knowledge manager is such use of his knowledge, which will lead the organisation to the achievement of the benefits from the market.

A knowledge manager [Asllani and Luthans 2003] would be responsible in an enterprise for, inter alia, the transfer of knowledge on the line, i.e.: business incubator (technology parks, academic business incubators, etc.) and an enterprise. A knowledge manager would contribute to drawing Business closer to Science or Science closer to Business [Mikuła and Oczkowska 2009]. They both have a lot to offer. The knowledge manager is not only a person working in an enterprise, but also a person working at universities or other scientific organisations. “A knowledge manager may be defined as a relevant person who knows how to use his knowledge in various ways. A knowledge manager is able to develop the concept of the transfer of knowledge between different organisations”<sup>15</sup>. In the era of knowledge-based economy it is reasonable to consider this concept

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<sup>14</sup> The resources may also be seen in the category of “relations”, in other words existing relations contribute to the creation of new, different resource.

The term and the definition of “complementary-synergetic resources” were developed by Michał A. Leśniewski and first published in this study.

<sup>15</sup> The definition of “knowledge manager” was developed by Michał A. Leśniewski and was used first used in the following elaboration.

of the manager from a long-term perspective of development of the organisation, both in companies and universities. In Figure 4 the conceptual model of knowledge manager was presented.

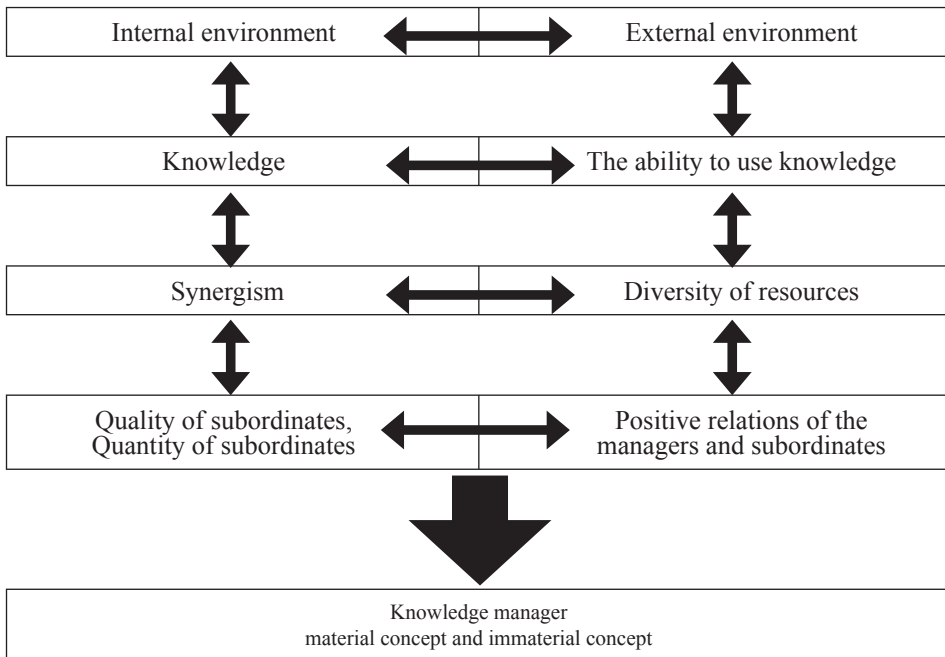


FIGURE 4. Conceptual model of knowledge manager

Source: own elaboration.

A knowledge manager is a managerial staff not only with a high level of relevance but also with a high level of responsibility for the transformations taking place in an economic operator. A model of knowledge manager which was presented in Figure 4 is an interpretation of an individual approach of the author to this model. This model is to be fully adapted to the conditions of functioning of any enterprise. The starting point of the analysis of the model of knowledge manager is the interpenetration of the internal and external environment. In order for the knowledge to cause benefits for an organisation, a component of the ability of using the knowledge must be added [Krogh 1998]. The knowledge and abilities are a typical example of complementarity and synergism. In an organisation, a manager must also implement the process of synergism and generate a diversity of the resources, which will increase the value of an organisation in its functioning on the market. In the diversity of the resources one can see – metaphorically speaking – so called “bottomless pit”, where you can come across such resources which do not exist at present and after some time these resources appear (interpretative

approach). Another element of the above model is the quality and quantity of subordinates. The subordinates as the employees of an organisation are presented in two categories: quantity and quality. The author of the model is the supporter of the qualitative approach to the subordinates, assuming that it is not the quantity but the quality which is the proof of the value of an employee – subordinate. Taking into account the fact that the other side of the employees in an organisation is the quantity, then one should generate skilfully the quality of employees from their quantity. A quality employee gives more of himself than a quantity employee. The quality and quantity of employees shapes the relations on the line: manager – subordinate. These relations mainly refer to the creation of positive approach towards a man. A manager is to understand a subordinate and a subordinate is to understand a manager. All of the factors presented above are a part of the concept of the model of a knowledge manager understood in the categories of material and immaterial concept. Both these concepts present the value of the model of a knowledge manager.

## CONCLUSIONS

The resources play an important role in shaping the widely understood development [Bratnicki 2001], as well as they form the competitiveness of the enterprises. In order for the resources to “live” their life in an organisation, they must have defined attributes which include, inter alia, synergism, diversity and a knowledge manager. A unit which generates the knowledge, synergism or diversity is the manager as a person who is the source of implementation of the process of organisation management. In the process of management [Glinka 2008], the subordinates also appear, with whom the manager creates a network of relations of different nature. A knowledge manager should know how to use his knowledge to the achievement of the intended target. The material or immaterial form of the knowledge manager presents the value of all the activity subordinated to the operational and strategic aim of an enterprise. The problem of synergism and diversity of resources is a challenge for the knowledge manager, who will be able to implement the processes in an organisation with his intellect in such a way, that they will lead to generating new resource/resources. The knowledge in an organisation may take various forms just as different are the forms of a knowledge manager as a material and immaterial concept.

The person of a knowledge manager is a unit of main interest of the research issue brought up in this study. He is a stimulator of any changes occurring in the enterprise also taking into account external conditions of the economic operator. Conceptual model of a knowledge manager, which should be subjected to the process of empiric verification, is an authorial interpretation of the literature of the subject. This model, which subjected to becoming practical in the companies, will provide the rightness of the value of the knowledge, not only for the theory of science, but also the economic practice of various organisations.



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**Summary.** One of the fundamental problems relating to the management of the company is the manager and its employees' as the human resource of the organisation. Managers with their staff and particularly positive relationship between them are able to build constructive foundation of the future undertakings. The aim of the white paper is to provide a fault energy and diversity of companies with the presentation of his concept of manager's model knowledge. In the development of the adopted research hypotheses formulated as follows: First hypothesis research area: knowledge manager is a wizard synergetic and diversity of companies, second hypothesis research area: meteoric manager is provided through knowledge and be able to use this knowledge, Third research hypothesis: manager knowledge can be reflected in the form of a concept of material and the concept of an intangible asset. The development of a conceptual design and is based on the method of interpretation literature.

**Key words:** manager knowledge, diversity enterprise resource, business management

**JEL:** O15, D83

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## **MACROECONOMIC STABILITY AND SOCIAL PROGRESS IN THE EU MEMBER STATES AND UKRAINE**

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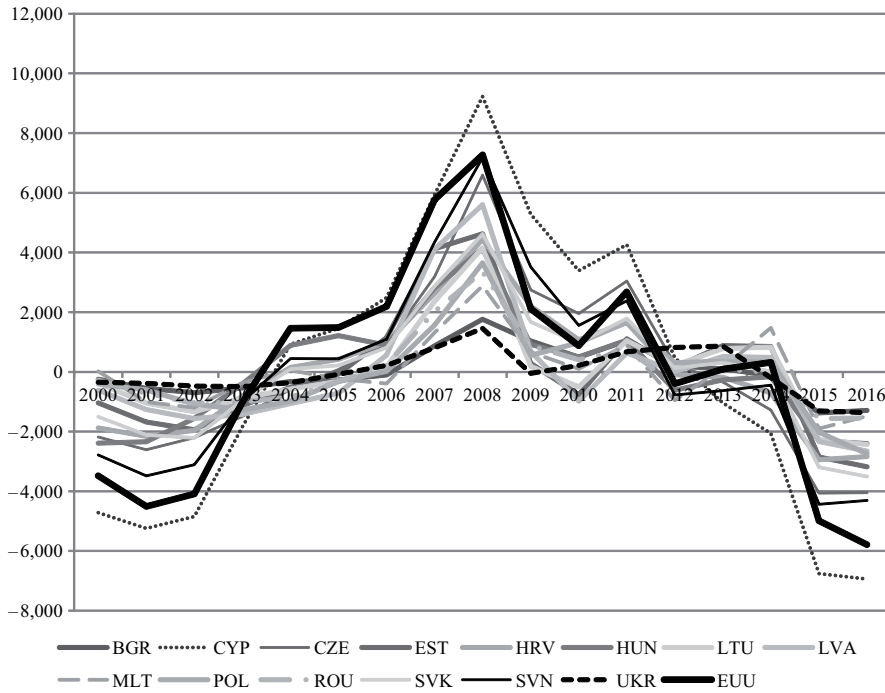
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### **INTRODUCTION**

The issues of the countries' macroeconomic stability became widespread after the last world finance and economic crises had already become. Thus, the consequences of macroeconomic imbalances provoked the negative dynamics of economic development [Buti 2011]. As a result, the slow temp of economic development provides the decreasing of living standards, increasing the unemployment and unequal social progress in the countries. With purpose to soft the above mentioned negative tendency EU countries implement the special instruments to cut the gaps in the social and economic development. Should be underlined, that approved European vector for national economy development requires to investigate the experience of the latest members of EU which have the post soviet regime and had the similar with Ukraine start position of economic and social state. The results of analysing will be allowed to indicate the general parameters of social and economic development and correlation between them.

In his speech "Macroeconomic stability and growth in the European Monetary Union" Eugenio Domingo Solans, member of the Governing Council of the European Central Bank, notes that "Macroeconomic stability is a key element of the socio-economic model of the European Monetary Union. It is a precondition for sustainable economic growth and job creation" [Solans 2002].

The economic growth measured by the gross domestic product per capita in most of the considered EU member states varied unevenly around the trend line. The separation of the cyclic component in the time series of GDP per capita with the help of the Godric-Prescott filter allows us to conclude that there is an identical trend of short-term developmental fluctuations in the EU member countries (Fig. 1). So the correlation coefficient of GDP fluctuations per capita for most of the countries under consideration is 0.5066 or higher.



Bulgaria – BGR; Cyprus – CYP; Czech Republic – CZE; Estonia – EST; Croatia – HRV; Hungary – HUN; Lithuania – LTU; Latvia – LVA; Malta – MLT; Poland – POL; Romania – ROU; Slovak Republic – SVK; Slovenia – SVN; Ukraine – UKR. Europe Union – EEU.

FIG. 1. The deviation of GDP per capita from the trend line for the whole of the EU and in individual countries (the Godric-Prscott filter)

Source: the author's calculations based on World Bank data [World Bank 2017].

It should be noted that the use of the Godric-Prscott filter is one of the most popular ways to identify the trend and cyclic (fluctuation) components of the time series [Ravn and Uhlig 2002]:

$$y_t = \tau_t + c_t \quad (1)$$

where:  $y_t$  – the actual data,  
 $\tau_t$  – the trend component,  
 $c_t$  – the cyclic component.

The trend component  $\tau_t$  is extracted from the actual data series  $y_t$  by solving

$$\min_{\tau} \sum_{t=1}^T \left( (y_t - \tau_t)^2 + \lambda ((\tau_{t+1} - \tau_t) - (\tau_t - \tau_{t-1}))^2 \right) \quad (2)$$

The most stable dynamics, which is characterized by a slight variation in the characteristics of this indicator, within 10–30%, have Austria (23.07%), Belgium (22.23%), Cyprus (24.37%), Germany (21.51%), Denmark (21.94%), Spain (23.24%), Finland (22.46%), France (20.63%), the United Kingdom (16.51%), Greece (26.78%), Hungary (28.76%), Ireland (23.12%), Italy (19.51%), Luxembourg (26.86%), Malta (26.86%), the Netherlands (22.16%), Portugal (21.32%), Slovenia (26.79%), Sweden (23.28%), but within 30–50% – Bulgaria (43.5%), the Czech Republic (34.67%), Estonia (41.13%), Croatia (30.4%), Lithuania (43.31%), Latvia (43.44%), Poland (35.43%), Romania (47.66%), the Slovak Republic (34.40%), which is primarily due to the obtained opportunities of these countries after entering the Europe zone. So in 2016 compared with the year of entry into the EU, Bulgaria was able to raise GDP per capita in 26%, the Czech Republic – 58%, Poland – 86%, Romania – 16% and the Slovak Republic – 55%.

When assessing the labour market in the EU member states, based on observing the unemployment rate, it can be concluded that there are quite large differences in the Eurozone (Fig. 2). Despite the relatively low level of unemployment in the EU as a whole (7.96% in 2016), its value remains much higher in some countries than in the entire Eurozone: in Spain by +9.44%, Greece – +15.4%. On the other hand, in countries such as Bulgaria, the Czech Republic, Estonia, Hungary, Lithuania, Malta, Poland, Romania, the Slovak Republic, since the beginning of the entry into the Eurozone the unemployment rate has shown a downward trend, however, in 2017 in Cyprus and Slovenia this level increased by 7.6 and 1.5% respectively. It should be noted that with the increase in the unemployment rate in Cyprus and Slovenia, the value of their GDP per capita remains one of the highest in the group under analysis. Therefore, it becomes necessary to study the interdependence of the two processes mentioned.

Supplementing the analysis of the comparison of the unemployment rate with the coefficient of variation for the EU member states during 2000–2017, it can be argued that Austria (11.23%), Belgium (9.01%), Finland (15.09%), France (8.80%), Malta (12.36%) demonstrated the most homogeneous dynamics in the range of 10–20% but not exceeding the absolute value across the region.

The calculations for 2000–2016 for the EU as a whole and for Ukraine show a statistically significant correlation between the fluctuations of GDP per capita (Y) and the unemployment rate (Un), which can be represented in the form of a regression equation:

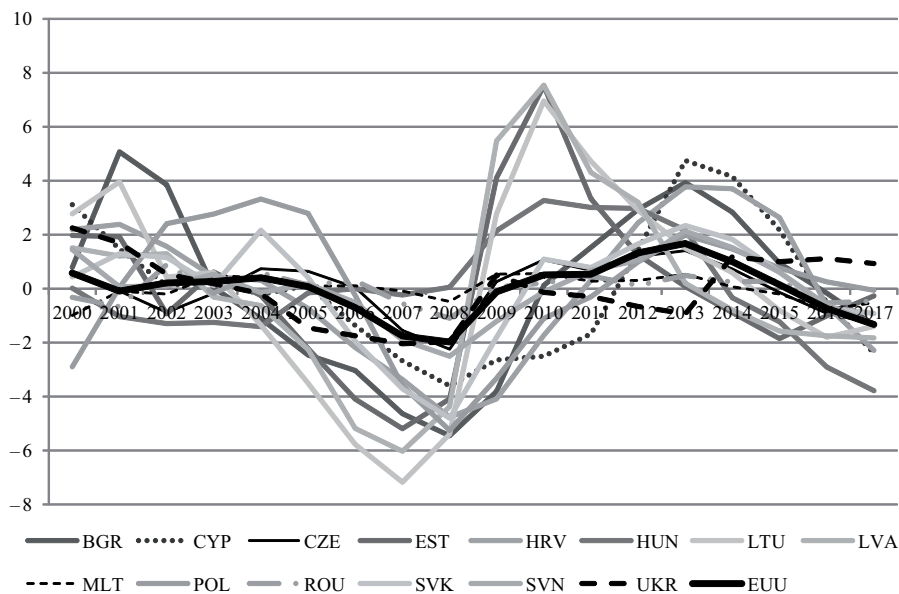
– for the EU as a whole

$$Y(\text{Un}) = 1.406869 - 0.0805075 \times \text{Un}, R\text{-squared} = 0.4567 \quad (3)$$

– for Ukraine

$$Y(\text{Un}) = -22.71298 - 416.265 \times \text{Un}, R\text{-squared} = 0.5019 \quad (4)$$

As it can be seen from the above data, the integration processes of countries in the European Union encourage their social and economic development. At the same time, as noted above, the accumulation of macroeconomic instability leads to a variety of socio-economic conditions and quality of life in individual countries. The main hypothesis of Mauricio Cárdenas and Miguel Urrutia in their work [Cárdenas and Urrutia 1995] is that countries with greater macroeconomic stability achieve greater social progress.



Bulgaria – BGR; Cyprus – CYP; Czech Republic – CZE; Estonia – EST; Croatia – HRV; Hungary – HUN; Lithuania – LTU; Latvia – LVA; Malta – MLT; Poland – POL; Romania – ROU; Slovak Republic – SVK; Slovenia – SVN; Ukraine – UKR. Europe Union – EUU.

FIG. 2. Unemployment deviation from the trend line as a whole across the EU and in individual countries (the Godric-Prescott filter)

Source: the author's calculations based on World Bank data [World Bank 2017].

Marta E. Kuc studying the processes of social convergence with the help of the transition matrix from Markov chains in the 24 EU member states in the period 1995–2012, comes to the conclusion that there is the convergence towards stationary distribution; however, the pace of convergence is very slow [Kuc 2015]. The author traces the basic indicators of the study to ten groups: population, labour market and job security, health and social care, education, leisure time, living conditions, transport and communication, social security, population incomes and expenditures, natural environment.

The work of Soukiazis is devoted to the study of the issues of reducing the differences in the living standards of countries after integration into the EU [Soukiazis 2000]. Having analyzed per capita income to express the diversification of living standards among the 15 EU member states for the period 1960–1997, the scientist notes the lack of convergence between the countries studied. The author notes that the income growth rate per capita in the less developed countries is not high enough to guarantee an absolute reduction in the discrepancy between living standards among the EU countries.

Using the econometric model, Ana-Maria Popa explores the direction and significance of the influence of social factors on the economic growth of the EU countries in the period 2005–2009 [Popa 2012]. The author uses the real GDP per capita as the dependent variable, and the independent variables are: population at risk of poverty, unemployment rate, life expectancy and expected years of schooling. The result of the study was the confirmation of the hypothesis of the existence of a strong connection between the human



and economic development of the country. In the author's opinion, for a more complete analysis, in addition to the proposed parameters, it is necessary to consider the financial, political and legislative factors within each of the countries studied.

## AIM AND METHOD

The aim of the article is to study the impact of social progress on macroeconomic stability for the EU member states and Ukraine. To consider many aspects of social progress, we propose to calculate it as an integral human asset index (5) considering the influence of many factors in three separate spheres, which are presented in Table 1.

TABLE 1. Selected statistical indicators for assessing social progress

Number and symbol of the indicator	Variable
Life. Health. Welfare	
k <sub>1</sub>	Human development index [HDR 2016]
k <sub>2</sub>	Global hunger index [GHI 2017]
k <sub>3</sub>	Prosperity index [LPI 2017]
k <sub>4</sub>	Health expenditure, total [% of GDP] [World Bank 2017]
k <sub>5</sub>	Population ages 15–64 [% of total] [World Bank 2017]
k <sub>6</sub>	Population ages 0–14 [% of total] [World Bank 2017]
k <sub>7</sub>	GNI per capita [current US\$] [World Bank 2017]
k <sub>8</sub>	Poverty headcount ratio at national poverty lines [% of population] [World Bank, 2017]
k <sub>9</sub>	Life expectancy at birth, total [years] [World Bank 2017]
Science. Education. Culture	
k <sub>10</sub>	Patent applications, residents [World Bank 2017]
k <sub>11</sub>	Global innovation index [GII 2017].
k <sub>12</sub>	Government expenditure on education, total [% of GDP] [World Bank 2017]
k <sub>13</sub>	Gross enrolment ratio, tertiary, both sexes [%] [World Bank 2017]
k <sub>14</sub>	Research and development expenditure [% of GDP] [World Bank 2017]
Freedom. Equality. Security	
k <sub>15</sub>	Index of economic freedom [EF 2018]
k <sub>16</sub>	Press Freedom Index [PFI 2017]
k <sub>17</sub>	Civil liberties index [CLI 2018]
k <sub>18</sub>	International property rights index [IPRI 2017]
k <sub>19</sub>	Networked readiness index [NRI 2017]

Source: the author's research.

$$HAS = \sqrt[3]{I_{LHW} \cdot I_{SEC} \cdot I_{FES}} \quad (5)$$

where:  $I_{LHW}$  – subindex “Life. Health. Welfare”,  
 $I_{SEC}$  – subindex “Science. Education. Culture”,  
 $I_{FES}$  – subindex “Freedom. Equality. Security”.

This approach will allow comparative analysis of different countries, to identify fluctuations in their development, and, along with other factors, to carry out an assessment of the impact on the macroeconomic stability of the country. In addition, each component of the integral index (5) can be used separately to characterize various aspects of social progress and assess the nature of the impact on the dynamics of its changes by certain complex factors.

In order to eliminate the multicollinearity of the indicators (Table 1), which show similar trends in time, have the same direction of impact on the integral assessment and can lead to complications in calculations without increasing the adequacy of the methodology, it is necessary to conduct a procedure for filtering indicators on the basis of correlation analysis. In the case of detecting the relationship between the indicators not less than 0.7 of fraction of unit in absolute value, it is necessary to choose one more influential on the investigated indicator, while the other one should be removed from the subsequent calculations.

After carrying out the procedure of filtration of the indicators, the calculation of subindices of the integral index by the formula (6) is carried out preliminarily following the procedure of normalization of indicators (Table 1), which have a different direction of influence:

$$I_i = \sqrt[n]{\prod_{j=1}^n X_{jt}} \quad (6)$$

where:  $I_j$  –  $i$ -th subindex,  
 $X_{jt}$  – corresponding normalized indicator of the  $j$ -th index for the  $t$ -th period of the time of the  $i$ -th subindex.

Actuality of the procedure for normalization of indicators (Table 1) is due to the presence within the limits of the input information base of both indicators-stimulators and destimulators. Accordingly, the normalization of the indicators is carried out using the following formulas:

- for indicators-stimulators, the increase of which is accompanied by an increase in the integral Human Asset Index:

$$X_{jt} = \frac{k_{jt}}{\max_t \{k_{jt}\}} \quad (7)$$

where:  $k_{jt}$  – actual value of the  $j$ -th indicator for the  $t$ -th period of time;  
 $X_{jt}$  – normalized  $j$ -th indicator for the  $t$ -th period of time.

- for indicators-destimulators, the increase of which is accompanied by a decrease in the integral Human Asset Index:

$$X_{jt} = \frac{\max_t \{k_{jt}\} - k_{jt}}{\max_t \{k_{jt}\} - \min_t \{k_{jt}\}} \quad (8)$$

The main target of changes in the integral indicator of human capital should be considered its approximation to one. Therefore, the classification of countries based on the integral Human Asset Index is proposed to be carried out according to a scale:

- $HAS \in [0; 0,25)$  – critical level;
- $HAS \in [0,25; 0,50)$  – insignificant level;
- $HAS \in [0,50; 0,75)$  – moderate level;
- $HAS \in [0,75; 1)$  – high level.

The study of the influence and statistical significance of changes in social progress on macroeconomic stability, we propose to do with the model previously proposed in the work [Melnyk et al. 2018]:

$$MI = \alpha + \beta(HAS) + \delta(Z) + \varepsilon \quad (9)$$

where: MI – integral indicator of macroeconomic stability;  
 Z – vector of variables that explain the behavior of macroeconomic stability in time (openness of the economy measured as the percentage of total trade to GDP (Openness), foreign direct investments (FDI);  
 $\alpha$ ,  $\beta$  and  $\delta$  – constants of the equation;  
 $\varepsilon$  – the error associated with the approximation of the model and the stochasticity of its factors.

As a measure of macroeconomic stability, we will use the following variables:

- the inflation rate. We use the annual change in the Consumer Price Index (CPI) as a given indicator [Martinez-Vazquez and Macnab 2006];
- Misery Index, which is the sum of unemployment rate and inflation rate [Iqbal and Nawaz 2010]:

$$MI = UR + INF \quad (10)$$

where: MI – Misery Index,  
 UR – unemployment rate;  
 INF – inflation rate of the economy.

- synthetic indicator MSP, based on the concept of the pentagon of macroeconomic stability, which was proposed by the director of the Institute of Finance in Warsaw, professor of Economics Grzegorz W. Kolodko [Żuchowska 2013, Hurduzeu and Lazar 2015, Ionita 2015, Lyulyov and Shvindina 2017].

## RESEARCH RESULTS

For the purpose of approbation of the proposed methodology for evaluating social progress on macroeconomic stability, we have calculated the integral Human Asset Index on the basis of the collected and processed statistical data, for the part of the EU countries

(Latvia, Lithuania, Poland, Croatia, Romania) and Ukraine, covering the period from 2000 to 2015 (Tab. 2).

TABLE 2. Calculation of the integral Human Asset Index for the part of the EU countries and Ukraine in the period 2000–2015

Year	Latvia	Lithuania	Poland	Croatia	Romania	Ukraine
2000	0.472625	0.440838	0.509688	0.474581	0.299257	0.403911
2001	0.466392	0.506713	0.504098	0.44568	0.346526	0.419362
2002	0.494464	0.53406	0.520724	0.497064	0.371321	0.373284
2003	0.473491	0.528093	0.508682	0.49833	0.378692	0.403004
2004	0.482424	0.559209	0.523779	0.521673	0.398735	0.421055
2005	0.458974	0.533725	0.528677	0.48787	0.377312	0.457829
2006	0.620411	0.660946	0.585184	0.544836	0.493224	0.466312
2007	0.572403	0.626801	0.576961	0.557847	0.538957	0.48381
2008	0.564025	0.61679	0.581221	0.561141	0.513517	0.484217
2009	0.55122	0.627171	0.588015	0.555485	0.535377	0.482789
2010	0.549822	0.611005	0.590742	0.551684	0.526842	0.416824
2011	0.537617	0.603864	0.586228	0.545427	0.511958	0.43928
2012	0.565488	0.59369	0.602505	0.539281	0.508311	0.443934
2013	0.548991	0.584306	0.575183	0.563395	0.486565	0.458466
2014	0.5404	0.57529	0.601398	0.5549	0.489163	0.455948
2015	0.481404	0.533207	0.540267	0.552531	0.415555	0.35529
<b>Mean</b>	0.523759	0.570982	0.55771	0.528233	0.449457	0.435332
<b>Std. Dev.</b>	0.048028	0.056026	0.036489	0.036254	0.077854	0.038814
<b>CV</b>	0.091698	0.098123	0.065427	0.068633	0.173218	0.08916

Source: the author's calculations based on [HDR 2016, GHI 2017, GII 2017, IPRI 2017, LPI 2017, PFI 2017, World Bank 2017, CLI 2018 EF 2018, ].

The average level of social progress in the period 2000–2015 was insignificant for Romania (0.449457) and Ukraine (0.435332), according to Table 2. However, the coefficient of variation of the indicator for Romania was 17%, indicating the fluctuation in the dynamics of the time series, since the moment of accession to the EU, the integral Human Asset Index decreased by 6% in 2015 and increased by 4% in 2014. Latvia, Lithuania, Poland and Croatia are in the range of moderate levels by the average value of the integral Human Asset Index.

Table 3 presents results of using the OLS method (the least squares) for constructing a regression equation (10).

If the indicator of macroeconomic stability of the country is used as an integral indicator that characterizes the main objectives of the macroeconomic policy of the state: high rates of development of production, full employment, slowing down of inflation, balance of external payments, support of a stable exchange rate of the national currency, increases the accuracy of the estimation of the dependent variable, which is explained by the dependency model considered. In particular, the value of  $R$ -squared varies from

TABLE 3. Results of the assessment of the impact of social progress on macroeconomic stability for the part of the EU countries and Ukraine in the period 2000–2015 (based on our own calculations)

Specification	CPI	Misery Index	MSP
for the part of the EU countries			
Opennes	0.1134666	0.5408216	0.340598
FDI	0.0029677	0.0560233	0.0084758
<i>HAS</i>	0.1695302	0.094949	0.9678703
Const	0.0078111	0.0410598	0.0042102
<i>R-squared</i>	0.4495	0.4149	0.9354
Ukraine			
Opennes	2.191027	3.743012	2.26548
FDI	0.0423862	0.1896754	0.1423544
<i>HAS</i>	0.5419695	0.1666731	1.090892
Const	-10.1752	-14.50906	-11.93013
<i>R-squared</i>	0.3464	0.2386	0.7668

Source: the Authors' calculations based on [HDR 2016, GHI 2017, GII 2017, IPRI 2017, LPI 2017, PFI 2017, World Bank 2017, CLI 2018, EF 2018].

0.3464 to 0.9354 when using CPI, Misery Index and MSP as an integral indicator of macroeconomic stability.

With some major results, the empirical findings of the study indicate a positive and statistically significant impact of social progress on macroeconomic stability. Signs for all variables are positive. However, the integral index of human capital is a statistically significant factor in explaining differences in the macroeconomic stability of Ukraine, the small size of the constant of equation (9)  $\beta$  shows that it is economically insignificant compared to other included changes. For some EU countries, the value of this constant is in the range from 0.094949 to 0.9678703, which also does not give grounds to assert the significant impact of social progress on macroeconomic stability. Accordingly, the value of the integral index of human capital should increase sharply to cause a noticeable change in macroeconomic stability.

## CONCLUSIONS

Macroeconomic stability is a key element of the EU's social and economic policy, which must ensure sustainable economic growth and job creation. The calculations for 2000–2016 for the EU as a whole and Ukraine show a statistically significant correlation between GDP per capita fluctuations and unemployment. The main source of fluctuation was the accumulated macroeconomic instability in the countries, which more and more manifested itself during the last world financial and economic crisis.

Consequently, in the context of identifying factors for increasing macroeconomic stability, social factors are becoming increasingly important. In order to monitor the social progress, the author proposes using an integral index of human capital that takes into account the influence of many factors in three separate areas: Life, Health, Drbrobut; Science, Education, Culture; Freedom, Equality, Safety. This approach will allow comparative analysis of different countries, to identify fluctuations in their development, and, along with other factors, carry out an assessment of the impact on the macroeconomic stability of the country. In addition, each component of the integral index can be used separately to characterize various aspects of social progress and assess the impact of the impact on the dynamics of its changes by certain complex factors. The calculations of the integrated capital human capital index for some of the EU countries (Latvia, Lithuania, Poland, Croatia, Romania) and Ukraine for the period 2000–2015 allowed us to conclude that Romania and Ukraine were on a marginal level of social progress, while Lithuania, Poland and Croatia in the range of moderate level. The use of the OLS (the least squares) method to determine the significance of changes in social progress to macroeconomic stability has revealed a positive and statistically significant impact of social progress on macroeconomic stability.

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**Summary.** The main purpose of the study is the role and influence of social factors on macroeconomic stability. The research is based on the hypothesis that countries with greater macroeconomic stability achieve greater social progress. The integrated index of human capital is proposed as a target for the construction of an appropriate system for monitoring social progress, and in the future – identifying the impact on macroeconomic stability. The main stages of estimating the integral index of human capital are: identification of relevant indicators that will form each of the sub-indices; filtering the selected indicators in the previous stage based on the analysis of the correlation matrix of each of the subindices;

normalization of indicators in each of the subindices, calculation of the integral index for each of the subindices, calculation of the final integral index of human capital. The calculations of the integrated capital human capital index for some of the EU countries (Latvia, Lithuania, Poland, Croatia, Romania) and Ukraine for the period 2000–2015 allowed us to conclude that Romania and Ukraine were on a marginal level of social progress, while Lithuania, Poland and Croatia in the range of moderate level. The use of the OLS (the least squares) method to determine the significance of changes in social progress to macroeconomic stability has revealed a positive and statistically significant impact of social progress on macroeconomic stability.

**Key words:** economic growth, unemployment, macroeconomic stability, social factors, European Union, Ukraine.

**JEL:** E60, C19, O15, O20, O40.

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## **EXPORT OPPORTUNITY AND CONSTRAINTS FOR FRUIT AND VEGETABLE PRODUCERS IN ALBANIA**

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### **INTRODUCTION**

The fruits and vegetable sector plays a very important role, not only as planted cultures in Albanian farms, but also for consumption by the Albanian population. Albania has a developing interior market and a non structured export market for fruit and vegetables. The main area for vegetable production in Albania is the coastal and hilly area of central Albania, including Fier, Berat and part of the Tirana region. Other important production areas are Shkodra (open field vegetables), Korça (potatoes and open field vegetables) and Lezha (melons) [Rural Development Strategy 2014–2020]. The most important region for vegetable production is Fieri.

The yield production from fruit and vegetable processing is used to fulfil the needs of the country for processed food, but also for export into the Eastern countries.

Albanian markets are dominated by domestic production [Skreli et al. 2009], except in the winter months. The export of fruit and vegetables in Albania in 2016 increased by 30% [INSTAT 2017] with the total value being approximately 60 million EUR.

Figures 1 and 2 show that the main exported vegetable in Albania is the tomato and the water melon is the most exported fruit. The main export markets are the East Balkan countries due to the increased demand for Albanian products. According to the INSTAT statistics from 2015, the main country that Albania exports to is Kosovo, followed by Monte Negro. There are a few wholesalers who export products to Kosovo and other Balkan neighbours. Recently, the export market is more dynamic due to the establishment of national and international wholesalers in the south-west of Albania like Doni fruits, Preniun Berry, Dupi-fruit etc. These markets are operating with the external markets, exporting Albanian agricultural products in many different European countries, such as in Poland, Switzerland, Netherlands, Italy, France, etc.

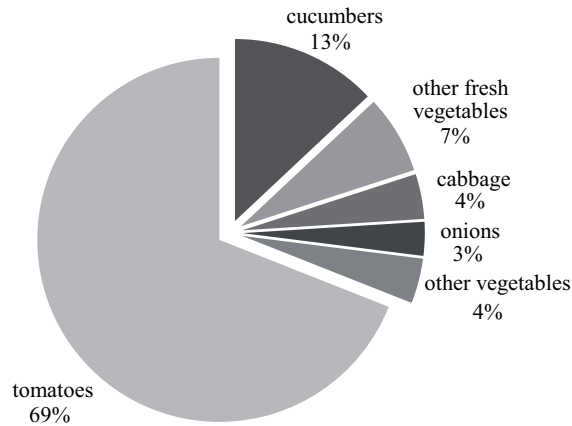


FIG. 1. Export of fresh vegetables in 2015

Source: Ministry of Agriculture and Rural Development, Albania

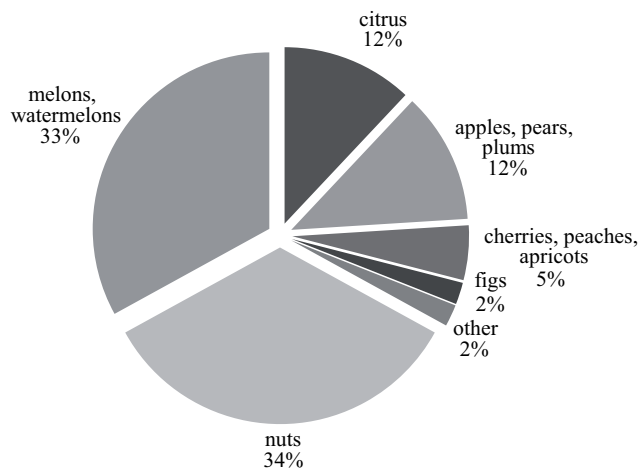


FIG. 2. Export of fresh fruit in 2015

Source: Ministry of Agriculture and Rural Development, Albania

## METHODS

The fruit and vegetable industry is considered as one of the most profitable in terms of capacity and at the same time one of the most problematic in terms of quality. The main goal of the survey was to identify the export constraints and opportunities for the fruit and vegetable sector in Albania and to test the probabilities for export growth. The principal aim of the study is to give a detailed picture of the fruit and vegetable sector in Albania and to identify the export growth opportunities. In order to reach the objectives of the study, primary and secondary data have been used during the elaboration process. The information is based on desk review which guided us during the selection of stakeholder

representatives on fruit and vegetables exporters. The survey was conducted in the south-west of Albania, more specifically in Fier and Berati. These areas are well-known for the production of fruit and vegetables. Fieri produced 326,663 tons of vegetables and Berati produced 105,641 tons in 2015 [INSTAT 2015].

We conducted 50 face-to-face interviews with farmers, agro-food processing companies and wholesalers in the south west area of Albania. The selection of the sample was made randomly through farmers, agro-food processing companies and wholesalers who export their products. The interviews were made during March–April 2017. The instrument used for the survey was a closed questionnaire. The questionnaire has been designed based on the literature review and through consultations with relevant stakeholders of the sector.

Database elaboration was made through the SPSS program. An ordinary probit regression was used to evaluate the constraints of fruit and vegetable producers in Albania. The model we applied was the ordered probit model elaborated from McKelvey and Zavoina [1975] and previously by Aitchison and Silvey [1957]. The probit model is a statistical probability model with two categories in the dependent variable [Liao 1994]. The model that satisfactorily fulfils the criterion falls within the group of qualitative choice – more specifically the ordinal probit model [Pindyck and Rubinfeld 1991].

The regression model for the study is ordered probit  $P(y_i = j) = P(y_i \times \text{falls within the } j\text{th category of } y_i)$ . The probit model is a statistical probability model with two categories in the dependent variable [Liao 1994].

## RESULTS

The export growth in Albania is hampered by different problems. The main duty of Albanian farmers and fruit and vegetable processors is the furnishing of the urban centres. Albanian producers and processors are suffering from a lack of standards. The internal market in Albania is not so much in need of quality standards and for this reason farmers do not try to increase the production costs. International standards do not guarantee higher profits because they have limited farm surface environs 0.26 ha [Rural Development Strategy 2014–2020].

Exportation is limited and is covered only by big producers of fresh fruit and vegetables. The absence of the economic structures in the process of collection and distribution of the products has encouraged the development of the direct circuits of commercialization, from rural producers to intermediaries, or from agro enterprises to regional intermediaries.

In our model we have evaluated only the significant variables, with different values from zero. The estimation of the model parameters are presented in Table 1.

The reference category of the model is: Profits from export activities. As a result of our calculations, the restricted log likelihood value is estimated  $-70.32$  and McFadden [1973] Pseudo  $R$ -square is estimated at 0.36. Furthermore, the correlation coefficient McFadden Pseudo  $R$ -square is 0.36, which show good relations between the variables involved in the study. These tests show the significant correlation between model variables. So, the model explains the factors influencing export growth possibilities for farmers and enterprises in Albania.

TABLE1. Model parameters estimation

Specification	Coeff.	Std. Error	b/St.Er	P[ Z >z]	Mean (x)
Constant	4.086	1.484	2.255	0.0014	
Black market in Albania	-0.235	0.143	-2.102	0.0267	3.435
High level of costs	-0.547	0.232	-2.832	0.0045	4.034
Serious partners for exports	0.245	0.178	-1.910	0.0556	3.642
VAT (Value added tax)	-0.323	0.189	-1.700	0.0879	3.776
Week consolidation of processed stakeholder for the right quantity in export markets	0.346	0.158	-2.085	0.0367	3.727
Body certificate for standards and quality	-0.286	0.175	-1.688	0.0912	3.816
Presence of government with subsidize or regulatory	-0.225	0.167	-1.880	0.0610	3.837
Years involved in exports activity	1.034	0.233	4.372	0.0020	2.534

Source: the authors calculations.

The approach of the ordered probit estimates the empirical effect of explanatory variables on the probability of a firm's export growth falling into the observed value  $j = 1$  to 5 (Likert scale) categories of the observed dependent variable  $y$  (which is used as an approximation of the unobserved 'true'  $y$ ). The binary dependent variable  $y$  takes on the values of zero and one [Aldrich and Nelson 1984].

According to the results, the explanatory variables that have an important influence in export growth of fruit and vegetables are: black market in Albania, high level of costs, serious partners for export, VAT, week consolidation of processed stakeholders for the right quantity in export markets, body certificate for standards and quality, presence of government with subsidize or regulatory and years involved in export activity. The growth of exports in Albania is based only on individual initiatives, by national or international wholesalers. The lack of a proper regulatory framework in production and the lack of subsidy schemes for the farmers has led to a much higher level of informality. The prices for the farmers fruit and vegetables are established by the wholesalers at the moment of the product collection. The farmers are only price takers.

Calculated marginal effects based on the estimated coefficients in Table 2 should be interpreted as follows: a 1-unit change in "Black market in Albania" increased the probability of being in category  $y_i, j = 1$ . Consequently, a black market in Albanian incentives lowered the probability of being in the category of firms with medium or high profits from exports. The number of years that a firm had already been involved in export activities significantly increased the probability of performing either at medium or moderate export profitability. However, changes in this variable did not seem to substantially affect the probability of being among the firms with the highest profits from exports (marginal effect only 0.022 for  $y_i, j = 5$ ). F&V processors or big exporters calculate only the turn over and make random market analysis. They are not making market evaluations and marketing plans in the mid and long term period.

As a consequence Albanian agricultural exports constraints are as follows:

TABLE 2. Marginal effects (dy/dx) in each category of  $y =$  "Export growth over last three years"

Likert category j from the answering scale:	1(low)	2	3	4	5(high)
Black market in Albania	0.037	0.211	-0.079	-0.127	-0.022
High level of costs	0.044	0.138	-0.062	-0.128	-0.023
Serious partners for exports	0.032	0.078	-0.035	-0.061	-0.0015
VAT (Value added tax)	0.041	0.153	-0.053	-0.119	-0.026
Week consolidation of processed stakeholder for the right quantity in export markets	0.026	0.078	-0.032	-0.068	-0.014
Body certificate for standards and quality	0.031	0.121	-0.039	-0.084	-0.018
Presence of government with subsidize or regulatory	0.024	0.079	-0.031	-0.056	-0.016
Years involved in exports activity	0.028	0.132	-0.033	-0.083	-0.022

Source: the authors calculations.

- Small producers are facing organization and standardization problems required from European markets. Meanwhile, producers should unify the production standards with export requirements.
- Albanian Government has no clear policies to support or subsidize export growth.
- Farmers are not market oriented because they choose the seeds and fertilisers according to input distributors advice.
- Lack of specialized units and large scale to exploit the positive elements of the climate and the increase of earliness index of agriculture products.
- Post-harvest services (cold storage facilities, packing houses, etc.) are limited. Limited cold storage facilities present an obstacle in the assurance of continuous demand for agricultural products. This is one of the main factors that increase the loss of products and at the same time prices pass through a high volatility curve.
- The big export wholesalers decide about the product price taken from the farmers.
- In Albania, the VAT for inputs is high at 20% and this fact increases the price of fertilizers and also the price of agricultural products. Sometimes the use of cheaper fertilizers imported from China are preferred but these are not standardized, therefore, the quality of agricultural products is compromised.

## CONCLUSION AND RECOMMENDATIONS

Traditional rural areas in Albania are distinguished by a subsistence economy. The export of fruits and vegetables in Albania during 2016 increased by 30% and the total value is approx 60 million EUR. On the other hand, farmers and Albanian producers are faced with constraints due to the small surface area of the farm 1.26 ha [Mardwa 2014], an informal sector and public policies. The small farm size [Biba 2001, Civici 2001, 2003] and the fragmentation are a major handicap to the improvement of agriculture

productivity and to the sustainable development of the agriculture sector [Dishnica and Topulli 2011].

Private farming in Albania is dominated by a large number of farms operating only on a subsistence or semi-subsistence level. This fact shows the necessity for organizing in cooperatives. Albanian producers and processors in a lot of cases are incapable of penetrating into foreign markets because in the majority of cases they don't have the right education and it is difficult for them to act as international marketing managers. Albanian producers should assure continuity with regard to the quality and quantity of their production. In this case it will be very useful to encourage them to collaborate together only in terms of marketing. Albanian producers and processors need to invest for label improvement or relabelling. Large scale companies are more likely to have full knowledge about EU grant programs. Meanwhile, the small enterprises are not very well-informed. However, for both of them it is very difficult to apply in such structures because they don't have the necessary assets to do so. The difficulties are bigger for Albanian producers. Previous experiences have shown that Albanian farmers can't operate together in terms of cooperatives because of lack of transparency from cooperative directors or the decision makers. The fruit and vegetables export growth will be more consistent and successful long term if all the value chain stakeholders will take their responsibilities and strongly collaborate in the future.

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**Summary.** Albania has considerable potential for growth in the fruit and vegetable market. Its climate-arable conditions are very adequate for the successful growth of a wide range of fruits and vegetables. Albania has an interior market in development and a non structured exporting market. The study is aimed at estimating and identifying export growth opportunities and constraints for fruit and vegetable exporters. The paper investigates the opinions of producers and exporters in south-west Albania. A face-to-face interview survey method was conducted. Database elaboration was made through the SPSS program. An ordinary probit regression was used to evaluate the constraints of fruit and vegetable producers in Albania. We conclude that there are several problems that hamper exportation growth in Albania. Albanian producers are usually not able to penetrate into foreign markets because they are not part of consolidated marketing distribution channels.

**Key words:** exportation, fruit and vegetable producer, distribution channel

**JEL:** Q 17, F19

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## **DEVELOPMENT OF SOCIAL CAPITAL BY STRENGTHENING OF DIGITAL COMPETENCES AMONG GROUPS EXPOSED TO SOCIAL EXCLUSION**

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### **INTRODUCTION**

In the modern world, competitive advantage on the professional market is shaped by competences known as skills, qualifications, and permissions. The number of typologies can be found in the subject literature. One of the classifications distinguished two types of competences: soft and functional (or otherwise known as specializing, hard and technical) [Moczydłowska 2008]. Within the specialized competences, IT skills can be distinguished. They are referred to as digital competences. They were recognized as key competences by the European Parliament and the council of the European Union. These define a set of rudiments, knowledge and foundation skills necessary for the active and purposeful participation of a person in social life. The lack or low level of digital competences is particular evident among groups which are at risk of exclusion primary among elderly people, people living in rural areas and those with a low level of education. In relation to these groups, various types of activities are carried out to reduce disparities in these areas, which leads to increase the involvement of these people in the development of their competences which undoubtedly affects social development of these groups and society as a whole. One of those activities was the Digital Poland Equal Opportunities (PCRS) project, the aim of which was to introduce the world of digital communication as well as service and content available on the Internet – polish adult generation 50+. This was implemented by the association “City on the Internet” and Ministry of Administration and Digitalisation. The project based on volunteers work who was referred to as the lamplotters. They played the role of a modern social animator. One of the lamplotters was the author of an article, who carried out two projects. They were addressed to people aged 50+ from the Łowicki county (Łódź Voivodeship) and those living in rural areas, in to the group of people most exposed to digital exclusion.

In total, over 700 people took part in both projects, and among this group of people survey research was carried out. On the one hand, these researchers were aimed at getting to know the opinions of the training participants about the activities carried out, and on the other hand, assessing the acquired knowledge in the context of their usefulness in both social and professional life. Research and conclusions are presented in the article.

## KEY COMPETENCES – THE MOST IMPORTANT INFORMATION

The starting point for considerations is the development of social capital among groups that are exposed to social exclusion and the presentation of basic and most important information related to key competences and their definition. This concept in the literature of the subject is quite well-known. It was sanctioned by the European Union in 2006. On 18 December 2006, the European Parliament and the Council of the European Union adopted recommendations on key competences for lifelong learning [Zalecenie Parlamentu...]. With regard to the subject of development, these recommendations are valid for three reasons. Firstly, it was stressed that in the face of globalization and the transition to a knowledge-based economy model, a framework is needed that will identify new skills acquired through lifelong learning. Secondly, it was noted that the learning process covers the period from pre-school age to retirement age. Thirdly, it was also pointed out that all activities related to this process must be aimed primarily at the unemployed and inactive people for various reasons, which underlined the status of socially excluded groups in which various types of activities should be intensified. These activities are aimed at the implementation of the assumptions referred to, in the recommendations on key competences in the process of lifelong learning [Maniak 2015].

The European Union has identified key competences as a set of rudiments, skills, and foundations that are necessary from the point of view of purposeful and active participation of a given person in social life. In connection with this definition, eight key competences have been established [Zalecenie Parlamentu...]:

- communicating in the mother tongue;
- communicating in foreign languages;
- mathematical competences and basic scientific and technical competences;
- IT competences;
- ability to learn;
- social and civil competences;
- initiative and entrepreneurship;
- cultural awareness and expression.

In accordance with the recommendations of the European Parliament and the Council of the European Union, activities implemented as part of the lifelong learning process must be implemented in such a way that participants of these activities can acquire knowledge and skills related to key competences. Attention should be paid to the education and training of young people who, thanks to this, acquire knowledge constituting the basis for further education so necessary in both private and professional life. It is also important to educate adults who, despite their knowledge, have the opportunity to develop and update their key competences. This education is important in relation to people who have certain deficits and are exposed to social exclusion [Górnjak 2014].

At this point, it is also worth defining the very concept of social exclusion. According to one of many definitions, the term describes a situation in which a given person belonging to a given society cannot fully participate in activities carried out by other representatives of that society [Nowak 2012]. The exclusion of a given individual may manifest itself in various areas of life, including in economic, political or cultural life. People exposed to such activities are people who do not have access to resources, goods or institutions, or this access is limited. One of the examples of exclusion is digital exclusion, which is related to the situation in which the persons do not have the opportunity to use modern information and communication technologies in their lives, both private and professional. In order to implement the process of lifelong learning by individual institutions or entities, infrastructure plays an important role, understood not only as access to lecture halls or training rooms but also as access to teachers and trainers [Dach 2008]. Lack or limited access to lecture halls or teachers can also lead to digital exclusion. In the literature of the subject, digital exclusion is often referred to as the digital abyss. These two terms are used interchangeably to identify differences between people and societies that have access to information technologies and those who do not. The ever more dynamic development of information technologies leads to increasing differences between the two groups. Undoubtedly one of the most important causes of the “digital abyss” is the lack of adequate internet infrastructure, which does not facilitate access and does not allow the use of communication and information technologies. It should also be emphasized that digital exclusion is not only a lack of access to appropriate infrastructure but also a lack of skills in using a computer and the Internet [Popiołek 2013].

## **DIGITAL COMPETENCES, AREAS OF DIGITAL SKILLS**

The eight key competences established by the European Union are considered equally important, mainly due to the fact that they are not only complementary but also partly overlap. For the needs of the study, IT competences will be discussed, which currently include a larger thematic range and are referred to as digital skills. In the recommendations of the European Parliament and the European Union, they have been defined as those whose possession gives the opportunity to skillfully and critically use of digital technologies in professional life, recreation, and daily communication. IT competences are nothing more than the use of computers that are used to obtain information, evaluate and store, create, present and exchange information. They are also used for communication and participation, which is carried out via the Internet. On the one hand, people with such skills must be able to handle computer applications, but on the other hand, they must demonstrate creativity and innovation. The development of the above-mentioned skills contributes to the development of social capital through the interest in participating in a given social group, which serves to satisfy cultural, social or professional needs [Zalecienie Parlamentu...].

The available subject literature has a number of terms that are referred to as IT competences, including primarily digital competences and e-competences [Warszawski Instytut... 2015]. Digital skills give the opportunity to effectively use digital technologies in various areas of life. Digital technologies are not only a computer that has access to the

Internet but also mobile technologies and devices, such as ticket machines or automated parcel lockers.

Digital competences (or e-skills) contain a number of skills that can be distinguished, separately presented and characterized. There are many different typologies in the available studies. The very concept of “digital competences” is used in European Union documents, and behind them are developed documents, reports, analyzes, and programs prepared by the governments of member countries. The European Union distinguishes digital skills, within five groups can be distinguished, i.e. [Gareis et al. 2014]:

- information (browsing, searching, filtering of received information, evaluation of information and storage of information);
- communication (social interactions that are implemented using modern technology, information sharing, citizen participation on the Internet, identity management and online cooperation);
- creating content (creation of content and combining them, processing, copyright/licenses, and programming);
- safety (protection of devices used by a given person, security of data/digital identity and protection of health and the environment);
- problem solving (solving technical problems, identifying needs and their solutions, innovativeness, creativity, defining gaps that occur within digital competences).

In the literature of the subject, there is a whole range of different catalogs, which often specify very detailed IT skills or broadly understood digital competences. Most of these definitions are based on documents developed by the European Parliament and the Council of the European Union.

## **GROUPS EXPOSED TO DIGITAL EXCLUSION - STATISTICAL DATA**

The percentage of people with Internet access in the European Union is high, although there are significant differences between the countries. Among the 28 countries belonging to the European Union, the percentage of households with Internet access reached 85.0% in 2016 (compared to 55.0% in 2007). In 2016, the highest percentage (97.0%) was recorded in Luxembourg and the Netherlands. Among the EU Member States, the lowest percentage of households with Internet access was recorded in Bulgaria (64.0%). According to Eurostat data, this percentage in Poland was 80.0% [EUROSTAT 2017].

The various surveys carried out over decades have shown that the percentage of Poles who use modern information and communication technologies in their lives increases year by year. This is also confirmed by the data of the Central Statistical Office. However, it should be noted that the impact on the percentage of people using the Internet depends on the level of education, place of residence or wealth [Tomaszewska 2013, Local Data Bank...].

Over the past 10 years, the number of households having a computer increased from 33.7% in 2003 to 72.1% of households in 2015. However, it should be noted that in 2003 this percentage was 16.9%, while in 2015 this percentage remained at a similar level to that of households with a computer. Interesting is also the fact that with the increase in

the number of households having a computer and access to the Internet, the percentage of households with a landline telephone decreased. Changes in this area in Polish households have been presented in the chart below (Fig. 1).

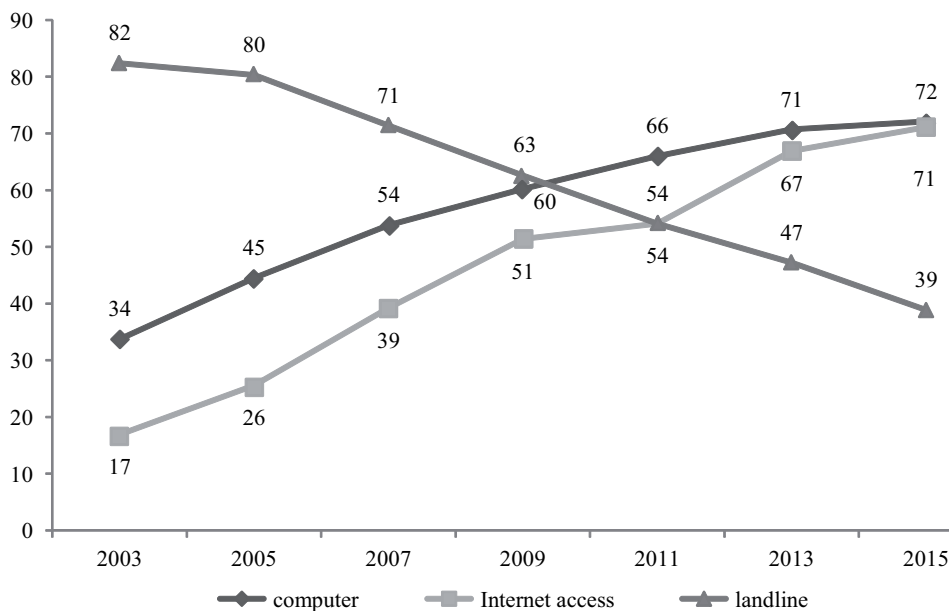


FIG. 1. Household equipment with a computer, Internet access and landline telephone in 2003–2015 [%]

Source: [Batorski 2015].

The statistical Polish citizen is increasingly using mobile Internet and mobile devices such as a tablet or a smartphone. Research shows that every fourth household has at least one laptop. As a result, the number of households with a desktop computer is decreasing. As it was already mentioned before, the presence of computers or access to the Internet depends also on the size of the place of residence or income per person in a given household. These data are presented in the scale below (Table 1).

The data presented above shows that the most deprived persons of the digital exclusion are the poorest, i.e. those in which the income per person in the household does not exceed the first quartile. However, it should be noted, that among this group, the percentage of households that have access to the Internet was growing the fastest within a few years (from 19.1% in 2007 to 54.5% in 2015). In households which the income exceeded the third quartile had Internet access in more than 90.0% of cases. In addition to the income that affects the accessibility to modern technologies, the place of residence plays an important role. For people in cities over 500,000 inhabitants in 2015, 82.3% of households had access to the Internet, while in the case of a village this percentage was maintained at about 67.5%.

TABLE 1. Availability of the Internet in various types of households in 2007–2015 [%]

Group of households		Internet			Computer	Tablet
		Years				
		2007	2011	2015	2015	2015
Size of the residence place	cities over 500,000	57.6	73.3	82.3	81.7	32.0
	cities 200,000–500,000	50.2	68.7	76.1	75.9	29.7
	cities 100,000–200,000	44.3	64.6	76.3	76.6	25.8
	cities 20,000–100,000	44.2	62.0	69.2	69.0	22.6
	cities below 20,000	40.2	61.4	69.9	70.1	22.2
	village	22.4	51.7	67.5	68.3	20.2
Income per person in households	to the first quarter	19.1	41.1	54.5	54.9	15.0
	from the first to the second quarter	30.7	54.1	61.4	61.4	17.2
	from the second to the third quarter	41.7	62.3	77.5	77.4	25.7
	above the third quarter	60.1	83.3	90.5	90.8	36.0

Source: [Batorski 2015].

The use of modern technologies is becoming more and more common. However, there are some differences in the use of these technologies among various social or professional groups. These differences are also visible in terms of age, social-professional status and education. These factors, as the data show, affect the percentage of people using computers or other devices with access to the Internet, and thus indicate groups of people who statistically more often than others are exposed to digital exclusion (Table 2).

In everyday life, modern technologies are used more and more often for shopping. Electronic commerce or so-called e-commerce is a dynamically growing sector of trade. Its importance in the global economy is systematically growing [Grochal-Brejdak 2016]. In Poland, shopping on the Internet is more often carried out by women than men. This percentage has not changed over two years. Most often, people 35 years up to 49 years of age decide to shop online. People over 50 years of age do their shopping online the least. People with secondary education more often than people with a different level of education decide to shop online. It is interesting to note that the percentage of people shopping online with low education decreased over the last two years. In the case of a place of residence, it can be noticed that the residents of villages decide to shop online the least often. Interestingly, in the last two years, the percentage of rural residents active in the e-commerce market has decreased. Most often, residents of cities under 200,000 are active on the electronic market. The selected demographics of buyers online are presented below (Table 3).

The data presented above shows that the percentage of people using a computer or the Internet is decreasing with age. Only one in five people over 65 years of age use modern technologies. It is the elderly who are most often mentioned in the group of people exposed to digital exclusion. Most often modern information and communication technologies are used by young people up to 34 years of age. The socio-professional status also affects the percentage of people using modern technologies. The available data show that the lowest percentage of people using modern technologies is recorded among pensioners

TABLE 2. Using the computer and the Internet in various groups in 2015 [%]

Groups		Computer	Internet
Age	16–24 years	97.2	97.5
	25–34 years	92.5	92.9
	35–44 years	85.2	85.6
	45–59 years	60.3	60.0
	60–64 years	41.3	40.8
	65 years and older	18.6	17.9
Professional and social status	public sectorwork	89.4	89.4
	work of the privatesector	82.4	83.1
	privateentrepreneurs	90.2	89.6
	farmers	51.0	50.5
	pensioners	32.9	32.6
	retirees	25.9	25.2
	pupils and students	98.8	98.8
	unemployed	68.4	68.9
Education	othersprofessionallyinactive	63.2	63.2
	elementary and lowereducation	15.1	14.7
	basic and post-secondaryeducation	49.0	49.4
	secondaryeducation	74.1	73.8
	higher and post-secondaryeducation	92.3	92.3
	learner	98.8	98.8

\* A larger percentage of people using the Internet than a computer shows that, above all, they have access to a computer through mobile devices, such as a mobile phone, smartphone or tablet.

Source: [Batorski 2015].

TABLE 3. Selected demographic data of people buying on the Internet for 2015–2017 [%]

Specification		2015	2017
Gender	women	53	53
	men	47	47
Age	15–24	26	29
	25–34	34	29
	35–49	28	30
	50+	12	13
Education	lowereducation	24	22
	secondaryeducator	44	47
	highereducation	32	30
The size of the place of residence	village	29	25
	cityup to 200,000 residents	39	44
	cityabove 200,000 residents	32	30

Source: the author based on Gemius 2015, 2017.

and the highest among learners and economically active (both private and public sector employees). Only every second farmer uses a computer and the Internet. People with low education are also exposed to digital exclusion. Along with the increase in the level of education, the percentage of people using modern technologies in both private and professional life increases.

### **ACTIVITIES AIMED AT THE DEVELOPMENT OF DIGITAL COMPETENCES AMONG GROUPS VULNERABLE TO SOCIAL EXCLUSION**

Data presented in the study show that among the groups exposed to social exclusion due to the lack of digital skills or having a low level of digital skills are older people, coming from poorer families, low level of education and people living in rural areas and small towns. It was in relation to these groups over the years that activities aimed at developing their digital competences were implemented. One of such actions was the Digital Poland Equal Opportunities (PCRS) project. The originators of this undertaking directed their activities towards people over 50 years of age. PCRS is a grassroots initiative. Its goal was to introduce digital communication, services, and content available on the Internet – adult Poles from the 50+ generation. The project was implemented by the Association “City on the Internet” and the Ministry of Administration and Digitization. It was based on the work of lamplotters – volunteers who acted as a modern social animator. The project was carried out from November 2011 to the end of 2015. Activities focused on identifying and training more than 2,600 people who became the main beneficiaries of the project. They were usually local leaders, digital education enthusiasts, trusting people in their local communities. From such a large number of people, the institution implementing the project chose more than 250 people who received grants for the implementation of their Local Digital Education Plans. In whole Poland, over 37,000 classes were carried out, in which almost 280,000 people age 50+ attended. These classes lasted almost 73,000 hours. In addition to the implementation of activities with people 50+, the project also provided regular meetings and training of lamplotters in various parts of Poland, as well as conventions from the National Polish Association of Lamplotters [Szymańska-Palaczyk 2016, WWW1].

### **RESULTS AND ANALYSIS OF THE CONDUCTED RESEARCH**

As part of the Digital Poland of Equal Opportunities project, the author of the article has realized two projects: “Łowiccy seniorzy XXI wieku” (Lowicz seniors of the 21st century [in Polish]) (lasting from 01.01.2013–30.06.2014) and “Księżacy on-line” (lasting from 01.10.2014–30.06.2015). Both projects were directed to people aged 50+ from the Łowicki county (Łódź Voivodeship) and those living in rural areas, ie to the group of people most exposed to exclusion. The classes were carried out in buildings belonging to the volunteer fire brigade, in communal libraries, in computer labs of rural schools and village centers. Over 700 people took part in both projects. The average workshop cycle for a given group ranged from five to six two-hour meetings.



During the course of the classes, a survey was carried out using the questionnaire. One hundred participants of the course took part in it, half of them were pensioners, followed by working people (38%) and unemployed (12%). The main goal of the conducted research was to get to know the opinions of participants of computer workshops about the organized training, the person running them and the usefulness of the training. Among the people who participated in the study, the following groups of participants can be distinguished:

- had a computer with Internet access – 73% of respondents;
- they did not have a computer, but after the training, they planned to invest in its purchase and connect to the Internet – 18% of the respondents;
- had a computer that was not connected to the Internet – 9% of respondents.

The information provided shows that most of the participants had a computer that was connected to the Internet. Despite this, they did not have the knowledge and skills to use it. According to the participants of the training, participation in it was to encourage, and above all, eliminate barriers that did not allow people over 50 to use the computer and the Internet. The persons who took part in the survey also evaluated the organization of training, in particular, the conditions enabling the integration, a suitably planned dimension of time, the quality of equipment used during the classes, the place where the training was held and the relevant notice of the date and place of the meeting. The distribution of answers to the questions in the survey is presented below (see Fig. 2).

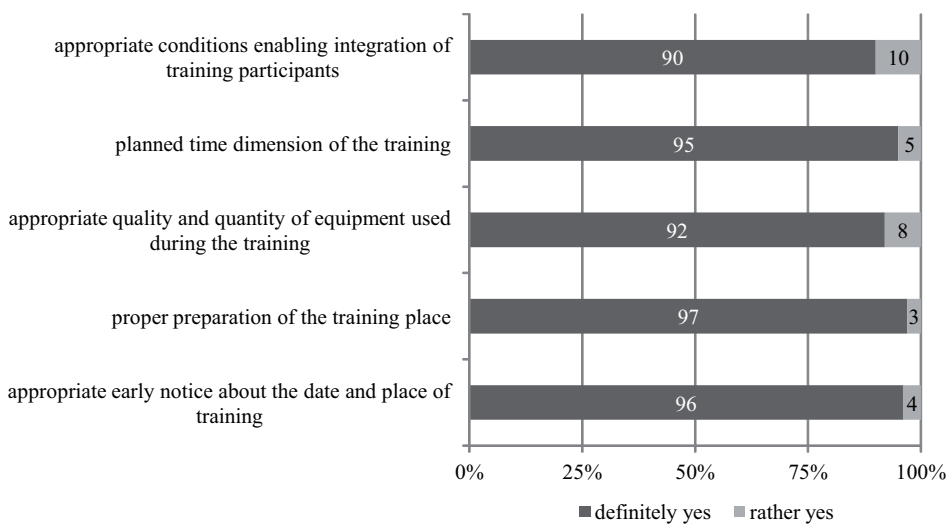


FIG. 2. Distribution of answers to questions regarding the evaluation of training organization [%]

Source: the author's research.

The respondents assessed the organization of training in which they participated very well. The time dimension according to the people who took part in the survey was rated as:

- just right – 43%;
- rather too short – 40%;
- far too short – 15%;
- too short – 2%.

In addition to the evaluation of the training organization, the persons participating in the study gave an opinion on the person conducting the training. The respondents were asked about the atmosphere prevailing during the training, commitment and substantive preparation of the person running them. The distribution of answers to questions asked in the survey is presented below (Fig. 3).

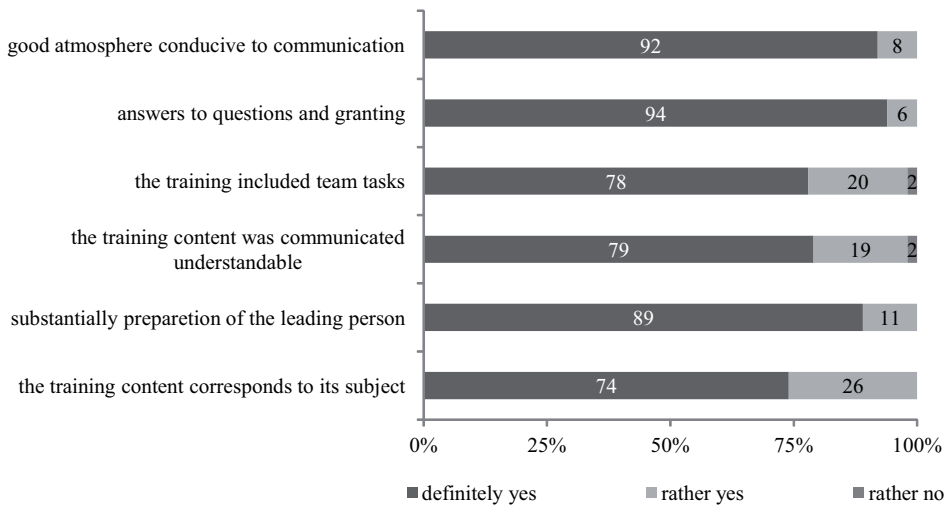


FIG. 3. The distribution of answers to questions about the evaluation of the person conducting the training [%]

Source: the author's research.

The respondents also answered questions related to the assessment of the usefulness of training. The vast majority of people were satisfied with the training (81% of the respondents indicated the answer definitely yes, 13% of respondents – rather yes, 6% of the respondents indicated the answer “rather not”). Respondents were asked to answer questions related to whether they would continue their adventure in the future taking part in similar training. An important role in this area was played by questions related to the assessment of acquired digital skills and their possible use in private or professional life. The distribution of answers to questions regarding the assessment of the suitability of training is presented below (Fig. 4).

The respondents also evaluated the entire training. They focused primarily on properly selected topics, substantive connections of the issues discussed, the proportion of time devoted to particular topics and the selection of training topics. The distribution of responses to questions asked in the survey are presented below (Fig. 5).

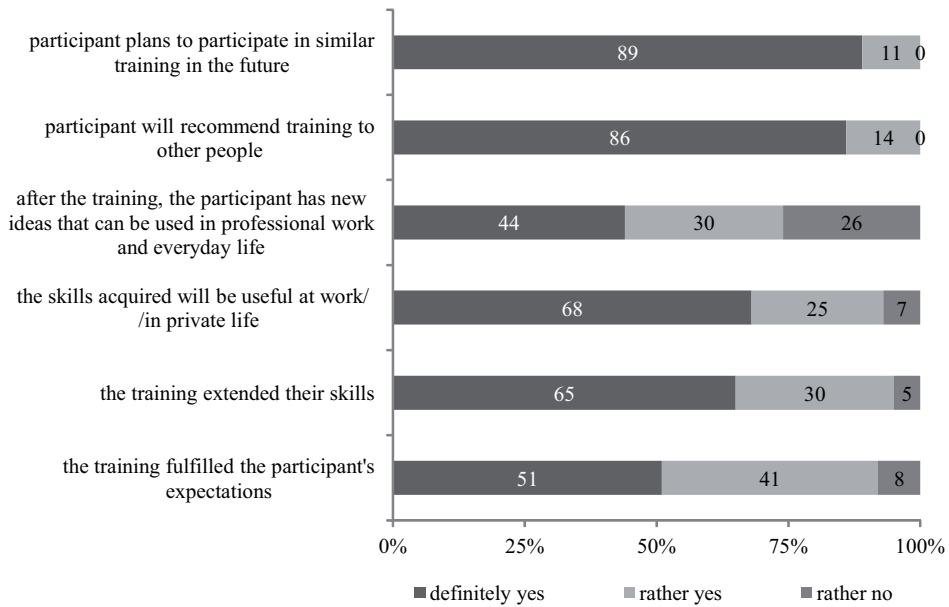


FIG. 4. The distribution of answers to questions regarding the suitability of training [%]

Source: the author's research.

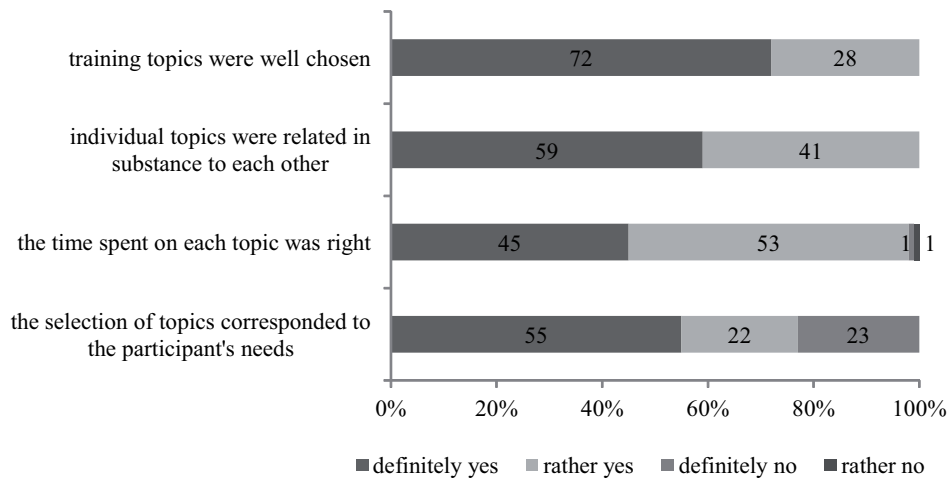


FIG. 5. The distribution of answers to questions regarding the overall evaluation of the entire training [%]

Source: the author's research.

The curriculum for acquiring skills in the field of broadly understood information and communication technologies was each time matched to the individual needs of people participating in the training. In spite of this, among the topics that the respondents thought were the most desirable were: computer skills, Internet skills, including the use of electronic mail and the ability to use word processors. It should be emphasized that these are skills that are currently considered as basic skills.

## CONCLUSIONS

Digital competences are among the eight competences mentioned by the European Parliament and the Council of the European Union as key and necessary skills for the implementation of the lifelong learning process. Their absence causes certain deficits and affects the exposure of a group of people to digital exclusion. Elderly people and people living in rural areas are among the most vulnerable to digital exclusion. In the case of the above-mentioned groups, digital exclusion is associated with the lack or low level of skills related to ICT.

The number of people with Internet access in the European Union is growing every year. In 2014, the highest percentage of households with Internet access was recorded in Luxembourg and the Netherlands, and the lowest in Bulgaria. The various surveys carried out over several decades show that the percentage of Poles who use modern information and communication technologies is increasing from year to year. However, it should be noted that the impact on the percentage of people using the Internet depends on the level of education, place of residence, age or wealth. Older, less educated, poorer and rural people are the most vulnerable to digital exclusion. Modern information and communication technologies serve their users both in professional and everyday life. The interest and use of this technology are growing year by year, as evidenced by the dynamic development of e-commerce. As the research shows, also better-educated people living in smaller and larger cities and younger people benefit from shopping online. All this also affects digital exclusion and increases the disproportion between people who have access to the Internet and those who do not have such a possibility.

As part of the funds coming from the European Union, activities are carried out aimed at the development of digital competences among groups vulnerable to social exclusion and social capital development, which is based on activities aimed at strengthening these competences. One of such activities was the Digital Poland of Equal Opportunities project. The originators of this undertaking directed their activities towards people over 50 years of age. It was based on the work of lamplotters – volunteers who acted as a modern social animator. As part of the Digital Poland of Equal Opportunities project, several dozens of initiatives were implemented, two of them: “Łowiccy seniorzy XXI wieku” and “Księżacy on-line” implemented in the county of Łowicz. Both projects were directed to people aged 50+ from the Łowicki county and living in rural areas, ie to the group of people most exposed to digital exclusion. The idea that guided the projects was a response to the activities of individual EU institutions in the whole process of lifelong learning.

During the course of the classes, research was conducted in which 100 participants took part, of which half were pensioners, then working people and the unemployed. Most of them were also people who had a computer with access to the Internet, but nevertheless, they did not have the proper skills to use it. Due to the fact that the group of people to whom the training was addressed was a less active group, the organization of training which were to encourage them to continue their education played an important role. In working with people over 50, the attitude of the person leading is important and affects the entire learning process. The activities that have been presented and characterized in this article undoubtedly contribute to the development of social capital by strengthening digital skills, especially among social groups vulnerable to exclusion. Activities implemented under two projects were the only of many tasks implemented in Poland, which contributed to reducing disparities between people who have access to a computer and the Internet, and people who do not have the opportunity to use modern communication and information technologies.

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**Summary.** Competitive advantage in the professional market is shaped by the competences possessed, i.e. skills, qualifications, and permissions. One of the eight types of key competences mentioned in the European Union documents is digital competence. It is a collection of knowledge, skills, and rudiments necessary for both, the purposeful point of view and active participation of a given person in social life. The low level of digital competences possessed is particularly visible among groups at risk of digital exclusion, in particular among people living in rural areas, the elderly and people with low education. The difference between people who have access to a computer and the Internet and people who do not have the possibility to use these devices is affected by the dynamic development of information and communication technologies. Digital exclusion is not only the lack of access to the appropriate infrastructure but also the lack of computer and Internet skills. In order to counteract the exclusion of these groups, activities aimed at developing social capital by strengthening digital competences play an important role.

**Key words:** social capital, key competences, digital competences, digital exclusion, Łowicki county

**JEL:** D83, E24, I24, I25

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**ECONOMIC KNOWLEDGE AND AWARENESS AND  
THE COMPETENCE OF THE YOUNG GENERATION  
OF THE ŚWIĘTOKRZYSKIE VOIVODESHIP IN THE  
ACHIEVEMENT OF FINANCIAL STABILITY**

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**INTRODUCTION**

China's wisdom proclaims this: "that money does not bring happiness, but we can not live without it". Economic Education that allows Fostering entrepreneurial mind-sets awareness and competence in making the right decisions on product placement of their financial resources in today's globalised market enlarge, on one of the pillars of the knowledge necessary to achieve professional and personal satisfaction. This applies both to the young and older generation because – as he showed the last global crisis on the financial markets, (which caused a serious crisis of confidence in the financial sector) – lack of knowledge in this respect can we cost you.

The aim of this paper is to analyse the importance of the knowledge economy to build awareness and competence of the students in the management of finances in the current, constantly changing environment. Design development was subject to the hypothesis in accordance with that – there is a relationship between the level of the knowledge economy and the increase of awareness and competence of the younger generation in achieving financial stability and consequently their independence. Analysis studies were carried out on two planes: Theoretical and empirical. Theoretical analysis is based on the use of knowledge in the literature of both Polish and foreign policy. Empirical analysis used a presentation of the results of surveys carried out in 2016, among Academic Youth (study desktop and portable exams I and II), studying at the universities of the Świętokrzyskie,

in the field of economic sciences, in discipline: economics, science management and finance, aged 20 to 30 years<sup>1</sup> (target group), making possible assessment scale and projection of changes in the composition of economic awareness over the matter.

## **DETERMINANTS OF ECONOMIC AWARENESS. THE CONCEPT AND THE NATURE OF ECONOMIC EDUCATION**

Whereas the earlier, copyright considerations on the importance of economic education to build awareness of the younger generation, taking financing decisions, can be defined “as the impact of economic determinants relating to get financial management by households such as: current expenditure, save, investment free resources for financial or insurance to”<sup>2</sup>. At this point, note that each man think of a better future and encountered some difficulties are transitional and as a result will be able to develop. Often it turns out that difficulties encountered turn out to be long-term and their solution does not appear in itself because that is and my personally we are the perpetrators of our problems because we cannot or do not have knowledge of how to solve. Be aware that the knowledge economy is like health – also from time to time our memory gets disease. Not to fall into the incurable disease, it is worth to spend more attention prophylaxis related to the improvement of our knowledge – in other words – develop in its proceedings the relevant set of rules that lead to a reduction of the risks associated with our ignorance. It can be seen as its own insurance policy in the event of difficulties arising, but it depends on each of us.

On the basis of previous studies, by author, “education economic, which will increase the awareness and the result and the development of our competence – educates positive habits that are necessary for the proper management of our financial management, whereas our needs in closer or further period. Successive exploration of the knowledge economy, results in recognizing the opportunities and threats associated with the functioning of the market, for customers will take the ever more aware of the economic decisions”. If our success in life we will be able to define as achieving our financial stability and independence and will allow us to pursue our needs, we cannot decide to forgo economic education. None of us is born with knowledge. We need themselves gradually acquire in the course of our lives. Unfortunately, already at the stage of school teachers do not learn practical skills relating to issues of micro and macroeconomic policies. Low awareness and therefore the awareness of economic among young people entering into adult life, leads ultimately to deepen the social inequalities.

Economic education can be seen as a process by which the customers/investors improve your ability to understand the rules on the functioning of the market. With the addition of this knowledge, if necessary they may request the assistance of, shall informed choices, as well as take effective action to improve its financial prosperity and ensure its protection. Economic Education is not only addressed, or primarily to investors. It is an

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<sup>1</sup> Tests were carried out in the provinces: małopolskie, podkarpackie and lubelskie. Total, together with the świętokrzyskie tested was 1,200 people. These studies are a continuation of the analyses carried out in a similar way in the years between 2012 and 2014.

<sup>2</sup> See the scientific studies of the years 2007–2017.

essential part of the members of the households who each day shall take the relevant decisions - short-term and long-term, e.g. with a view of training children that about saving retirement [The Importance ..., 2006].

By author, economic education can be carried out on three key levels. These are: the knowledge economy and to understand it – the customer knows and understands the principles of the functioning of the market, skills and competences with knowledge of the economic – based on the customer possesses the knowledge and awareness of having an impact on the implementation of their own needs and awareness and responsibility – customers understand that taken by them decisions have an impact on the other.

By the above attributes economic education can say that to be effective there must be a relationship, i.e.: education needs to improve knowledge, thereby increasing the competence and obtained knowledge must lead to a change in customer behaviour (Implementation) needs by increasing awareness of economic (Fig. 1).

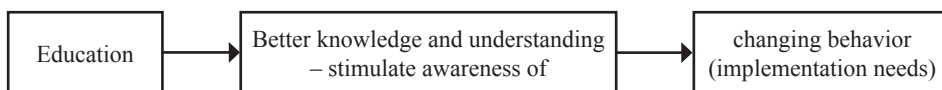


FIG. 1. Impact of education to change the behaviour of the financial

Source: the author.

Economic Education should be carried out as long as it brings effects in the form of an increase in awareness and competence and is not too expensive. With the growing importance of economic education should also have regard to the costs that it generates and how shall take into account the human motivations and capabilities of human perception [Chłóń-Domińczak et al. 2013] and ways to deal with stress in a dynamic market environment. Economic Education is to be troubleshooting low skills customers. At the same time constitute an integral part of the entire decision-making process in which are also important in other factors and mutual interactions between them. We can these include: the availability of reliable and accurate expert advice, offered options default financial products that bring benefits to the customer and not the seller, transparency and simplicity of financial products to ensure their comparability, the imposition of liability to the seller for sold unsuitable for customer financial product and restrictions on the sale of products particularly risky [Willis 2008].

As indicate Xu and Zia [2012] the level of the knowledge economy affects the degree of economic development of the country in which the person resides. It turns out that its level is higher among the population of developed countries. Similar conclusions are based on “national research Longitudinal Survey of Youth” conducted by Lusardi, Mitchell, Curto [2010] among people aged 23–28 years.

In many countries of the world the measurement of the knowledge economy is based on the set of questions that cover the scope of three basic issues, i.e. how to calculate the percentage of inflation and risk diversification [Lusardi et al. 2010]. Shall be that for the understanding of the concept of saving the average customer should understand and be able to move in the area of these issues [Chłóń-Domińczak et al. 2013].

In the context of the problem of low economic knowledge it can be concluded that the society needs information and education and the existence of transparent and fixed rules on the functioning of the market, in its environment closer and further [Przybytniowski 2013]. Education in the functioning of the market, must be carried out on many planes, because only to increase knowledge and awareness and therefore the powers in respect of the implementation of its own needs and reasonableness educate [Przybytniowski 2007, Przybytniowski and Pacholarz 2015, Przybytniowski 2016, Grzebieniak 2016].

## AWARENESS AND ECONOMIC POWERS

In view of the dynamic development of the financial markets, demographic change and economic subjects economic competence, including financial in recent years has particular significance. Change the needs of individuals as well as new and increasingly complex financial products and with them appears to have an adequate knowledge economy and skills to these needs in the best extent and as far to meet.

The issue of competence and awareness of economic, including financial is important because it does not concern only the individual units at micro, but includes the society as a whole and affects their mutual interactions that affect the economy [Pieńkowska-Kamieniecka 2016]. At the macroeconomic level, greater knowledge [Pacholarz 2016] and competence increase because the demand of household products and services, leading to the development of the market, reducing fluctuations in economic and acting accelerator growth (Fig. 2) [Jariwala and Sharma 2011].

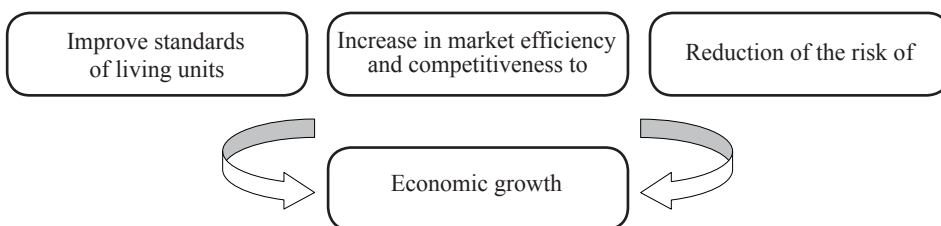


Fig. 2: Benefit from Economic Education

Source: the author based on Messy 2009.

Therefore, it can be concluded that the increase in awareness and competence of economic leads appropriate education and therefore to the situation in which blow away all market operators. On the other hand, incorrect decisions due to the lack of the knowledge economy, including financial lead to disadvantaged social and economic unit and the households, restricting the development of the market and leading to increased public expenditure on social benefits and other broad state aid associated with the commitments made by the citizens of the inadequacy of the financing decisions [Pieńkowska-Kamieniecka 2016]. There is a strong link between knowledge economy, financial exclusion and over-indebtedness. This relationship can be seen in two variants: pessimistic and optimistic. Worse may lead to low awareness of economic. The lack of a proper economic

education leads to further reluctance in broadening knowledge in this field, which results in a lack of competence and of averseness to financial institutions. Persons with low awareness and therefore the knowledge economy, easier to become victims of financial exclusion. This leads to the use of other institutions (para-financial), which in a quick way to grant loans, but on worse conditions [Iwanicz-Drozdowska and Nowak 2011]. In the case of optimistic – high economic awareness gives you the ability to avoid unwanted problems associated with easier financial management. The educational program provides an opportunity for systematic deepening of the knowledge economy [Iwanicz-Drozdowska and Nowak 2011]. As we read in the development of Laboul [2012], the national strategy of economic education, including financial, has been defined as “coordinated approach at national level to economic education, including financial, which consists of a customized framework or program”. Please note that the customer have the appropriate knowledge is aware of the larger the potential market. This translates too materially to the increased demand and hence on the more innovative products and services. In addition, it also affects the increase confidence in the institution of the financial market. Economic education should not be seen as the sole means of influencing the reduction of the asymmetry of information between service providers and recipients of services, but as a factor which ensures an adequate level of protection of customers and their needs and consequently the proper functioning of the market to give you the word in economic growth.

## RESEARCH METHODOLOGY

In the development were used methods of analysis descriptive-qualitative comparative analysis and statistical analysis. For the collection of the material of the original author used the results of the survey conducted in 2016 and on the study of knowledge and awareness of economic. This questionnaire contains general part, including questions related to metric respondents and part of a detailed, relating to the assessment of the status of the subjective, objective and sources of knowledge and preferred forms of economic education students.

Made in the representations of Likert’s scale, where the author obtains the answer associated with the acceptance of the phenomenon. The proposed scale consisted of the cafeteria, which connects five replies arranged on the total acceptance – 5, to total rejection – 1. Tested student was to determine to what extent agrees with the specified question where: 1 – meant “strongly small”, 2 – meant “small”, 3 – meant “medium”, 4 – meant “high”, 5 – meant “strongly high”.

The selection of the sample provides the representativeness of the results for students aged from 18 years to 30, in terms of gender and place of residence. The choice of this ensures the comparability of the results of earlier years, carried out within the framework of the statutes. In both cycles research, attempt consisted of 320 people, which made it possible to carry out analyses in more detailed. In this test was attended by students on desktop and portable exams I and II, universities with the Świętokrzyskie, studying in the field of economic sciences, in discipline: economics, sciences fund and finance. Accounted for the most numerous group respondents studying specialities: finance and accounting, management, banking and insurance: – 111 persons (34.7%), 89 (27.8%), 66 (20.6%)

and 45 (14.1%). Among all responders the students achieved study portable exams – II . Including comprised – 221 (69,1%) examined people, while the number of students studies and the represented 99 (30.9%). In the examined group exceed slightly men (51.3%). Most respondents were in the age 26–27 years and 24–25 years, sequentially (25.6% and 22.2%). They constitute the 47.8% of all examined patients. Least tested students were over the age of 30 (8.8%) years, 20–21 (12.5%) years as well as 28–29 (13.8%).

## **SUBJECTIVE ASSESSMENT OF THE STATUS OF THE KNOWLEDGE ECONOMY STUDENTS**

In the statement of the number of properly cast answers by students, it can be noted that all students answered the set of questions contained in the survey.

In the first instance students study desktop and portable exams I and II degree answered the question related to the subjective assessment of the knowledge economy financial, management and economics: Sampled answered the question: How Do and their general knowledge of economic, financial and management? Whether you're and knowledge is...? On the basis of the results obtained, students consider that their knowledge of economics, finance and life sciences management is at "strongly small" and "small" (the indicators in 2014 were until 52.3% and 2016 – 51.5%. In the further students have identified their state of knowledge at the level of the medium and in 2014 – 41.2% and in 2016 – 43.3%. As can be seen in the period considered was decreasing interest test evaluators your knowledge economy as "strongly small" and "small", for these respondents who assess it as "medium". In addition, compared to the year 2014, of less than 3% decreased the number of assessors their knowledge as: "strongly high" and "high", for students evaluators it as "medium".

The next stage of research was related to the subjective assessment of the knowledge economy in selected slices demographic (place of residence and age), where students answered the question: How Do and its general knowledge of Economics, Finance and life sciences helpful? Whether you're and knowledge is...? .

By analysing the data from the Figure 3, students worse to assess the state of their knowledge, the respondents in age 20–21 years, residing in rural areas. In addition, compared to the year 2014, of less than 2% of the reduction in the number of respondents assessing their knowledge as: "strongly high" and "high", for respondents evaluators it as "medium". Students who declare that their knowledge is the medium level are over the age of 30 years and 28–29 years residing city from 100 to 500 thousand inhabitants. In relation to the year 2014, nearly 4%, in both cases, decreased the number of test, evaluators their knowledge as "strongly small" and "small" for students showing it as "medium". At this point, it can be concluded that it is difficult to identify your students at age had a significant impact on the level of aid response, since respondents of different ages begin studies and work that is also a source of knowledge and awareness of economic.

Another question related to subjective assessment of knowledge, was to determine its in different areas: How do and the level of their knowledge and skills related to...? Whether you and knowledge is...? Whereas the area in which the students to assess the state of their knowledge, preferably to drop the ability to manage finances. Whereas the

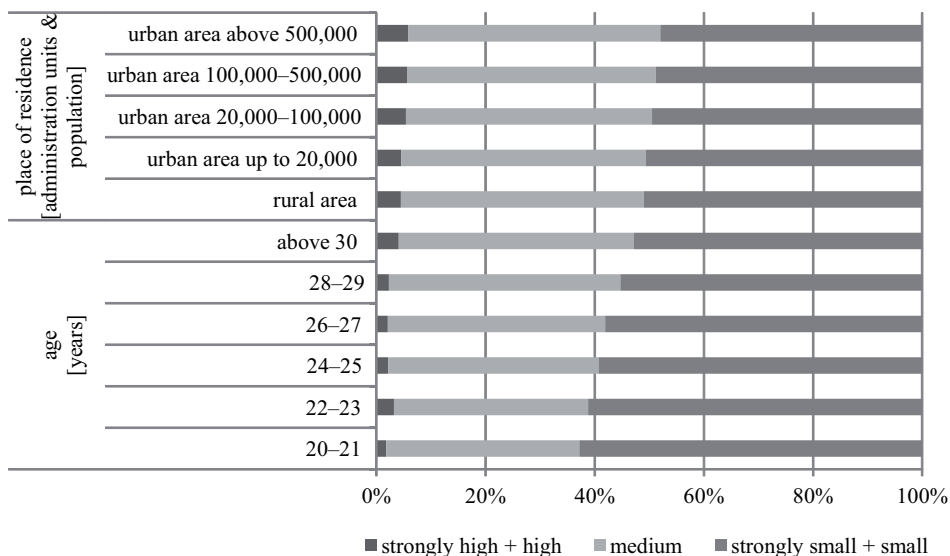


FIG. 3. How Do and its general knowledge of Economics, Finance and life sciences helpful? Whether your and knowledge is ...? (N 2016 = 320)

Source: the author.

year 2014 in virtually all areas of decreased interest students Evaluators their knowledge as “strongly high” and “high”. While increased group those students who evaluate your knowledge as a “small” and “small”. By analysing the above question, taking into account the degree and year of study, it can be stated that the stage of study does not determine the status of the knowledge economy students. Slightly higher level of knowledge have students and is in comparison with students II. Noteworthy is the fact that students starting process to study have a higher average from students finishing education (Table 1).

The next steps in the research were analysis of knowledge gaps and skills among women and men. Respondents had to answer the question: How do and the level of their knowledge and skills related to...? Whether you and knowledge is...? Both men and women the lowest evaluate your knowledge with the functioning of the commercial banks and the concept and essence of inflation. In the vast majority of areas women rate your level of knowledge of the lower than men. The biggest difference in subjective level of

TABLE 1 How do and the level of their knowledge and skills related to...? Whether you and knowledge is...? (N 2016 = 320)

The average level of the knowledge economy	The studies and the			Studio II	
	3.09%			2.83%	
	Year 1	Year 2	Year 3	Year 1	Year 2
	3.22	2,98	3.08	2.92	2.75

Source: the author.

knowledge between women and men is in areas: the functioning of the commercial banks, use of investments and deposits and pension rights. In virtually all areas there is less self-esteem women than men. Whereas the age of respondents, the largest gaps in knowledge, regardless of age, concern: insurance, concept and essence of inflation, pension and euro zone. The largest differences in subjective assessment of the level of knowledge between the newest and oldest age group, noted in the Euro Zone and pension benefits.

## **OBJECTIVE ASSESSMENT OF THE STATUS OF THE KNOWLEDGE ECONOMY STUDENTS AT**

An objective assessment of the status of the knowledge economy students at was made on the basis of the results of the questionnaire as well developed indicators of the knowledge economy constructed on the basis of specific questions of management, of economics and finance<sup>3</sup>, relating inter alia to: ability to manage their own portfolio financial knowledge of the banking, insurance, pensions, rules save and invest, issues related to unemployment and inflation, the functioning of the zone and the euro currency, use of loans and credits, of non-cash transactions and the knowledge of the tax system.

Analysis of the test of the knowledge economy, i.e. response respondents on specific questions, showed that the knowledge students study desktop and portable exams I and II is much better than their subjective assessment. As can be seen from the above table, more than half of the valid questions has granted over 40% (strongly high, large), while over 21% of students replied to the medium level. Less than 6 correct answers has granted over 16%, which gave strongly small level of the knowledge economy. In comparison to the studies carried out in 2014 (the same questions), the percentage of students, which may be classified to the group of high, medium and low level of the knowledge economy, decreased slightly but does not give a significant statistical difference. One of the easiest questions for students has proved to be a question relating to manage their own financial resources. Just 51 respondents indicated an incorrect answer, which gives 15.9% of the total corresponding to this question. In the further minor problems meant question related to inflation – near 31% of students responded correctly. A similar result to the previous issues appeared the unemployment. 102 persons most often correct option, which gives 31.9% of the total corresponding to. Most problems with the reply have students with question regarding: the functioning of the zone and the euro (194 person – 60.6%), tax system (181 person – 56.6%), retirement benefits (169 person – 52.8%) and insurance (161 – 50,3%) all responders students (Table 2). Compared to the year 2014, increased interest of students, which comply with the correctly on almost all questions (for three questions, changes were significant). The largest increase (nearly 24 p.p.) for questions related to electronic money.

In view of the above data, it is difficult to clearly indicate that your age had an impact on the level of response. Students between 24–27 (8.2%), the most appropriately correctly the entire survey and respondents aged 20–21 (18,5%) – urgency, according to the lowest level of the knowledge economy. The results of that age range of 24–27 years,

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<sup>3</sup> same questions were asked in an earlier edition of research, i.e.: years 2012 and 2014



TABLE 2 Number of correct responses by the students I and II in selected slices demographic in 2016 (N = 320)

The number of correct answers						
Sex	Strongly large and high		Average		Small and strongly small	
Women	12	3.8%	55	17.2%	89	27.8%
Men	39	12.2%	20	6.3%	105	32.7%
Age						
20–21 years	4	1.3%	7	2.2%	59	18.5%
22–23 years	9	2.8%	11	3.3%	36	11.3%
24–25 years	14	4.4%	24	7.5%	40	12.6%
26–27 years	12	3.8%	11	3.3%	27	8.4%
28–29 years	6	1.9%	9	2.8%	21	6.6%
Above 30 years	6	1.9%	13	4.1%	11	3.3%

Source: the Author.

reside in large cities, which confirms the results obtained with the evaluation studies of the subjective respondents.

The final stage in the study was to compare the subjective and objective assessment of the shortcomings of the knowledge economy among responders. Students consider have the least knowledge in the functioning of the zone and the euro currency, concept and essence of unemployment, inflation and knowledge of the banking sector. But if we examine the results of the test are we see that the least respondents evaluate: functioning zone and Euro currency, knowledge of the tax system. Relatively businessmen took counsel with questions about: knowledge of the insurance sector and rules on the functioning of the financial institutions and couple-Financial.

## CONCLUSIONS

As a result of the studies carried out, has been implemented. The analysis of the level of the knowledge economy students at universities of the Świętokrzyskie enabled the verification that has been put at the outset article hypothesis. In the development has been confirmed hypothesis there is a relationship of the knowledge economy and the increase of awareness and competence of the younger generation in achieving financial stability and their independence. Following the above considerations, compared to the year 2014, although there were significant changes in the level of the knowledge economy test students. Still, over half of students has significant shortcomings in this area. Noticeable changes are in the following areas:

- The subjective assessment of the knowledge economy where decreased significantly interest assessments relating to knowledge “strongly high” and “high” for assessments medium,
- Subjective sense of knowledge is lower in 2016 in relation to 2014 (in virtually all areas is noted a statistically significant,

The studies carried out, it was found that there were no significant between gender, age, the place of residence and economic knowledge students regardless whether he studies at the desktop and portable exams of the first and second degree.

## RECOMMENDATIONS

Should enhance and improve the knowledge economy already at the level of the secondary education, but not only through theoretical knowledge but the introduction of practical lab, increasing the attractiveness of teaching, using existing sources of knowledge: Internet, broadcasts educational games, competitions, baler expertise that tasks practical (development projects). Encourage the young generation not only to raise the competence in the already existing areas but also to increase knowledge in new areas as confirmed by carried out surveys.

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**Summary.** It has been found that the financial education increases substantially the economic knowledge to build awareness and competence of the younger generation and therefore the dissemination of this knowledge. The aim of this paper is to identify the importance of the knowledge economy in the growth of the build awareness and competence of the students in the management of finances in the current, constantly changing environment. Design development was subject to the hypothesis in accordance with that – there is a relationship of the knowledge economy and the increase of awareness and competence of the younger generation in achieving financial stability and their independence. This problem will be implemented using the analysis of the state of the knowledge economy university students of the Świętokrzyskie on individual economic areas. Method applied research area is anonymous questionnaire survey addressed directly using a survey to students study desktop and portable exams I and II degree.

**Key words:** economy knowledge, objective knowledge, economic awareness, subjective knowledge

**JEL:** D83, A2, A13

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## **INSTAGRAM AS A TOOL FOR PROMOTING SUPERFOOD PRODUCTS**

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### **INTRODUCTION**

Intensification of online communication is an ever-growing trend in buyers. A significant part of the society uses the Internet as a source of information, entertainment or as a way to stay in touch with their family, friends as well as strangers. This willingness to exchange opinions on all kinds of issues has encouraged companies to contribute to the flow of information in social media. Taking advantage of a number of social networking websites, a business can interact with its target group. In this way, both sides can profit from direct and immediate feedback. Enterprises do their best to make good use of the available tools in order to convert random Internet users into actual clients purchasing their products. Social media have become a good solution for companies to promote new products with their sometimes very particular characteristics. An example of such a product is superfood, a category of products which is expanding rapidly and therefore needs new ways of reaching its consumers. A channel often used for this purpose is Instagram, a social networking website which utilises the structure of its content – very big, attractive photographs – to present products in a favourable way and influence the shopping decisions of the recipients of a brand's message.

### **THE ROLE OF SOCIAL MEDIA**

Nowadays companies compete for the attention of consumers on many levels. One that is developing dynamically is their participation in direct interaction with Internet communities. Social media make it possible and their number is constantly growing.

Using social media for promoting a business and its product is known as social marketing. It is sometimes defined as a form of viral marketing due to the fact that it consists of passing content to other users, for example by recommending specific products and services or by discouraging other people from buying them [Barefoot and Szabo 2011]. In order to remain highly competitive, an enterprise needs to continue to adjust its communications strategies to the current and ever-changing expectations of consumers. This is particularly significant for small and medium-sized companies as they run on a limited budget and look for solutions that translate directly into sales figures.

Social networks make it possible to engage in non-anonymous conversations with friends on a variety of topics, including those connected with brands. Consumers interact with social media profiles of enterprises by writing posts, reading the posts of other users and brands, posting comments, liking things or doing the equivalent depending on the medium, forwarding or sharing content and engaging in a number of similar activities available within such channels. Increasing involvement of consumers influences the visibility of a brand and the spreading of information about it (word-of-mouth marketing). Internet users are happy to share their opinions and experiences in social media, which opens up a window of possibility for companies to take advantage of this form of communication [Erkan 2015]. Social media are usually defined as media intended to facilitate interaction between users [Hassan 2014].

Prior to the development of social media, companies used to rely on one-way online communication by using tools such as banners, pop-ups or sponsored advertisements. This has since transformed into two-way communication between the brand and the consumer. The communication may assume the form of involvement at the stage of shaping the final product and choosing the preferred channels of distribution or at the stage of negotiating the quality of the offer via various forms of feedback [Hassan 2014]. Figuring out the right marketing strategy for a company has an influence on successful fulfilment of the intended aims in terms of the company's image or communications policy. The effects of such activity include:

- increase in brand visibility on the Internet,
- improved brand recognition among potential consumers,
- increased number of unique users of the brand's website,
- increased number of photos displayed and videos played in hosting services,
- increased number of online opinions on the company's offer,
- improvement in result positioning in Google's ranking algorithm,
- increase in sales figures for the brand's products or services.

Proactive behaviour in social media may have significant influence on the conversion of potential consumers into actual clients of the enterprise [Barefoot and Szabo].

Entrepreneurs perceive social media as a channel facilitating interaction between consumers and the brand on the Internet in real time. Users can get acquainted with products and services and provide their feedback on the enterprise. Using social media, brands are able to respond to potential problems of their customers more quickly, which greatly increases their satisfaction levels. Measured online communications policy is an effective way to spread positive recommendations and opinions about the enterprise. Compared with traditional media, the cost of reaching out to a significant number of recipients is relatively low, a fact which contributes to the high popularity of this type of communication [Momany and Alshboul 2016].

The dynamic increase of the share of mobile devices in browsing the Internet has become more and more visible in recent years. 66% of the world population currently owns a mobile phone and as many as 2.5 billion people use the device to access social media (34%). In comparison with last year (January 2017 vs. January 2016) the figure increased by 30%. An important factor here might also be the spreading of the share of particular devices in terms of accessing online services (Internet traffic), with 50% of the worldwide share assumed by mobile devices. For Poland, the figure is as high as 57% [We are social 2017]. The conclusion is that the potential of mobile users is ever on the rise and causes social media communications channels dedicated for the group to become more and more interesting for enterprises. A particular Internet service of this sort is Instagram, the characteristics of which are esteemed highly by consumers interested in mobility and new technologies. Its popularity has soared in the recent years.

The social networking website Instagram consists of profiles which users and brands use to post photos or videos with short descriptions and often at least one hashtag (a key word relating to the contents of the message, preceded by the symbol #). Users can also make use of built-in filters to edit a photo before they publish it. A basic indicator of the efficiency of communication on Instagram is the number of likes and comments under the content posted on the user's or company's profile. Research to date has shown that indicators of consumer involvement on business profiles may be dependent on the line of business [Erkan 2015]. Table 1 presents classification of users on the social networking website. It differentiates between 5 basic types, making it easier to choose a target group for a given brand's communication. The greatest number of potential clients can be found in the group of readers [Garifova 2016].

TABLE 1. Classification of users on the social networking website Instagram

Group	Description
Small enterprises, shops and services	Refers to specific industries, among others sport, food, health, animals, photography, weddings, holidays, clothes, cosmetics, education, handicraft.
Hobbies	A profile created in relation to a user's hobby or on account of potential income for the user (selling advertisements, organising campaigns on the profile).
Stars	Famous people posting their own photos. They typically follow few other users themselves, but have a huge number of followers (more than 100,000 users). They are not potential clients, but they present an opportunity for brands to promote their products or services among the followers of a given famous person.
Celebrities, bloggers	People known to a lesser extent, usually popular within a specific thematic community. They are followed by between 10,000 and 100,000 people. Just like with the category above, they do not constitute potential clients, but they give brands an opportunity for promotion of products and services among followers.
Readers	Different users, among others travellers, tourists, young mothers, dog or cat lovers, amateur athletes. They have between 10,000 and 100,000 followers, and they follow about 1,000 profiles themselves.

Source: [Garifova 2016].

## **SOCIAL MEDIA AS AN EFFICIENT CHANNEL FOR MARKETING COMMUNICATIONS**

Social media have a direct impact on the way consumers perceive a brand. Brand image in the eyes of consumers can be shaped by means of interactive communication of the brand's features and values. Skilful use of social media maximises consumer engagement and creates a personalised relation between the consumer and the brand, a relation sometimes seen as private. This can result in a growth of the number of fans, likes and comments [Hassan 2014].

As we analyse social media, we need to pay special attention to the issue of sales and sales promotion. Before the technological revolution took place, enterprises had reached their customers through traditional channels of communication. Nowadays the Internet is used for that purpose more and more frequently. This change follows from the evolving behavioural patterns of buyers, many of whom have started to see the Internet as their preferred channel of communication. Social media initially shot to popularity as places where Internet users could socialise with other people. Brands, however, noticed the potential of social media but used it as a way to reach their customers [Hassan 2014]. Due to the evolution of communication – which more and more often assumes the form of a dialogue between the consumer and the brand – the way that social media are being used is undergoing a similar transformation. Consumers are becoming more and more demanding and brands have no choice but to meet their requirements. Methods of promotion that were effective at the beginning of the development of social media cannot deliver the same kind of satisfactory results anymore, which forces brands to work out new methods to influence the behaviour of buyers.

Due to the growing popularity of brands communicating via social media, research is being conducted to determine the exact relation between the so-called firm-generated content and what consumers actually purchase, also with respect to the long-term interaction between the consumer and the brand. This way, the viability of specific activities of enterprises can be verified. What concerns the spendings of a consumer – seen here as his or her transactional value for an enterprise – the impact of the content is determined in reference to the brand's sales figures. On the other hand, buying additional products, defined as the number of different product categories within which the consumer purchases anything specifies the intensity of the relation between the consumer and the brand. Direct correlation between these indicators has been discovered, which implies that it makes sense to conduct such research in social media. Enterprises ought to engage in communication with consumers and build long-term relations that result in profit from the sales of products and services [Kumar et al. 2016].

According to Table 2, research conducted on 22,618 Internet users has indicated that the behaviour of online buyers is mainly shaped by opinions of other Internet users, by the possibility to take advantage of special offers as well as by various advertising formats [PricewaterhouseCoopers 2016]. Because of the specificity of Instagram – it is oriented towards visual communication – many Internet users refer to it for product information and for inspiration.

Because the above factors affect the behaviour of consumers, the phenomenon of social selling is developing rapidly. Social selling is understood as all the activity of an



TABLE 2. Aspects of social media which influence the shopping patterns of online consumers (September 2015)

Aspect	Share of the response [%]
Reading opinions, comments and feedback	45
Access to special offers	44
Browsing advertisements	30
Following trends concerning fashion and products	25
Writing opinions, comments and feedback	22
Identifying with a brand or a retailer	20
Buying products directly via a social networking website	16

Source: PricewaterhouseCoopers 2016.

enterprise in social media that brings about an increase in sales possibilities. The starting point for such activity is creating brand profiles on selected social networking websites and deciding on a communications policy that would be adjusted to the target group. Typical strategies of a brand's presence in social media include building long-term relations through finely polished content (content marketing) and getting involved in discussions concerning issues closely related to the brand's offer [Gumińska 2017].

Instagram is especially efficient with respect to B2C communication (business-to-customer). The decision-making process is influenced to a great extent by the appearance of the product or the place where the services are offered. Instagram makes it easy for a brand to be associated with positive visual communications. The website is equipped with features designed to help convert brand followers into clients. In March 2017 8 million enterprises had profiles on the website and out of these an average of 1 million advertised their products or services in an active way every month (an increase by some 800,000 profiles in comparison with March 2016). Business profiles were followed by over 80% of the users of the website, and as for the users themselves in March 2017 their number amounted to over 600 million people. According to the official data provided by Instagram, in February 2017 as many as 120 million people used the website to visit a company's website, to get directions to a company or their contact data. This proves that more and more companies discover the potential of the website and that users treat Instagram as a source of information about companies [Instagram 2017b]. Moreover, as many as 49% of users search Instagram for interesting brands while 14% of users declare themselves potentially interested in clicking on the "Shop Now" button available on the website. These are the highest numbers in comparison with other social networking websites (e.g. 39 and 9% respectively for Facebook). In order to further improve the efficiency of their communication and social selling, enterprises also make use of tools which monitor the contents of the Internet, to be able to respond to the activities of the target group in the shortest time possible [Karwat 2016].

The possibility of tagging products in content posted via business profiles is currently being tested. When they browse posts, users can easily distinguish the ones relating to products as they bear a special icon placed in the bottom left corner that tells them to touch the photo to display it. Users interested in a product can click on its image to get

acquainted with basic information about it as well as the price in the form of a pop-up window appearing on top of the photo. When a user clicks on the information window, he is taken to a website which is dedicated to the product but which is still within Instagram. A user interested in the product can choose the “Shop Now” option at the bottom of the page and go directly to an online store, thus greatly shortening his or her shopping path. The maximum number of products an enterprise can tag in a photo is 5 [Instagram 2016]. The new feature has been embraced both by entrepreneurs and users who have been using it a lot. A feature soon to be made available is statistical data to measure precisely the number of clicks on products and on the “Shop Now” button [Instagram 2017a].

### **ANALYSIS OF BRAND ACTIVITY ON THE SOCIAL NETWORKING WEBSITE INSTAGRAM AS EXEMPLIFIED BY SUPERFOOD PRODUCTS**

Superfood is a term which refers to products containing a wealth of nutritional values, such as Omega-3 fatty acids. “Superfoods are plant products that have been used for centuries all around the world as a remedy for illnesses or as ingredients of bills of fare of local tribes” [Ekiert i Dochnal 2015]. Rock rose, *salvia hispanica* – chia, spirulina, açai berries or matzo are just a few examples of superfood products. Thanks to the technological progress, the easier access to information, the relative shortening of the distance between continents as well as the general increase in worldwide wealth there has been a change in eating habits with greater accessibility of products from around the world. Superfood is a key element of a healthy diet as these products have a positive influence on the brain, kidneys, the reproductive system and the metabolism. The effectiveness of superfood in this respect has been proved through numerous scientific research. For example, goji berries are a source of complete protein, they contain polysaccharides which stimulate the immunological system, betaine which cleanses the liver, sesquiterpenes which counter the aging process, antioxidants, over 20 trace minerals and many other [Wolfe 2015].

Nowadays consumers more and more often look for information about products or services on the Internet. The technological progress has granted them with access to a wide range of information at any time. Consumers can familiarise themselves with the offers of enterprises, compare them, get to know the opinion of other Internet users and in the end buy their chosen products online. Internet communication has been affected by the development of social media to a great extent. The change in the way people communicate and its increased interactivity has caused consumers to be more and more proactive in their attitude. Unlike for big corporations, this presents a particular opportunity for small and medium-sized enterprises. While their presence in traditional media is relatively small due to high costs, this can be compensated for by means of staying active in social media, which also allow companies to use less formalised means of communication [Garifova 2016].

In accordance with the above and due to the character of superfood products, which are mostly provided by small and medium-sized enterprises, the conducted analysis of Internet content collected at Instagram has focused on profiles of such enterprises and their brands. People pay more and more attention to their health, they are more aware of their body and its internal correlations. In his publication Philip Kotler mentions an ever

more important demographic known as LOHAS, or Lifestyles of Health and Sustainability [Kotler and Keller 2012]. They are people who promote a balanced lifestyle (including healthy eating) and personal development. The reports of Nielsen, a research agency seem to confirm that there is a general trend to look after your health, with 77% of Polish people agreeing with the following saying: “You are what you eat”. Indeed, it is health – and not job stability – that is the greatest single worry for Poles [Petrolvenience Raport 2016]. Looking after your health is physical activity on one hand, but on the other it is healthy eating, which can also include superfood products.

For the sake of the present study, the following three representatives of superfood products have been chosen: Chias – liquid snacks with chia seeds, ZmianyZmiany (lit. ChangesChanges) – bars made from fruit and vegetables, PowerWaters – drinks enriched with organic caffeine extracted from green coffee. Table 3 presents the characteristics of the products. They were chosen mostly because they contain elements of superfood, but also because they are available all across Poland, because they use Instagram to promote the image of the brand – and lastly, because they are from Poland (consumer patriotism). The objective of the comparative study is to verify the activity of the brands on Instagram and to identify elements of efficient promotion with respect to these products.

Numerous positive articles on the three products published in specialist magazines confirm that it was reasonable to choose these specific products<sup>1</sup>. Table 4 presents an analysis of the three Instagram profiles.

The Instagram profiles of the analysed enterprises which manufacture products containing elements of superfood are characterised by a similar number of posts and profiles followed. One of the categories used to create Table 4 refers to the rate of engagement, which should be understood as an attempt to describe the combined engagement of all the followers of an Instagram profile. The rate is calculated by adding up the number of likes and comments in relation to the number of followers. The rate seems to be most favourable with respect to the Chias brand, which means that Chias has the greatest proportion of active followers. The majority of posts for all the analysed profiles are product photos – the respective rate is 96.36% for Chias, 91.7% for ZmianyZmiany and 87% for PowerWaters. The policies of the companies are apparently different, however, as regards reposting photos, i.e. posting to your own Instagram profile photos that were previously published by other users of the website (without infringing on anyone’s copyrights). This method of posting photos is appreciated by the administrator of the profile @chias\_eu, with 73.94% of photos on the Chias profile reposted from other users, while the figure is as low as 39.5 and 39.1% for @zmianyzmiany and @powerwaters respectively.

Another interesting piece of data in Table 4 is the relatively high number of Instagram users who tagged Chias products in their own posts. This seems to show high levels of customer satisfaction and identification with the brand. There is a chance that the Chias brand might soon achieve the coveted status of a so-called “lovemark” – a brand enjoying an exceptionally high level of adoration and esteem among its clients. This sort of behaviour among buyers is also a cheap and efficient form of promoting a product. “Information spread with the use of a social networking website travels like a snowball between

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<sup>1</sup> For example: <http://www.portalspozywczy.pl/napoje/wiadomosci/nasiona-chia-w-butelce-tworcy-modnej-przekaski-powalcza-o-rynek-z-oshee,128586.html> [in Polish], [accessed: 23.03.2017].

TABLE 3. The characteristics of superfood products: Chias, ZmianyZmiany, PowerWaters

Specification	Chias	ZmianyZmiany	PowerWaters
Type od product	A liquid snack with chia seeds and fruit juices	A plant bar made from fruit and vegetables	A drink with mineral water enriched with organic caffeine
Producer	Chias Brothers Europe Ltd.	ZmianyZmiany (civil law partnership)	Organic Energy Ltd.
Number of flavours	6	9	1 (another 2 to be launched )
Superfood ingredient	Chia seeds	Chia seeds, spirulina	Organic caffeine extracted from green coffee
Places of distribution	Fitness clubs, health food stores, petrol stations (e.g. Lotos), chain stores (e.g. Piotr i Paweł)	Fitness clubs, health food stores, online stores	Fitness clubs, health food stores, online stores
Is the product available all across Poland?	Yes	Yes	Yes
The price of an example product from the product category	5.99 PLN	6.99 PLN	3.99 PLN
Ingredients of an example product from the product category	Chias pomegranate-hibiscus: juice (66%) from concentrate juice from apples, pineapple, pomegranate (5%), water, chia seeds – salvia hispanica (6,2%), natural extract from hibiscus flowers	Plant bar “Firecracker”: dates, raspberries, mulberry, cashew nuts, Brazil nuts, chia seeds, spirulina	PowerWaters: mineral water, organic caffeine
Nutritional values of an example product from the product category	Chias pomegranate-hibiscus, 1 portion of 200 ml. Calorific value: 532 kJ/128 kcal Fats: 4.7 g Carbohydrates: 15 g (including sugar: 14 g) Protein: 3.5 g No added sugar	Plant bar “Firecracker”, 1 bar 69 g. Calorific value: 1126 kJ/269 kcal Fats: 8.2 g Carbohydrates: 45.3 g (including sugar: 31.7 g) Protein: 7.5 g No added sugar	PowerWaters, 500ml. Calorific value: 0 kJ/0 kcal Fats: 0 g Carbohydrates: 0 g (including sugar: 0 g) Protein: 0 g No added sugar
Website	<a href="http://www.chias.eu">www.chias.eu</a>	<a href="http://www.zmianyzmiany.pl">www.zmianyzmiany.pl</a>	<a href="http://www.powerwaters.com">www.powerwaters.com</a>
Instagram profile	@chias_eu	@zmianyzmiany	@powerwaters

Source: author' own research.

TABLE 4. Analysis of Instagram profiles for the three brands: Chias, ZmianyZmiany, PowerWaters

Specification	Chias	ZmianyZmiany	PowerWaters
Number of all posts	165	253	620
Number of all followers	6,995	7,138	9,851
Number of profiles followed	933	478	2,258
Total number of likes	65,039	62,458	97,671
Total number of comments	2,911	2,234	3,300
Average number of likes/posts	394.2	246.9	157.5
Average number of comments/ /posts	17.6	8.8	5.3
Date of first post published	07.03.2016	08.09.2014	15.10.2015
Frequency of posts published*	0.4 a day	0.23 a day	1.17 a day
Ratio of the number of posts containing the product to the number of all posts	96.36%	91.7%	87%
Ratio of the number of photos reposted to the number of all posts	73.94%	39.5%	39.1%
Number of posts of other In- stagram users tagged with the profile @chias_eu/@zmianyzmiany/ /@powerwaters	1055	810	975
Hashtags generating greatest interaction	#chias #nasionachias (chia seeds) #zdrowo (healthy)	#zmianyzmiany #baton (bar) #vegan	#powerwaters #zdrowyenergetyk (healthy energy drink) #organic
Best time to trigger the enga- gement of followers	Monday 10.00–11.00 Tuesday 09.00–10.00	No time stands out in a significant way, impossible to deter- mine a best time	Friday 16.00–17.00 Thursday 12.00–13.00
Use of additional Instagram features	Live story, sponso- red posts	No such use	Sponsored posts
Use of additional software	Iconosquare, Brand24, Google Analytics	No such use	No information

If not stated otherwise, the data refers to the time between the first publication of a photo on the website and 31.03.2017 \* data for 29.01–30.03.2017

Source: authors' own research on the basis of an analysis of the profiles and the data obtained with Instagram Analytics for Business ([www.minter.io](http://www.minter.io)) and Instagram User Report ([www.simplymeasured.com](http://www.simplymeasured.com)).

people. (...) The number of potential recipients who receive a given piece of information from a single user – infected with the information, as it were – is significant” [Śliwińska and Pacut 2011]. The mere ownership of an Instagram profile does not make one immediately successful. The key contributor is active administration of the profile understood as interaction with users (which includes liking photos posted by followers, responding to comments, publishing posts systematically). The PowerWaters brand did the best job in this respect, with a daily average of 1.17 posts in 60 days within the examined period, while for @zmianyzmiany the figure was as low as 0.23 post a day.

If we analyse the day of the week and the time at which specific profiles post their content, it is possible to specify time periods when publishing posts is the most efficient – published in that time, a photo or a video receives the most comprehensive response. The prime time for Chias is Monday between 10 and 11 a.m., for PowerWaters it is Friday between 4 and 5 p.m. These time periods can be referred to the producers’ chosen methods of promoting and positioning their respective products. The producer advertises Chias as a healthy snack, for example at work between breakfast and lunch. Researchers of time management claim that on Mondays at around 10 a.m. there is a decline in the efficiency of work in offices – having completed their most urgent task for now, workers grab a snack and visit social networking websites, quite in keeping with the business idea of the Chias brand. As for Fridays between 4 and 5 p.m., for most people this is already free time after work and they can spend it by going jogging, visiting a fitness club or doing crossfit exercises – all of these activities favour the consumption of PowerWaters, which positions itself as a healthy energy drink. The above recommendations are applicable and ought to be used in order to maximise the efficiency of Instagram business activity.

In order to verify the Instagram profiles in question more accurately, the authors of the present study conducted in-depth interviews with experts, i.e. the representatives of the companies who are responsible for their presence and activity on social networking websites (Chias Brothers Europe Ltd., ZmianyZmiany (civil law partnership), Emptio Ltd.). The owner of the Chias brand and the manager of the brands belonging to the ZmianyZmiany group both admit that Instagram is their main tool used for the development of brand awareness among potential clients. Both companies employ the following strategies in order to manage their Instagram profiles:

- publishing posts at equal intervals,
- presenting products in different contexts, not only during product photo sessions,
- reposting photos of other users and barter exchange,
- liking photos of potential clients.

As a matter of fact, it is the above mentioned barter exchange that looms as the key to success in the case of managing Instagram profiles devoted to superfood products. The legal definition of barter exchange is that it consists in cashless exchange of goods or services. Regarding the analysed businesses, however, it assumes the form of publishing photos within a user’s own social media channel in return for goods received free of charge. Krzysztof Pahl, deputy chairman of Emptio, a trade company dealing in the so-called fast-moving consumer goods (FMCG in short) within the superfood category mentioned that it is not uncommon for the rate of return from this sort of barter exchange with Instagram users to be 1 : 20 – one item sent to a given person results in 20 followers of that person ordering the product. As regards the so-called digital influencers – users

with thousands of followers – that rate is likely to skyrocket. To confirm this, let's quote a representative of the Chias brand: "We send our products to influencers when there is some important event taking place, for example launching a new product. (...) We try to establish a good rapport with them. We post comments to their photos and like them. This makes influencers feel we care about them. We do our best to react – if we can see a famous person drinking anything unhealthy, like Red Bull, we offer them to try our natural energy drinks and we send them a packet with our products. (...) The rule of reciprocity usually kicks in at this stage – people want to return the favour and they post their own photo with our product to their own profile or as an insta story." Barter exchange with respect to superfood products is a phenomenon that has been developing dynamically and in the future it is going to be put to common use, just like it happens in the case of the fashion industry.

## CONCLUSION

In the context of all the marketing strategies available today, the intensifying presence of enterprises in social media is more and more visible. It is strictly related with the changing behavioural patterns in buyers, who spend more and more of their time on social networking websites in ever greater numbers. Using mobile devices to visit such websites is particularly popular and this is where Instagram thrives, with its big photographs and easy interaction patterns providing the necessary functionality when mobile phones and tablets are in use. By actively communicating in this channel, an enterprise has a direct impact on their consumers' online shopping decisions. So far the analysis of the activity of brands dealing in superfood products has indicated that producers of such goods have been using the tool correctly, although in fact attitudes vary noticeably in terms of the actual number of posts as well as their frequency. A good example here is the producer of the Chias drink, who pays close attention to their interaction with followers – potential buyers of their products. This is attested to by for instance a significant number of posts of Instagram users in which @chias\_eu is tagged. It also proves the importance of adopting smartly designed communications policies for the sake of social media, particularly with respect to new channels of communication such as Instagram in the case of industries marketing products with a number of characteristic features.

Recommendations for small and medium-sized company owners that follow from the conducted analysis include elements such as the use of photos posted by brand supporters and influencers – or in fact, a number of things defined by the umbrella term of UGC, or user-generated content. For the grand majority of the followers of an Instagram profile what really matters is not the source of a post but its content. However, posts published by people who are not affiliated with a given enterprise often achieve higher levels of professionalism and enjoy greater trust of followers and better engagement rates than any FGC (firm-generated content). It is also advisable to keep track of the behaviour of followers by identifying specific days and times when followers are eager to interact with a given Instagram profile. The most efficient communications method is posting at times when followers are most likely to be active. Another thing to take note of is that barter exchange – posts in return for products free of charge – is relatively profitable in terms of

the ratio between a company's costs and income. The thing that stands out, however, is that communication needs to be systematic because, regardless of the product they might be interested in, followers expect regularity of posts and interaction between the brand and its customers. It certainly enhances the efficiency of the strategy for a given brand's online presence.

Due to the limited data examined for the sake of the present study, a more comprehensive look at the issue would certainly be useful, one that would involve points of view from other lines of business. It would also do no harm to expand the analysis with Instagram data relating to sales figures (e.g. tagging products in posts, the use of the "Shop Now" button) as well as to analyse similar activity on other social networking websites.

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**Summary.** Social media, Instagram included, are more and more often used by enterprises to promote their own products. Year by year there has been an increase in the rate of the use of the analysed channels of marketing, which seem to be one of the most basic forms of spreading information about their products for enterprises active in the field of superfood products. Superfoods are products containing elements characterised by a wealth of nutritional values, e.g. chia seeds or goji berries. The article presents a short characteristic of social media and defines the eponymous superfood category. The research section of the publication analyses the Instagram activity of three Polish producers of food containing superfood elements, namely Chias – a snack producer, ZmianyZmiany – a producer of plant bars, and PowerWaters – a producer of water with caffeine. The current state of affairs with respect to Instagram profiles of the three discussed brands are studied comprehensively and several applicable recommendations are presented. The research also touches upon the issue of improving customer engagement levels as well as the issue of barter exchange as a way to increase sales and brand awareness in the virtual world.

**Key words:** superfood, instagram, online communication, social selling

JEL: M31, L81

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## **OPERATIONAL RISK ANALYSIS OF NETWORK OPERATION CENTER DIVISION PT. IO**

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### **INTRODUCTION**

Every company that produces goods and services has a goal to satisfy its customers. Similarly, PT. IO, a company engaged in telecommunications, is always striving to provide the best services to its customers. For that purpose PT. IO try to control the risks that occur in the company.

However, by year 2014 PT. IO incurred a loss of more than 10 billion INR (rupiah, ≈715 thousand EUR) caused by for one day error in data routing resulting in increased complaints from customers. In addition, in September 2016 when the sea cable broke for 2 days the company suffered a loss of 5 billion INR (358 thousand EUR). The results of the investigation indicated that there were employees identified as violating the Standard Operating Procedures (SOPS).

In the business world, companies anticipate risks that occur through risk management. The company's management continuously manages risks by conducting risk management activities, such as identifying, performing risk measurement, controlling, communicating, and monitoring the risks from each activity undertaken by the company. Risk management is a system of managing the risk and protection of property and corporate profits against possible loss due to risk.

Sunaryo [2007] defines risk as a loss due to unexpected events. While operational risk is defined as failure of internal processes, human resources, and failures in technology systems, as well as losses due to external events, and the consequences of violations of laws and regulations [Muslich 2007, Lam 2007, Hanafi 2009, Gunawan and Waluyo 2015]. Lam [2007] explained that effective operational risk management provide three

benefits such as minimizing daily losses while reducing the potential for large events, Improve the company's ability to achieve its business goals, as well as accounting of operational risks will strengthens the entire corporate risk management system. According to Sunaryo [2007] there are 3 stages in the risk management process: 1) risk identification, 2) risk Measurement, and 3) risk management/evaluation.

## AIM AND METHOD

The objective of the research is to identify the operational risks faced by PT. IO; measure and evaluate the risks, as well as make control and response measures to operational risks in the Network Operation Center Division. The study was conducted from June to September 2016.

The sample selection was done by quota sampling followed by convenience sampling, i.e. by assigning every 5 employees from 8 departments and one region out of 13 departments and 5 regions of operation of PT. IO. Data collection technique uses questionnaires to the employees who have competence in network center operations and have had working experience of at least five years. Furthermore, FGD (Focus Group Discussion) is conducted to determine the magnitude of the impact and the probability of the risk occurring.

The data validity test is done by Triangulation Test, that is by comparing the interview result from the resources person.

## RISK ANALYSIS AND MITIGATION

Risk identification can be done by identifying the event, cause, impact, and frequency and likelihood of occurrence. According to Mushlich [2007], there are several operational risk identification techniques such as Risk Self Assessment (RSA), Risk Mapping, Key Risk Indicator, Limit threshold and Scorecard. This study uses Risk Mapping, a process whereby the risks that occur and that may occur are mapped in each business unit or department.

Risk can be measured to determine the extent of likelihood and the impact. Likelihood risk is expressed by the percentage probability of risk occurrence [AS/NZ 2009]. The size of the likelihood was converted to a semi-quantitative size scale from 1 to 5. The size of the likelihood is described in Table 1.

Impact is the seriousness of the loss from the risk associated with the company's objectives, i.e. how much the impact may occur from the event (if it happens) on the target [AS/NZ 2009]. Impact is measured using a Likert scale with a score of 5 criteria, as described in Table 2.

TABLE 1. Likelihood Ratings

Score	Occurrence	Probability of Occurrence	Occurrence in a year
1	Rare	may occur only under abnormal conditions, probability $\leq 20$	1–2 times
2	Unlikely	it may occur at some time, probability $20 \leq p \leq 40$	3–4 times
3	Possible	it may happen at some time, probability $40 \leq p \leq 60$	5–6 times
4	Likely	may occur in many circumstances, probability $60 \leq p \leq 80$	7–8 times

Source: the authors elaboration of PT.IO based on Likelihood rating, based on AS/NZS 2009.

TABLE 2. Impact Ratings

Impact Score	Financial Impact	Occupational Safety Impacts	Corporate Image Impact
Score 1 (Insignificant)	Financial losses are very small	work accident without doctor's help	Bad image among internal employees
Score 2 (Minor)	Financial losses are small	work accident without the help of a general practitioner	Bad image among the owner's environment
Score 3 (Moderate)	Financial losses are moderate	work accident without the help of a specialist doctor	Bad image among the local media
Score 4 (Major)	Financial losses are big	work accident without the help of specialist doctor and hospitalization	Bad image among National media
Score 5 (Catastrophic)	Financial losses are very big	wound work injuries are very severe and result in death	Bad image among international media

Source: the authors elaboration of PT.IO based on impact rating based on AS/NZS 2009.

According to Sunaryo [2007], undesirable risk is measured and managed by using the multiplication value of the probability and impact of potential events, called level of risk, with the formula:

$$L = p \times I$$

where:  $L$  = level of risk,  
 $p$  = probability,  
 $I$  = impact.

Furthermore, the probability and risk impact tables are combined into a matrix. This matrix serves to map the risk and the level of risk. The risk level is divided into four and represented by four different colours, i.e. green for low risk, yellow for medium risk, orange for high risk, and red for extreme risk [Ristic 2013]. The risk level matrix is presented in Figure 1.

Risk evaluation is a comparison between the risk levels found during the analysis process with predefined risk criteria. In risk evaluation, risk levels and risk criteria are compared using the same basis. The result of a risk evaluation is a list of risk priorities for further action. An evaluation step is taken to ensure that not all identified risks require further control plans.

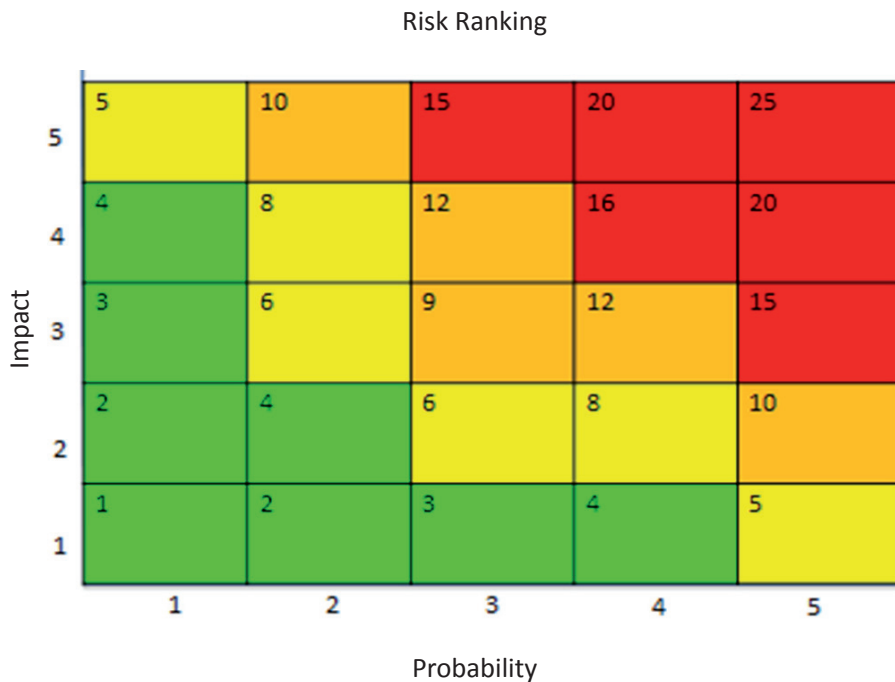


FIG. 1. Level of Risk

Source: the authors calculation based on formula  $L = p \times I$ .

The results of the risk analysis will be submitted to the highest responsible risk manager in the work unit for validation. Validation results will be used to establish a control system plan to reduce the likelihood or to reduce the impact of risk occurrence. The risk criteria are described in Table 3.

TABLE 3. Risk Criteria

Category Level	Score	Criteria and Explanation
Low	$L \leq 4$	Acceptable, no action is required
Moderate	$4 < L \leq 8$	Supplementary Issue, suggested action is taken if company resources are available
High	$8 < L \leq 12$	Issue, action required to manage risk
Extreme	$12 < L \leq 25$	Unacceptable, immediate action required to manage risk

Source: ISO 2009 version 2015, (Risk Management) [AS/NZ, 2009]

Risks that have been screened in the evaluation phase, then carried out the risk control plan. This step is called response to risk or risk mitigation. Risk mitigation involves identifying options to handle risks, assessing those options, setting up a risk treatment plan and implementing a risk treatment plan [Sunaryo 2007, see also: Darmawan 2011, Dewi 2012, 2010, Djohanputro 2004, Rosih 2015, Tisyana 2011, Wiryoana and Suharto 2008]. Risk mitigation is divided into two types: risk control and risk handling. Risk control is an attempt to avoid the risk. Examples of risk control can be in the form of procedures and work instructions, while the risk handling is the effort that will be done as a new step to treat the risk because the existing efforts are not yet adequate.

## RISK IDENTIFICATION AND RISK MEASUREMENT

Risk identification and risk measurements were done at 8 departments and one region in the Network Operations Centre division, i.e. Front Office dept., Regional Operation Dept., Transmission Backbone Operation Dept., IP/MPLS Operation Dept., Access Operation Dept., CME Operation Dept., Core Operation Dept., Configuration Management, and Partner Management.

Risk measurement is performed prior to any action to change likelihood or risk impact, i.e. risk with conditions at the time of interview or mapping of the department. The risks that occur in each department may vary because of the differences in occupations and responsibilities. Risk measurements explain the incidence, probability of occurrence and frequency of occurrence in one year. Furthermore, risk measurement and risk criteria are determined. The summary of risk probability as well as the results of the measurement and risk criteria in each department of Network Operation Center are described in Table 4.

TABLE 4. Summary of Risk Results of the Network Operation Center Division

ti	Department	Description of Risk	Likelihood			Impact			Score Risk			Average Risk Score				
			Occur in Year	Occurrence	Score	Financial	Work Safety	Image	Impact Size	Score	Impact Score		Likelihood Score	Risk Score	Risk Criteria	
1	Front Office	1	Customer profile information to unauthorized parties	1	Rare	1	Ignored	Ignored	Affected	Major	4	4	1	4	Acceptable	$(4 + 9 + 8 + 8 + 6) : 5 = 35 : 5 = 7$
		2	Travel risk for employees on night shift	6	Possible	3	Ignored	Affected	Ignored	Moderate	3	3	3	9	Issue	
		3	Technicians fell asleep so shift alarm become late	5	Possible	4	Ignored	Ignored	Affected	Minor	2	2	4	8	Supplementary Issue	
		4	Employees provide their usernames and password to unauthorized	8	Likely	4	Ignored	Ignored	Affected	Minor	2	2	4	8	Supplementary Issue	
		5	Error in describing technical root cause by Customer Contact Services (CCS)	4	Unlikely	3	Ignored	Ignored	Affected	Minor	2	2	3	6	Supplementary Issue	
2	Regional Operation	1	Lack of Technicians	6	Possible	3	Affected	Ignored	Ignored	Moderate	3	3	3	9	Issue	$(9 + 12 + 6 + 12 + 4 + 12 + 8 + 5) : 8 = 68 : 8 = 8,5$
		2	Customer complaints against bad signal	6	Possible	3	Ignored	Ignored	Affected	Major	4	4	3	12	Issue	
		3	Lack of Operational vehicles	6	Possible	3	Affected	Ignored	Ignored	Minor	2	2	3	6	Supplementary Issue	
		4	Complaint handling is slow	6	Possible	3	Ignored	Ignored	Ignored	Major	4	4	3	12	Issue	
		5	Theft of Battery, Genset and Antenna	1	Rare	1	Affected	Ignored	Ignored	Major	4	4	1	4	Acceptable	
		6	Hoodlum, the person who impersonates as youth organization request security money	8	Likely	4	Affected	Ignored	Ignored	Moderate	3	3	4	12	Issue	
3	Transmission Backbone Operation	7	Limited Stock of Modules/Devices, affect BTS and MSC that need to repaired	3	Unlikely	2	Affected	Ignored	Ignored	Major	4	4	2	8	Supplementary Issue	$(8 + 8 + 8 + 5 + 6) : 5 = 35 : 5 = 7$
		8	Natural Disasters	1	Rare	1	Affected	Ignored	Ignored	Catastrophic	5	5	1	5	Supplementary Issue	
		1	Fiber Optic cable broken due to excavation	3	Unlikely	2	Affected	Ignored	Ignored	Major	4	4	2	8	Supplementary Issue	
		2	Disconnected cable under the sea	3	Unlikely	2	Affected	Ignored	Ignored	Major	4	4	2	8	Supplementary Issue	
		3	Coaxial cable broken due to the flood	3	Unlikely	2	Affected	Ignored	Ignored	Major	4	4	2	8	Supplementary Issue	
4	Lost of Satellite from its Orbit	1	Rare	1	Affected	Ignored	Ignored	Catastrophic	5	5	1	5	Supplementary Issue			
5	Lightning strikes /SAT link causing slow access to ATM Bank	3	Unlikely	2	Affected	Ignored	Ignored	Moderate	3	3	2	6	Supplementary Issue			



cont. Table 4

No	Department	Description of Risk	Likelihood			Impact				Score Risk			Average Risk Score		
			Occur in Year	Occurance	Score	Financial	Work Safety	Image	Impact Size	Score	Impact Score	Likelihood Score		Risk Score	
4	IP/MPLS Operation	1	Error of IP destination by the vendor resulting problem in data access	3	Unlikely	2	Affected	Ignored	Ignored	Major	4	4	2	8	Supplementary Issue
		2	Error in routing and layer setting by employee caused problem in data network	3	Unlikely	2	Affected	Ignored	Ignored	Major	4	4	2	8	Supplementary Issue
		3	Error in changing the network layer that affects the MPLS network and result in disruption of internet, video streaming and sosial media access	3	Unlikely	2	Affected	Ignored	Ignored	Major	4	4	2	8	Supplementary Issue
		4	The decline in the quality of the international Backbone Network	1	Rare	1	Affected	Ignored	Ignored	Major	4	4	1	4	Acceptable
		5	The Network broke up due to carelessness of employee	1	Rare	1	Affected	Ignored	Ignored	Catastropic	5	5	1	5	Supplementary Issue
5	Access Operation	1	Lack of human capital while tools and technology are increasing	7	Likely	4	Affected	Ignored	Ignored	Moderate	3	3	4	12	Issue
		2	Work environment security against theft (laptop, hp, etc)	7	Likely	4	Ignored	Affected	Ignored	Minor	2	2	4	8	Supplementary Issue
		3	Human Errors and Work Accident	7	Likely	4	Affected	Ignored	Ignored	Minor	2	2	4	8	Supplementary Issue
		4	Lack of Operational vehicles	6	Possible	3	Affected	Ignored	Ignored	Minor	2	2	3	6	Supplementary Issue
6	CME Operation	5	Computer/laptop facilities for outsourced employees are minimal make their performances are low	8	Likely	4	Affected	Ignored	Ignored	Minor	2	2	4	8	Supplementary Issue
		1	Frequent power outages at the site so that BTS and BSC devices are disrupted	7	Likely	4	Affected	Ignored	Ignored	Moderate	3	3	4	12	Issue
		2	Frequent delay of generator check	6	Possible	3	Affected	Ignored	Ignored	Minor	2	2	3	6	Supplementary Issue
		3	Generator set (Genset) does not work automatically	3	Unlikely	2	Affected	Ignored	Ignored	Moderate	3	3	2	6	Supplementary Issue
		4	AC for inner (MSC, BSC dan BTS) is damaged and takes a long time to have the new ones	3	Unlikely	2	Affected	Ignored	Ignored	Moderate	3	3	2	6	Supplementary Issue
		5	The ability of employees regarding air conditioners, batteries and generators are low	3	Unlikely	3	Affected	Ignored	Ignored	Moderate	3	3	3	9	Issue
6	Land leased for tower placement is not renewed by the owner	3	Unlikely	3	Affected	Ignored	Ignored	Moderate	3	3	3	9	Issue		

(8 + 8 + 8 + 4 + 5 ) : 5 = 33 ; 5 = 6,6

(12 + 8 + 8 + 6 + 8 ) : 5 = 42; 5 = 8,4

(12 + 6 + 6 + 6 + 6 + 9 + 9 ) : 6 = 48; 6 = 8

cont. Table 4

No	Department	Description of Risk	Likelihood		Impact				Score Risk			Risk Criteria	Average Risk Score		
			Occur in Year	Score	Financial	Work Safety	Image	Impact Size	Score	Impact Score	Likelihood Score			Risk Score	
7	Core Operation	1	Configuration errors on PS, CS and IN- VAS core systems by new vendors or company employees	Possible	3	Affected	Ignored	Ignored	Minor	2	2	3	6	Supplementary Issue	$(6 + 6 + 6 + 4 + 8)$ : 5 = 30 : 6 = 6
		2	“Action hardware” error while working on MSC location	Unlikely	2	Affected	Ignored	Ignored	Moderate	3	3	2	6	Supplementary Issue	
		3	Lack of supervision on vendors	Possible	3	Affected	Ignored	Ignored	Minor	2	2	3	6	Supplementary Issue	
		4	Employees provide sms and voice of subscribers without the permission of the company and the police	Rare	1	Ignored	Ignored	Affected	Major	4	4	1	4	Acceptable	
		5	Outsourcing employees get “user” that not match their level	Unlikely	2	Ignored	Ignored	Affected	Major	4	4	2	8	Supplementary Issue	
8	Configuration Management	1	The server device collapse	Possible	3	Affected	Ignored	Ignored	Minor	2	2	3	6	Supplementary Issue	$(6 + 4 + 6 + 3 + 8)$ : 5 = 27 : 5 = 5,4
		2	Server is dmaaged	Possible	2	Affected	Ignored	Ignored	Moderate	2	2	2	4	Acceptable	
		3	The Server is exposed to virus	Possible	3	Affected	Ignored	Ignored	Minor	2	2	3	6	Supplementary Issue	
		4	Password of the server is given to person who is not available	Rare	1	Ignored	Ignored	Affected	Major	3	3	1	3	Acceptable	
		5	The company uses imported server modules and materials, so it takes time for ordering and dan installation	Unlikely	2	Affected	Ignored	Ignored	Major	4	4	2	8	Supplementary Issue	
9	Partner Management	1	Vendor (supplier) approach employees through rewards to facilitate maintenance contract cooperation	Rare	1	Ignored	Ignored	Affected	Major	4	4	1	4	Acceptable	$(4 + 6 + 4 + 4 + 4)$ : 5 = 22 : 5 = 4,5
		2	Collaboration between employee and vendors in creating maintenance reports	Unlikely	2	Ignored	Ignored	Affected	Moderate	3	3	2	6	Supplementary Issue	
		3	Employees get rewards from vendors (supplier) in order to win contract tenders	Rare	1	Ignored	Ignored	Affected	Major	4	4	1	4	Acceptable	
		4	Employees reduce penalties to vendors	Rare	1	Ignored	Ignored	Affected	Major	4	4	1	4	Acceptable	
		5	Employees are not objective in determining the winning vendor	Rare	1	Ignored	Ignored	Affected	Major	4	4	1	4	Acceptable	

Source: the author's own work, based on Table 1., 2., and 3

## RISK EVALUATION

The evaluation steps ensure that not all risks identified require risk control plan. From the risk list in all departments in the Network Operation Center division as many as 49 risks, there are 9 risks with Issue criteria, 30 risks with Supplementary Issue criteria, and 10 risks with acceptable criteria. The operational risk can be classified as: risks caused by human error – 12 risks; customer Satisfaction Risk – 2 risks; partnering risk – 6 risks; fraud risk – 3 risks; procurement risk – 3 risks; human resources risk – 3 risks; business interruption risk – 4 risks; capital availability risk – 3 risks; disaster risk – 3 risks; procedure risk – 4 risks; environment risk – 2 risks; and equipment risk – 4 risks.

The results of the risk analysis are submitted to the highest responsible manager of risk in the work unit for validation. Further validation results are used to establish risk control system plan to reduce the likelihood and the impact of risk occurrences in each department. Evaluation conducted on each department in the Network Operation Center PT. IO is described in Table 5.

TABLE 5. Risk Evaluation

Department	Risk Evaluation
a. Front Office Department	<ol style="list-style-type: none"> <li>1. Travel risk for employees on night shift. This problem is solved by giving instructions to employees on shift-2 (14:00–22:00), who cannot possibly return home due to rainy days or other reasons, to continue work until shift-3 (22:00–06:00) replacing co-workers who were supposed to work on shift-3. The next day the replaced partner will work with two shifts, namely shift-2 and shift-3.</li> <li>2. Technician fell asleep so shift alarm become late. This risk is dealt with by making work instruction (IK), that sleeping during working hours will be sanctioned. Each shift leader should pay attention to his team's work every 10 to 15 minutes. Thus, the risk of late alarm can be avoided.</li> <li>3. Employees provide their usernames and passwords to unauthorized employees. This risk is overcome by creating a written rule of Standard Operating Procedures (SOPs), that employees are prohibited from giving their username and password to other employees. If the action resulted in a loss to the company, then the employee will get sanction in the form of dismissal. Prevention efforts are also done in cooperation with Security Management i.e.:               <ol style="list-style-type: none"> <li>a) employees are only given access to the information and network systems they need.</li> <li>b) implementing methods of identifying and authenticating data owned by security management and disabling passwords when not used for a certain period of time.</li> </ol> </li> <li>4. Error in describing technical root cause by Customer Contact Services (CCS). This risk is mitigated by facilitating two weekly meetings with Customer Contact Services (CCS) to resolve issues surrounding customer complaints on the network and root cause information in simple ways.</li> </ol>
b. Regional Operation Departmen	<ol style="list-style-type: none"> <li>1. Customer complaints against bad signal. Some ways to deal with this are as follows:               <ol style="list-style-type: none"> <li>a) if it occurs in urban areas, then Repeater or signal booster will be added.</li> <li>b) if it happens inside the building, then Repeater or BTS Indoor specifically for building, hotel and mall will be added.</li> <li>c) when it occurs in small urban areas or rural areas, then the addition of BTS will be added by first reviewing the business side in coordination with the sales and marketing team.</li> </ol> </li> <li>2. Hoodlum, the person who impersonates as youth organization request security money. Some ways to deal with this are as follows:               <ol style="list-style-type: none"> <li>a) cooperation with the police.</li> <li>b) personal Approach, i.e. approach to youth groups or influential people in the area.</li> <li>c) assign local thugs or youth in the area as security guards or site security officers.</li> </ol> </li> </ol>

cont. Table 5

cont. b. Regional Operation Departmen	<ol style="list-style-type: none"> <li>3. Complaint handling is slow. To solve this problem the department assigns a rapid reaction team from technical team.</li> <li>4. Lack of Technicians: To solve this problem is by training and practice sharing knowledge to existing teams in order to master and handle the technical problems of various things as well as efforts to add new employees through outsourcing.</li> <li>5. Lack of operational vehicles. To solve this problem is by optimizing available operational car, by bringing the team simultaneously to a distant area. As for the surrounding area is by empowering the employee's motor and give rewards that can be claimed to the department.</li> <li>6. Limited Stock of modules/devices, affect BTS and MSC that need to be repaired. This issue will be resolved by informing to the division and to the partner management department to immediately order the module to the designated vendor.</li> <li>7. Natural disasters. This problem is resolved by providing spare part stock at headquarters.</li> </ol>
c. Transmission Backbone Operation Department	<ol style="list-style-type: none"> <li>1. Fiber Optic cable broken due to excavation. This problem is solved by cooperating with Ministry of Public Works&amp;Housing (PU) and Regional Water Company (PDAM), so that PT. IO can monitor whether work was done that passed its cable.</li> <li>2. Disconnected cable under the sea. This problem is solved by cooperating with TNI AL and POLAIR to monitor and check the cable channel under the sea.</li> <li>3. Coaxial cable broken due to the flood. This problem is solved by cooperating with Search And Rescue (SAR) team.</li> <li>4. Lost of satellite from its orbit. This problem is solved by risk transfer method – transfer the potential loss to the insurance company.</li> <li>5. Lightning strikes VSAT link causing slow access to ATM Bank. This problem is dealt with by adding anti-lightning devices in every building containing VSAT.</li> </ol>
d. IP/MPLS Operation Department	<ol style="list-style-type: none"> <li>1. Error of IP-destination by the vendor resulting problem in data access. This problem is addressed by requiring SOPs and explanatory impacts from vendor as well as being supervised by field supervisor. In addition, vendor is allowed to leave the site after 30 minutes of work completed to ensure no impact on the data or network.</li> <li>2. Error in routing and layer setting by employee caused problem in data network. This problem is solved by making SOPs of routing and layer settings.</li> <li>3. Error in changing the network layer that affects the MPLS network and result in disruption of internet, video streaming and social media access. This problem is solved by creating SOPs of network layer.</li> <li>4. The Network broke down due to carelessness of the employee . This problem is solved by creating SOPs for network layer.</li> </ol>
e. Access Operation Department	<ol style="list-style-type: none"> <li>1. Lack of human capital while tools and technology are increasing. This problem is solved by training and sharing knowledge with existing teams in order to master and deal with technical problems on access issues (BTS, BSC and PDH) and working with regional access teams to address access issues at level-2 that are not too difficult. Besides, efforts are done to add new employees through outsourcing.</li> <li>2. Work environment security against theft (laptop, mobile phone, etc.). This problem is addressed in several ways i.e. install CCTVs and make cooperation with the CME team to create an access reader machine at the entrance of the workspace.</li> <li>3. Human Errors and Work Accidents. The problem of human error is solved by providing training and outing division activities as well as family gathering to provide refreshment for employees. Work accidents are handled by the Department of Health and Work Safety.</li> <li>4. Lack of operational vehicle. This problem is solved by optimizing operational vehicles. For non-urgent work that can be done through remote from the office or from home, will be decided without visiting the location.</li> <li>5. Computer/laptop facilities for outsourced employees are minimal which causes slow performance. The manager strives for all outsourced employees to have adequate access to computer.</li> </ol>

cont. Table 5

f. CME Operation Department	<ol style="list-style-type: none"> <li>1. Frequent power outages at the site so that BTS and BSC devices are disrupted. This problem is solved in cooperation with the State Electricity Company (PLN), by making an agreement that every time there will be a power outage, PLN will notify PT. IO so that it can immediately replace it with a generator or battery as an alternative backup.</li> <li>2. Frequent delay of generator check. This problem is solved by generating SOPs of generator check and every technician on duty should fill out the checklist generator check.</li> <li>3. Generator does not work automatically. This problem is solved by generating SOPs of generator inspection. Every technician in charge should fill out the generator and battery checklist.</li> <li>4. The ability of employees regarding air conditioners, batteries and generators are low. This problem is solved by providing training and sharing knowledge.</li> <li>5. Land leased for tower placement is not renewed by the owner. This problem is forwarded to the division to be followed up by team planning and partner management.</li> <li>6. AC for inner (MSC, BSC and BTS) is damaged and takes a long time to replace with the new ones. This issue is resolved by informing the division and the partner management department</li> </ol>
g. Core Operation Department	<ol style="list-style-type: none"> <li>1. Configuration errors on PS, CS and IN-VAS core systems by new vendors or company employees. This problem is solved by making SOPs that vendors and employees must comply with as well as training and sharing knowledge for employees.</li> <li>2. "Action hardware" error while working on MSC location. This problem is solved by making SOPs for technical personnel assigned to the MSC site, as well as training and knowledge sharing for employees.</li> <li>3. Lack of supervision on vendors. This problem is resolved by reinforcing the SOPs as well as the obligation for supervisors to accompany vendors up to 30 minutes after vendor work is completed to ensure that there is no impact on the system or network.</li> <li>4. Outsourcing employees get 'user' that not match their level. This problem is solved by monitoring and sanctions for employees who violate SOPs, unless approved by the manager. The Department also works with a team of Security Management to take precautions.</li> </ol>
h. Configuration Management Department	<ol style="list-style-type: none"> <li>1. The server device collapse. The manager reminds the employees to always work based on SOPs and do check on the server two times a day, that is when it starts to work and after finish the work so that server conditions can be detected earlier.</li> <li>2. The server is exposed to virus. This problem is solved in cooperation with the IT division to always upgrade the latest anti-virus on all server devices and employees are required to do the scan before using the server.</li> <li>3. The company uses imported server modules and materials, so it takes time for ordering and installation. This problem is solved in collaboration with Partner Management Departments and Project Division team to make an order at least 6 months before it is used.</li> </ol>
i. Partner Management Department	<ol style="list-style-type: none"> <li>1. Collaboration between employee and vendors in creating maintenance reports. This problem is solved by strengthening existing SOPs and also applying sanctions to employees who collaborate with vendors.</li> </ol>

## RISK MITIGATION

Determination of risk response or risk mitigation is carried out against the risks that have been filtered out in the evaluation step, to further control plan. Risk treatment and risk mitigation options generally include:

1. Avoidance of risk, means not carrying out or continuing activities that may cause risk.
2. Risk reduction, risk treatment to reduce the likelihood of occurring or reduce exposure to its impact, or both.

3. Risk sharing, an action to reduce the possibility of risks through insurance, outsourcing, subcontracting, acts of protection, transactions of foreign currency values, etc.
4. Risk Acceptance, not doing anything against the risk.

In the Network Operation Center division there exist 35 documents that covers all the risks that have been evaluated, as a way to risk mitigation as described in Table 6.

## MANAGERIAL IMPLICATIONS

The managerial implications of operational risk mitigation at PT. IO can be done by using Planning, Organizing, Actuating, and Controlling (POAC) approach, namely:

### 1. Planning

PT. IO can plan a more comprehensive operational risk mitigation strategy through discussions conducted by Risk Managing Division. This plan is undertaken by evaluating all identified risks in the company and together with all departments formulate mitigation actions to be taken to address those risks. Separate risk management in each department will result in different ways of handling the same type of risk. So risk management becomes inefficient.

### 2. Organizing

Organizing can be done by placing the right person in the risk management process. The risk assessment process should be performed by the department head. Delegate tasks to the incompetent staff may affect the validity of the data.

### 3. Actuating

PT. IO needs to play an active role in raising participation and awareness of employee regarding the risks and their effort to mitigate the risks.

### 4. Controlling

Supervision on corporate risk mitigation implementation can be done by improving the supervision function of Risk Management Division.

TABLE 6. Risk Mitigation Documents in Network Operation Center Division PT.IO

No	Name of Documents	Responsible Unit
1	Cooperative Contract between PT.IO, PU and PDAM	Transmission Backbone Operation
2	Cooperative Contract between PT.IO and TNI	Transmission Backbone Operation
3	Cooperative Contract between PT.IO and POLAIR	Transmission Backbone Operation
4	Working Instruction (IK) – Working shift	Consumer Front Office
5	IK – Night Working Shift	Consumer Front Office
6	SOPs Security User	Consumer Front Office
7	Form Customer Complaint	Consumer Front Office
8	SOPs Field Inspection	Regional Operation
9	IK – Field Inspection	Regional Operation
10	IK – Work safety	Regional Operation
11	Cooperative Contract between PT.IO and POLRES	Regional Operation
12	Establish rapid reaction team	Regional Operation
13	IK – Professionalism: Outsourcing	Regional Operation

cont. Table 6

14	Cooperative Contract between PT.IO and ASTRA Rent Car	Regional Operation
15	IK – Work Standard Module	Regional Operation
16	SOPs Countermeasures earthquake	Regional Operation
17	SOPs Fire Prevention and Countermeasures	Regional Operation
18	SOPs IP/MPLS System	IP/MPLS Operation
19	SOPs Configuration Routing	IP/MPLS Operation
20	SOPs Monitoring Traffic	IP/MPLS Operation
21	IK – Professionalism: Outsourcing	Access Operation
22	SOPs Environmental Safeness	Access Operation
23	SOPs Device Inspection	Access Operation
24	Division System Budgeting	Access Operation
25	SOPs Genset Preparation	CME Operation
26	IK – Genset Checklist	CME Operation
27	IK – Professionalism: Outsourcing	CME Operation
28	Long term contract with Landowner	CME Operation
29	SOPs Configuration System	Core Operation
30	SOPs Hardware and Software Protection	Core Operation
31	SOPs Vendor Monitoring	Core Operation
32	SOPs User Security	Core Operation
33	SOPs Server Control	Configuration Management
34	SOPs Procurement	Configuration Management
35	SOPs code of ethics with vendors	Partner Management

Source: Network Operation Center, PT.IO, Jakarta.

## CONCLUSIONS

The results showed that the company have to focus on 9 risks with Issue criteria, which require immediate action to manage risk or reduce risk. Most of the operational risks in Network Operation Network Division of PT. IO, i.e. 40 out of 49 identified risks have been handled properly, indicated by low levels of risk with acceptable and supplementary issue criteria, and it has 35 documents as a way of mitigation. Nonetheless, efforts are still needed to improve and update mitigation strategies because of the possibility of new risks and increased risk levels.

This study demonstrated the importance of identifying, measuring risk, and evaluate the risks for the company. Thus, it can be seen how far the company has prepared mitigation against identified risks, and the need to improve mitigation strategy.

This study has not fully explained the overall impact, such as financial losses of any identified risks. In addition, the evaluation and mitigation of impacts undertaken were still at the senior managers and engineers level. Therefore, it became a proposal for further research.

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**Summary:** This research is try to identify the operational risks in Network Operation Center division of PT. IO; measure and evaluate the risks, as well as make control and response measures to operational risks. The research method was a survey and Focus Group Discussion, by using a questionnaire as a research tool. The sample selection is done by Quota sampling and Convenience sampling methods to the employees in Division Network Operating Center PT.IO, which has had experience of at least 5 years. The results showed that as many as 40 out of 49 identified risks have been handled properly. Against these risks,



the company have 35 standard operating procedure documents (SOPs) as a mitigation of those risks. Nonetheless, efforts are needed to improve and update mitigation strategies because of the possibility of new risks and increased risk levels. It becomes a suggestion for further research as well as suggestion to undertake further research on mitigation at the division and director level.

**Key words:** risk, likelihood, impact, risk criteria, risk mitigation

**JEL:** M10, L21

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## **STRATEGIC MANAGEMENT OF TRANSNATIONAL BANKS IN THE INTERNATIONAL MARKET AFTER THE GLOBAL FINANCIAL CRISIS**

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### **INTRODUCTION**

Continuing crisis in Ukraine's financial and banking system demands not only the need of a radical revision of the state's anti-crisis policy, but also the improvement of scientific and methodological approaches to the formation of post-crisis strategic priorities of banks in the post-crisis period. In particular, there is a need for further study of the issues related to the influence of combinations of different types of financial crises on the credit and investment market and the global banks' strategic vectors on it, the rationale for post-crisis changes in strategic determinants of the activities of different types of banks in different segments of credit and investment market, the formation of an effective tools' portfolio in post-crisis strategic bank's management, etc. A prerequisite for solving the above-mentioned issues is the development of scientific and methodological approaches to the formation and implementation of strategies of banks in the credit and investment market during the recovery of the economy after the financial crisis.

During the liberalization of the capital markets, the countries significantly reduced or removed at all the restrictions on the banking sector, giving foreign banks greater access to the domestic market, both in terms of investment and in terms of servicing domestic economic agents. As with other forms of capital liberalization, the presence of foreign banks may increase the presence of international capital, increase the level of real investment and economic growth in the capital recipient country.

## METHODOLOGY AND RESULTS

Quite often, the arrival of foreign banks leads to increased competition in the domestic market, increased financial and economic efficiency of economic entities, and reduced transaction costs in financial intermediation [Stezhko 2009]. In addition, the presence of foreign banks stimulates the improvement of control and oversight bodies in the country [Berger et al. 2000]. However, the 2008 financial crisis has called into question the positive impact of transnational banks on the country's economy. The collapse of Lehman Brothers in September 2008 led to a reduction in the global liquidity of the world economy, which led to a reduction in the international activity of banks, especially in the countries with emerging markets. From 2007 to 2008 international bank loans decreased by 80%: from 500 billion to 100 billion USD. This led to a sharp decline in production in 2009, especially in the countries with emerging markets [Calvo 1996]. Exit of international banks from emerging markets has caused a collapse in domestic asset prices and the destruction of domestic financial systems in these countries.

We consider next hypotheses about transnational banks behaviour just after the crisis.

1. Transnational banks will leave countries with greater risks and lower profitability, they will search for more effective markets that let them earn more profits.
2. Transnational banks will increase their presence in those countries, where crisis had the lowest impact on economy, because credit and regulatory risks in such countries would be lower.
3. The effectiveness of monetary transitional mechanism is important factor, that can influence transnational banks behaviour in contrast to financial and macroeconomic factors.

For the purposes of this paper, we examine just European countries and bank, because they have crucial impact for the most Eastern European countries and their banking systems, including Ukraine.

Considering the fact that the behaviour of transnational groups in different countries differed in terms of the development of their subsidiaries, we will conduct an analysis of the relationship between the presence of foreign capital in the banking system and individual indicators of economic development and development of the banking system. We understand that there were many non-financial factors stimulating crisis (e.g. lack and fall of consumer confidence, chain reactions in consumers and banks behaviour and so on), but we opine that every non-financial impact has its financial interpretation, so it can be counted by some financial indicator. For that purpose we consider the following groups of indicators:

1. Indicators of profitability of banking activities:
  - return on assets;
  - return on capital;
  - net interest margin;
  - commission income;
  - the average level of credit rates.
2. Indicators of financial stability of the banking system:
  - the ratio of regulatory capital to risk-weighted assets;
  - the ratio of regulatory capital of the first level to risk-weighted assets;

- the ratio of non-performing loans excluding reserves to equity;
  - the ratio of non-performing loans to total gross loans;
  - the ratio of loans by sector of the economy in total gross loans;
  - the ratio of interest margin to gross income;
  - the ratio of non-interest expenses to gross income;
  - the ratio of liquid assets to total assets;
  - the ratio of liquid assets to short-term liabilities;
  - the ratio of net open position in foreign currency to capital;
  - the ratio of capital to assets;
  - the ratio of open positions to capital.
3. Indicators of ease of doing business (doing business ranking):
- registration of enterprises;
  - obtaining permits for construction work;
  - registration of property;
  - obtaining loans;
  - protection of minority investors;
  - taxation;
  - international trade;
  - resolution of insolvency issues.
4. Indicators of the speed of the country's exit from the financial crisis:
- GDP growth;
  - increase in the deposit portfolio;
  - increase in the loan portfolio;
  - increase in Z-score;
  - the growth of assets of the banking system;
  - decrease in the volume of state support to banks;
  - increase in international reserves;
  - increase in public debt.
5. Indicators of the financial crisis of different types:
- the ratio of customer deposits to total gross loans (excluding interbank loans);
  - the ratio of liquid assets to short-term liabilities;
  - the ratio of net open position in foreign currency to capital;
  - the ratio of non-performing loans excluding reserves to equity (the right scale);
  - the ratio of public debt to GDP;
  - the consumer price index;
  - the ratio between external and internal public debt;
  - the ratio of corporate debt to GDP;
  - the exchange rate of the national currency to the USD;
  - the equity of foreign trade balance;
  - the balance of the financial account;
  - the volume of international reserves of the central bank;
  - the ratio of net open position in foreign currency to capital;
  - the ratio of the volume of foreign direct investment to GDP;
  - the discount rate;
  - the difference between the central bank discount rate and LIBOR.

We selected the following factors as indicators of the presence of foreign banks:

- increase in loans from non-resident banks;
- increase in the share of external loans and deposits of banks in loans and deposits of the entire banking system;
- increase in the share of assets of foreign banks in the aggregate assets of the banking system;
- increase in the share of foreign banks (number) in the banking system.

During 2008–2011 many regulations were done both – on the local levels and Central European Bank level. For example in 2009–2013 European Parliament adopted CRD II (2009), III (2010) and IV (2013) that made banks to modify their reserve politics. But we think that those changes will have strategic impact, that can be analysed after at least 5 years of work. Anyway, those regulations were initiated by crisis consequences, so we cannot consider them separately, but we will analyse financial factors that caused regulation measures and were influenced by them. That let us to avoid difference in impact that Basel 2.5 and Basel III had in different countries.

The main method of analysis we use is Pearson correlation analysis. We consider that crisis that started in 2008 in Europe had its peak in 2010–2011 and starting from 2011, in most countries we can observe the beginning of recovery. So in that opinion we can take 2011 as the start point of post-crisis recovery.

In European countries, the decline in external assets and liabilities reached 20% over a fairly short period of time (Fig. 1).

As can be seen from Fig. 1, the largest value of external assets and liabilities was observed in November 2008, followed by a significant decline. In our opinion, such a decline was a reflection of the policy of European transnational banks, aimed at supporting the main “parent” business.

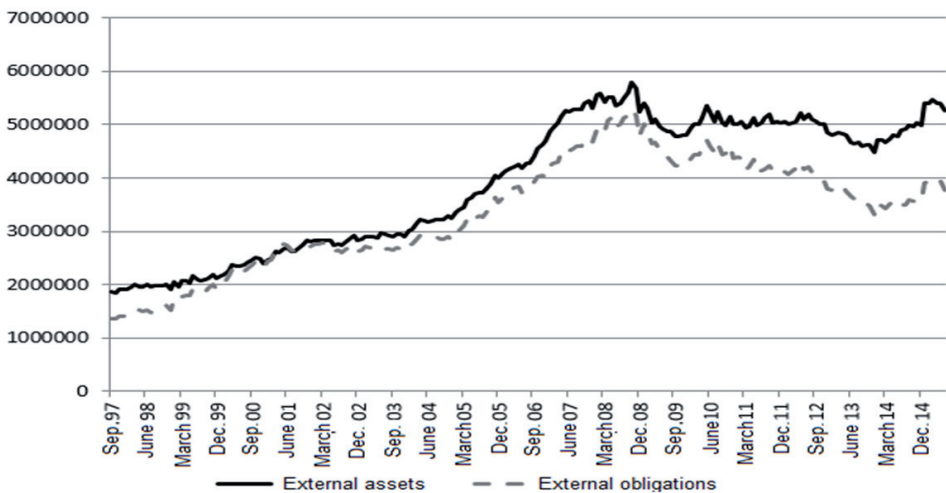


FIG. 1. International position of banks in EU countries in 1997–2014 in million EUR

Source: the authors based on European Central Bank database.

Researchers [Claessens and van Horen 2011, Dekle and Lee 2012] note that in the early 2000s the expansion of the international network of banks from Europe took place gradually. In 1997, foreign assets and liabilities of European banks amounted to about 2 trillion EUR. Over the next 6 years, they increased by 50% and reached almost 3 trillion EUR for 2003. The reasons for such a gradual increase were both the crisis of dotcoms, which made banks more prudent in choosing industries for lending and investment, and the underdevelopment of economies in post-soviet countries. Ukraine, Belarus and Russia – the largest post-soviet economies have suffered the crisis of 1998 that hit their financial sectors, reducing their financial and investment attractiveness for European banks. The countries of central, eastern and southern Europe also experienced severe market transformations. 2003 marked the end of the period of uncertainty. In Southern Europe military operations were over, the countries of Central Europe successfully carried out monetary reforms and began to develop rapidly. Ukraine, Russia and Belarus also recovered from the crisis and began to demonstrate real progress in economic development. It was in 2003 that the active expansion of European transnational banks began. In Figure 1 this is noticeable since the end of 2002, when external assets started to grow at a faster pace than the commitments, which meant the active development of overseas branches and subsidiaries with donor funding from parent banks.

In the inter-crisis period – starting from 2003 (the end of the crisis of dotcoms) to the beginning of 2008 (the beginning of the global financial crisis), the foreign assets of banks in the European Union increased from 2.9 trillion EUR to 5.5 trillion EUR, or almost by 90%, with a slightly lagging growth rate of external corporate debt. A similar situation was observed during 1999–2001 before the dotcoms crisis. This testifies to the policy of active expansion conducted by transnational banks.

With the beginning of the crisis of 2008–2009, the volume of external assets and external liabilities almost equalled, indicating the transfer of external units to self-financing. At the same time, the growth of such assets has ceased, moreover, in fact for one year (from November 2008 to November 2009), foreign assets decreased from 5.8 trillion EUR to 4.8 trillion EUR, i.e. by 17.2%. It should be added that the growth of lending to foreign banks in the period 2003–2008 was carried out quite actively. Almost half of the external assets of the banks that carried out the expansion were issued as loans (Fig. 2).

And such as in the case of assets, there is a decrease in lending – from 2.4 trillion EUR to 1.9 trillion EUR for the period from 01.10.2008 to 01.10.2009 or by 21%. At the same time, the volumes of lending by non-resident banks during the period of expansion grew more than two times – from 1.1 trillion EUR to 2.4 trillion EUR, or by 120%.

The study of the causes and consequences of the global financial crisis [Claessens et al. 2001, Collins and Kincaid 2003, Bussiere 2006, Dell' Ariccia et al. 2008, Allen et al. 2009, Reinhart and Rogoff 2009, Dobravolskas and Seiranov 2011, Claessens and Ayhan 2013] shows that most transnational banks suffered from the initial shock of liquidity, especially as reflected in the balance sheets of parent banks, which in turn led to a reduction in lending in foreign markets. Such a reduction in lending, especially in significant volumes, was observed in relation to European banks in the markets of Eastern Europe, Asia and Latin America.

Separate scholars [Claessens and van Horen 2011] indicate that there is a close link between the volume of reduction in lending of a specific transnational bank and the level

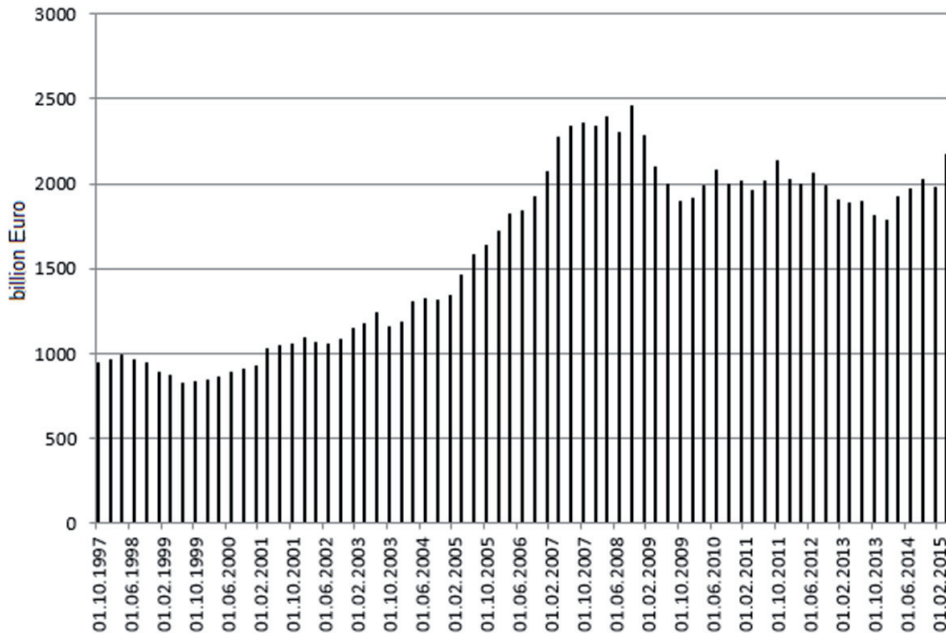


FIG. 2. Dynamics of loans granted by non-resident banks in the European Union in 1997–2014 in million EUR

Source: the authors based on European Central Bank database.

of public debt in the country where the headquarters of such a bank is located. Banks from European countries, where the high level of public debt was observed, reduced lending in foreign banking markets to a greater extent than banks with headquarters in countries with low levels of public debt.

Such an effect can be explained in the following way. With the beginning of the financial crisis, banks began to feel the acute shortage of liquidity. To cover the lag of liquidity, state governments have traditionally resorted to the same monetary tools. Basically, these are refinancing tools. However, for their application, especially on a large scale, considerable financial resources are required. It is obvious that countries that already had a high level of public debt were limited in their ability to quickly raise additional capital, and that which was involved was rather expensive. Thus, transnational banks were forced to assess the difference in the cost of supporting their own banking business by attracting additional resources from the state and by releasing resources from their foreign assets. This justifies the fact that for banks from countries with a high level of public debt it was more profitable to reduce the amount of support for their own franchise to save the parent bank rather than to attract additional support for liquidity from the state.

As to the commitments, during the period of expansion, they increased almost two times – from 1.6 trillion EUR in the beginning of 2003 to 3.1 trillion EUR at the end of 2008, or by 94% (Fig. 3).

The decrease in the total volume of liabilities of non-resident banks was more rapid than the volume of assets – from 5.2 to 4.2 trillion EUR, or by 19.2% over the period from



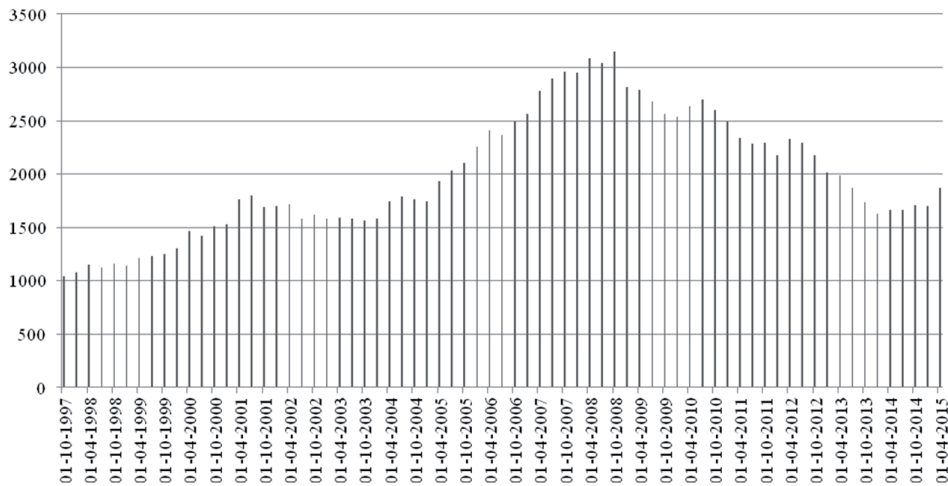


FIG. 3. Dynamics of deposits of non-resident banks in EU countries, in 1997–2015 in billion EUR  
Source: built by authors based on European Central Bank database.

November 2008 to November 2009. At the same time, we can state that the financial and economic crisis has significantly impacted on the liquidity of balances of foreign banks. Thus, during the year of the crisis (from November 2008 to November 2009), the reduction of the deposit base was 18.5%, and in the next 5 years, another 36.7%.

In a situation where banks are experiencing a sharp outflow of resources, banks tend to reduce lending. The sharp contraction of bank liabilities (for example, the withdrawal of banks from the market, accompanied by a reduction in liabilities for which the required reserves are calculated) creates the need to find new sources of resources that would be able to cover the lack of liquidity, and subject to a reduction of the interbank credit market this problem can be solved only by reducing the volume of lending, otherwise the bank will not be able to meet the reserve requirements.

The study of the American banking market and the international activities of American banks during the 2008–2009 crisis shows that the crisis in Africa and Asia has led to a significant reduction in lending, while in the American banking market, the reduction in lending was not so high [Frankel and Saravelos 2012 see also: Bech 2016, Barrel et al. 2010, Cetorelli and Goldberg 2010, Popov and Udell 2010, Babecky et al. 2012]. As for European banks, they have become leaders in reducing lending in the US and Latin American markets.

In both of the considered crises (2001–2002 and 2008–2009), there is a levelling of volumes of foreign assets and liabilities of transnational banks, indicating the tendency of transnational banks to withdraw their own investments from subsidiary banks during the crisis and at its completion. Let us analyse in more detailed data on the international financial activity of individual banking groups.

The most interesting for the analysis in this case is the Raiffeizen Bank International group, as this group is one of the most widespread and successful international banking

groups in the former USSR. Let's consider the dynamics of the assets of the banks of the Raiffeisen International Group by regions (Fig. 4).

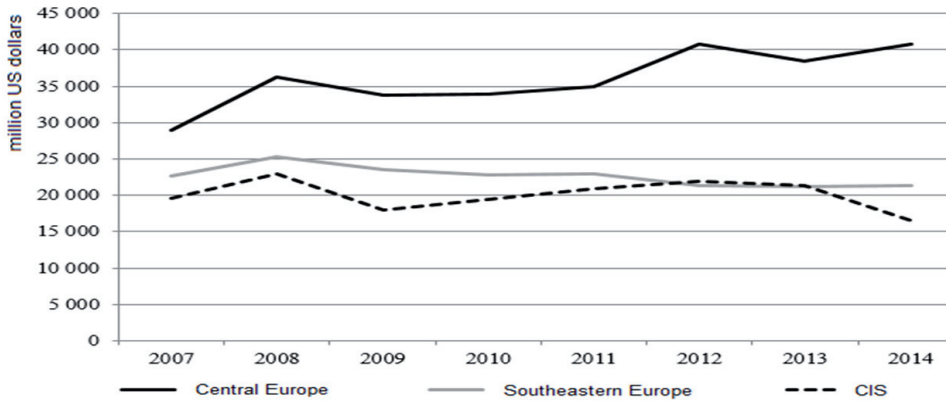


FIG. 4. Assets of the Raiffeisen International Group banks by regions in 2007–2011 in million USD  
Source: the authors based on Official consolidated annual report of the Raiffeisen Bank International.

As we see from Figure 4, the Raiffeisen Bank International Group ceased to pursue the expansion policy in 2007. Starting from 2008, the bank has virtually ceased to expand its business in Southeast Europe and the CIS. Instead, there is an increase in the assets of Central Europe, that is, in Austria, where the parent bank is located. This again leads us to the hypothesis that in the times of crisis and post-crisis recovery, large transnational banks prefer to develop and rescue their main business, while neglecting the interests of the regional divisions. An illustration of this policy is the volume of external debt of PJSC “Raiffeisen Bank Aval” (Ukraine), which was mainly formed by borrowing from the parent bank (Fig. 5).

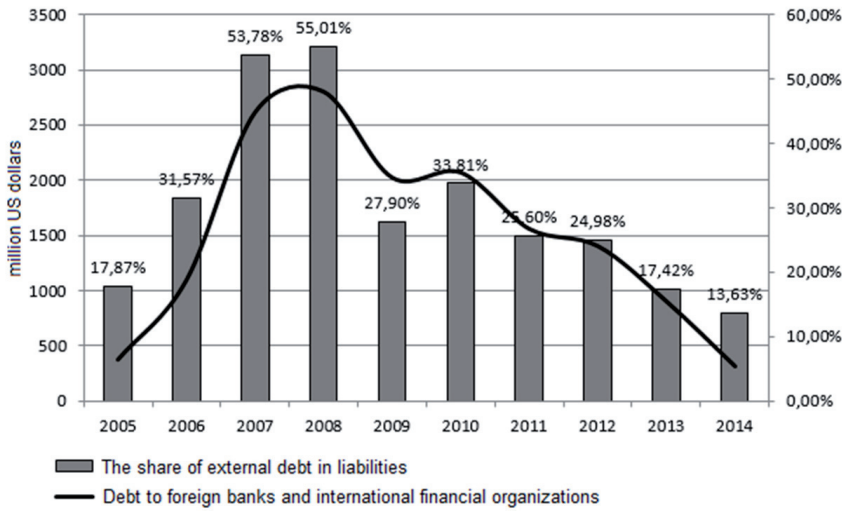


FIG. 5. Dynamics of external debt of PJSC “Raiffeisen Bank Aval” (Ukraine)

Source: the authors based on Official consolidated annual report of the Raiffeisen Bank International.

Starting from 2009, and despite the devaluation of the Ukrainian hryvnia, the share of external debt in the structure of the bank’s liabilities decreased twice within the year, and

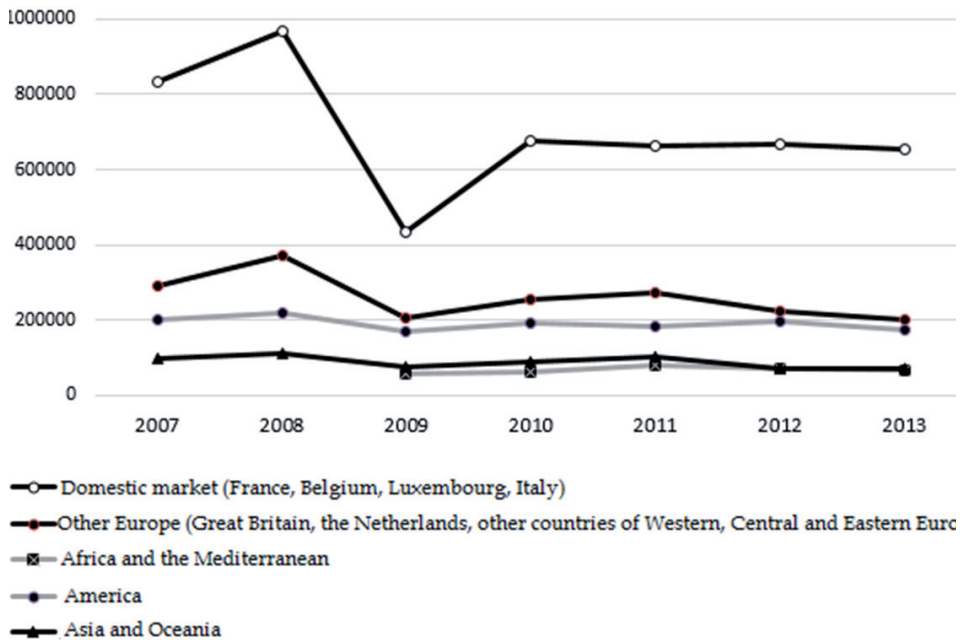


FIG. 6. Dynamics of assets of the BNP Paribas Group by country of placement in 2007–2013

Source: the authors based on Official consolidated annual report of the BNP Paribas Group.

even more than twice in the next 5 years. In fact, the Ukrainian branch of Raiffeisen International has almost lost the support of the parent company. During this period, one should also note the change in the bank's business model, which, from a universal one, actually turned into a corporate bank. Another vivid example of a change in the vector of development is demonstrated by the BNP Paribas Group (France). In the pre-crisis period of 2006–2007, the BNP Paribas Group has grown its assets in Central and Eastern European countries by 27%. Analysing the international activity of the group during the last two crises (2008–2009 and 2012–2013), it can be concluded that the largest group reduced its assets in 2008–2009 in local European markets and in European countries (Fig. 6).

As we see from Figure 6 in the post-crisis period, the BNP Paribas Group actively resumed assets on the so-called domestic market, which includes France, Belgium, Luxembourg and Italy. At the same time, assets in other regions of the world have not undergone significant global changes. Let's analyse the activity in the international markets of another large banking group in Europe – UniCredit Group. This group is represented in 18 countries of Europe (total 104 subsidiaries and representative offices), in 8 countries of Asia and Oceania (9 subsidiaries and representative offices), in 3 countries of America (4 subsidiaries) and in 3 countries of Central Asia and Africa (3 subsidiaries). In Ukraine, the group until 2017 was represented by PJSC “Ukrsotsbank”, which has a long and successful history of activities in the market of banking services of Ukraine. In 2016, the UniCredit Group decided to sell its Ukrainian subsidiary company. The new owner of PJSC “Ukrsotsbank” for today is Alfa Group. Table 1 shows the dynamics of assets of regional banks of the UniCredit Group in the countries of Eastern and Central Europe.

TABLE 1. Risk weighted assets of UniCredit Group regional units, in 2007–2016 in millions EUR at the end of the year

Country	Years									
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Poland	25 726	22 544	22 011	22 969	23 234	25 185	24 162	25 894	25 810	25 649
Turkey	10 300	9 382	13 143	16 870	18 519	21 020	19 144	24 367	28 767	29 092
Russia	9 048	11 596	9 560	11 787	14 731	17 205	16 808	15 690	15 080	14 191
Ukraine	0	4 189	4 324	4 076	4 158	3 764	3 543	2 741	1 992	1 917*
Croatia	7 525	8 460	7 731	8 707	9 588	9 038	7 906	7 850	7 594	7 559
Kazakhstan	5 725	5 571	4 809	4 687	4 391	0	0	0	0	0
Bulgaria	2 685	3 916	4 472	4 285	4 411	5 002	4 969	5 118	5 060	4 876
Romania	2 479	3 300	2 878	3 327	3 864	4 015	4 016	4 831	5 389	5 491
Hungary	4 268	4 677	4 223	4 079	4 270	4 052	3 669	3 967	3 979	3 869
Czech Republic	7 756	7 797	7 459	7 921	7 595	7 553	7 714	8 532	9 612	10 153
Slovakia	2 352	2 843	2 778	3 318	3 143	2 811	2 759	3 175	3 555	3 567
Bosnia	1 235	1 437	1 835	1 933	1 533	1 577	1 528	2 394	2 729	2 653
Slovenia	1 531	2 020	1 997	2 149	2 278	1 855	1 515	1 251	1 119	1 276
Serbia	731	753	1 611	1 749	1 838	1 743	1 763	2 452	2 801	2 547

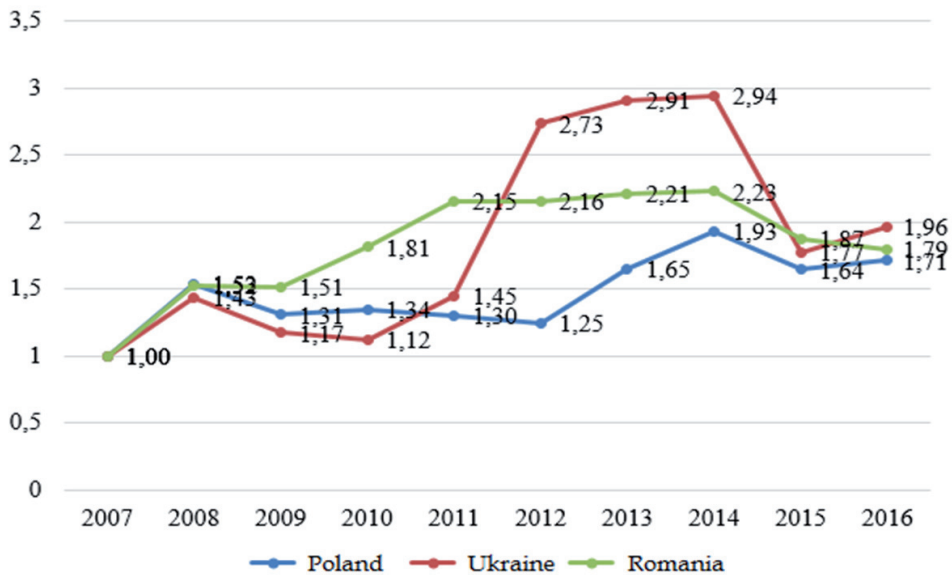


FIG. 7. The index of growth of assets of banks belonging to the Credit Agricole Group in the countries of Central and Eastern Europe, base year – 2007

Source: the authors based on (Official consolidated annual report of the Cr dit Agricole Group.

\* data are presented at the end of the third quarter of 2016, because then the group left the Ukrainian banking services market

Source: the authors on based on Official consolidated annual report of the UniCredit Group.

As we see, the decline in assets in the post-crisis period occurred only in Bosnia, Bulgaria, Kazakhstan and Ukraine. In all other countries, volumes of assets continued to increase in the post-crisis period. This behaviour of the international transnational banking group contradicts the hypothesis of withdrawal of capital from subsidiaries during the crisis; therefore, to explain this fact, it is necessary to analyse additional factors that may influence the decision to increase or decrease the presence of a transnational bank in the market of a particular country.

Let's consider the dynamics of development of subsidiary banks of another large transnational banking group, Credit Agricole Group, which has 2,771 local banks in France and more than 1,000 units in 52 countries of the world (Fig. 7). As we can see from this Figure, in 2009 there was a short-term and insignificant decline in the assets of banks in Eastern Europe (other countries were not analysed due to the insignificant presence of the group or lack of necessary statistics).

At the same time, the growth in Ukraine began in 2011 and in Poland as early as 2013. The associated company in Romania has more quickly emerged from the crisis because since 2010 the assets have already grown. However, Credit Agricole Group did not dem-

TABLE 2. Correlation between economic indicators and the share of foreign banks

Country	Indicators that have shown an impact on the presence of foreign banks in local banking systems												
	The ratio of banks' capital to assets	Loans to deposits ratio	Deposits to GDP	The share of problem loans in total	Adequacy of regulatory capital	The presence of a banking crisis (dummy-variable)	Z-Score	Price index	The ratio of loans to residents to GDP	The ratio of external loans and deposits to total loans and deposits	GDP	Banking investments	Loans from non-resident banks
Austria	0.49454989	-0.70581954	0.5	-0.523	0.255	0.43	0.1	0.4	0.005	-0.4840789	0.6	-	-0.346
Belgium	0.82304263	-0.89304958	0.9	0.902	0.883	0.762	0.7	0.8	-0.918	-0.7989928	0.6	-	0.822
Bulgaria	-0.07421999	0.4541629	-0.3	-0.631	-0.388	-	-0.1	-0.3	0.056	-0.0222622	-0	0.88	-0.787
Greece	0.17834358	-0.30394539	0.3	-0.658	-0.489	0.455	-0.3	-0	-0.097	0.76786793	0.9	-	0.159
Denmark	-0.11478626	0.232877585	0.4	0.265	0.109	0.369	-0.4	0.3	0.646	-0.0373972	0.5	-	-0.101
Ireland	-0.28408530	0.273427574	-0.7	-0.433	-0.423	-0.959	0.2	-0.5	0.051	0.52614992	-0	-	-0.044
Spain	-0.44075139	0.411460074	0.7	0.94	0.345	0.743	-0.4	0.8	0.48	-0.0689671	0.5	-	-0.405
Italy	-0.49864326	0.121874343	0.7	0.431	0.381	0.577	-0.2	0.6	0.777	-0.4162291	0.8	-	-0.356
Latvia	-0.26603865	0.863036787	0.5	0.321	-0.153	0.536	-0.6	0.4	0.934	-0.6057932	0.6	0.82	-0.154
Lithuania	-0.06788134	0.207994476	-0.2	-0.328	-0.227	-	-0	-0.1	0.133	-0.1511189	0.1	-	-0.312
Netherlands	-0.14242882	0.007936329	-0.1	0.236	-0.177	-0.415	0.7	-0.3	-0.076	0.22144771	-0	-	0.358
Germany	-0.02104783	0.161162417	-0.2	-0.021	-0.177	-0.201	0.1	-0.1	0.187	-0.0071430	-0	-	0.284
Norway	0.63372464	-0.68673437	-0.6	-0.399	-0.29	-	0.4	-0.6	-0.427	0.3817636	-1	-	0.084
Poland	-0.03911385	-0.18987128	-0.2	-0.221	-0.28	-	0.1	-0.1	-0.134	0.11725382	0.1	-0.8	0.002
Portugal	0.14455706	0.612992729	0.5	0.341	-0.447	0.463	-0	0.4	0.707	-0.0817684	0.7	-	-0.693
Slovenia	0.74549931	0.607843745	0.1	0.351	0.02	0.458	-0.3	0.6	0.767	-0.1053692	0.6	-	0.314
Slovakia	-0.10822735	-0.71076914	-0.2	-0.79	0.243	-0.633	-0.4	0.1	-0.767	-0.3325819	0.1	-0.6	-0.169
Ukraine	-0.37862627	0.888137854	0.8	-0.705	-0.071	0.766	-0.7	0.7	0.878	0.50767824	0.8	0.93	-0.198
France	-0.35114238	0.440373875	0.5	-0.019	-0.121	0.73	-0.6	0.3	0.608	0.16659468	0.6	-	-0.411
Croatia	0.04331988	0.243241967	0	-0.078	-0.072	-	0.1	0.1	0.123	-0.2316088	0.1	0.06	0.74
Czech Republic	-0.27733231	-0.28102312	-0.2	-0.576	-0.411	-	-0.6	-0.3	-0.296	0.22810943	-0	0.73	-0.591

Source: calculated by authors based on European Central Bank database.

TABLE 3. Results of the analysis of the response of transnational banks to the structure of the complex financial crisis (2007–2008), the rate of recovery of economies and banking systems in Europe in the post-crisis period (2009–2011)

Country	The presence (+/-) of the financial crisis of the corresponding type in 2007–2008)				Indicators of the speed of the post-crisis (2009–2011), the recovery of the economy of banking systems in Europe				Indicators of the reaction of transnational banks to the structure of an integrated financial crisis and the speed of post-crisis recovery of economies and banking systems in Europe			
	Banking	Debt	Currency	Balance of payments	GDP growth [%]	Increase in banks' deposit portfolio [%]	Increase in the loan portfolio of banks [%]	Increase in Z-score [%]	Growth of loans from non-resident banks [%]	Increase in the share of external loans and deposits of banks in loans and deposits of the entire banking system [%]	Increase in the share of assets of foreign banks in total assets of the banking system [%]	Increase in the share of foreign banks (number) in the banking system [%]
Austria	+	-	-	-	+8	-7	-2	-15	-16	-20	-12	0
Belgium	+	-	-	-	+9	+1	-6	+18	-15	-17	-2	0
Bulgaria	-	-	-	-	+9	+7	-5	+4	-32	-12	-11	-6
Greece	+	+	-	-	-13	-5	+33	-100	+46	-21	-36	+14
Denmark	+	-	-	-	+7	-19	-7	+19	-13	-10	-10	-11
Estonia	+	-	-	-	+18	-3	-23	+641	+23	+216	-2	0
France	+	-	-	-	+6	-4	+2	-5	-2	+16	0	-20
Finland	+	-	-	-	+9	-1	+4	-35	+15	-30	+7	0
Germany	+	-	-	-	+10	-2	-14	+8	-15	-25	-8	0
Czech Republic	-	-	-	-	+11	-2	+7	-1	+7	-13	-1	-4
Croatia	-	-	-	-	-1	+13	+5	-1	+18	-46	0	+9
Ireland	+	+	-	-	+2	-10	-32	+359	-25	-13	0	-3
Italy	+	-	-	-	+4	-4	+8	-20	-8	+11	0	+10
Latvia	+	-	-	-	+9	-1	-25	+92	-2	+31	-12	-11
Lithuania	-	-	-	-	+16	-6	-29	+246	+26	+22	-3	-4
Netherlands	+	-	-	-	+4	0	-2	+16	+7	-21	+166	+7
Norway	-	-	-	-	+29	-3	-2	+17	-1	+20	-6	0
Portugal	+	+	-	-	0	0	-2	-21	-19	-14	-8	-3
Poland	-	-	-	-	+20	+6	+9	+6	-1	+10	-1	-3
Serbia	-	-	-	-	+9	+12	+12	-1	+73	-10	+3	+5
Slovenia	+	-	-	-	+2	+3	-1	-14	-6	-50	-4	0
Slovakia	-	-	-	-	+10	-12	+4	+11	+23	+3	+1	-8
Spain	+	+	-	-	-1	-5	-3	-15	-5	-5	0	+29
European Union	+	+	-	-	+6	-7	-4	-16	-2	+14	-	-
Countries outside the European Union:												
Turkey	+	-	-	-	+26	-2	+36	-14	-6	-37	0	-8
Ukraine	+	+	+	+	+39	-5	-22	+33	+14	-18	-11	+2

Source: calculated by authors based on European Central Bank database.

onstrate the volume of additional injections into its associated companies, and in fact, this increase was provided by the forces of the subsidiaries themselves.

As a result, we note that among all the certain factors in the greatest statistical significance are the following:

- GDP growth;
- increase in the loan portfolio;
- increase in the deposit portfolio;
- increase in Z-score (Tables 2 and 3).

These factors as well as the presence of several types of crises have a great impact on the behaviour of foreign banks in local markets. In some cases, when the dynamics of relevant factors indicated the need to exit the market (there was a reverse trend in some countries), transnational banks increased their presence. An in-depth analysis of the actions of regulators in the crisis period showed that these countries demonstrated a high degree of efficiency of the transmission mechanism of monetary policy, that is, in such countries the market reacted quickly enough to the implemented regulatory measures. In our opinion, this contributed to the leaving of transnational banks in such countries, even with unfavourable dynamics of relevant factors.

## CONCLUSIONS

The hypothesis regarding the post-crisis change in strategic priorities of transnational banks has been checked on the data of Ukraine and other European countries. An analysis of the policy of the four largest European transnational banking groups (Raiffeisen International, BNP Paribas, Cr dit Agricole and UniCredit) to expand/narrow their activity outside the bank of the country for 2000–2016 has shown that in the pre-crisis period, all these banking groups actively expanded their the net abroad (for example, only in 2006–2007 the BNP Paribas group increased its assets in Central and Eastern European countries by 27%), during the crisis, they contracted foreign assets and suspended further expansion of the network (for example, during the in 2008, the assets of the Raiffeisen International group in Central Europe declined by 9%, in the South East – by 15%, and in the CIS countries – by 23%), and in the post-crisis period there was a clear general tendency to change the strategic priorities of these banking groups absent (different groups in different countries behaved differently).

In order to identify the factors that influence the strategy of transnational banks in the post-crisis period, the work analyses the correlation between the volumes of assets of foreign banks in the banking systems of European countries in 2009–2011 and the following factors: 5 indicators of return banking activity in the country; 12 indicators of financial stability of the banking system; 8 indicators of ease of doing business; 8 indicators of the rate of exit of the country from the financial crisis; 12 indicators of the availability of various types of financial crisis.



Calculations showed no explicit link between the presence of foreign banks in the banking system and performance are the ease of doing business and the financial stability of banking systems. At the same time, speed indicators withdrawal from the financial crisis and the simultaneous presence of the financial crisis different types of average correlation coefficient was high ( $R^2 > 0,7$ ) for the majority of countries surveyed.

In addition, calculations have been made of the time lag between the use by regulators (European Central Bank and national central banks) of these countries of anti-crisis measures and the change in the target indicators for which these measures were directed, and the dependence of changes in the volumes of assets of foreign banks in the banking systems of these countries has been determined from the duration this time interval.

The calculations have shown that in countries where the transmission mechanism of monetary policy operates quickly and efficiently, multinational banks rarely decide to leave the market of the host country. Thus, in the post-crisis period, for multinational banks, when choosing to increase/decrease the volume of assets in the banking system of the host country, the prevailing factors are: 1) the number of types of crises deployed in the country simultaneously (the structure of the complex financial crisis); 2) the rate of recovery of economies and banking systems of these countries in the post-crisis period; 3) the effectiveness of the transmission mechanism of monetary policy in these countries.

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**Summary.** The article identifies post-crisis determinants of strategic management of transnational banks in the market of direct investments by means of the correlation analysis of the dependence of growth of external assets of transnational banks of European countries on the indicators of profitability and financial stability of banking systems of the countries of placement of subsidiary banks, the efficiency of the transmission mechanism of monetary policy in these countries, the structure of a complex financial crisis and the speed of post-crisis recovery of the country, ease of doing business. There is no obvious connection between the presence of foreign banks in the banking system and indicators of profitability, ease of doing business and financial stability of banking systems. This is confirmed by the correlation analysis of 45 indicators on the example of 26 European countries for 2009–2011 (the period immediately after the end of the global financial crisis of 2008–2009). It is proved that in the post-crisis period, for transnational banks, the decision of increasing/decreasing the volume of assets in the banking system of the host country is dominated by: 1) the structure of a complex financial crisis; 2) the speed of post-crisis recovery of economies and banking systems of these countries; 3) the effectiveness of the transmission mechanism of monetary policy in these countries.

**Key words:** strategic management, transnational banks, international market, financial crisis, post-crisis development.

**JEL:** H12, F23, G01, G15, G21.

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## **MONITORING THE FRESH FRUITS AND VEGETABLES SUPPLY CHAIN IN TURKEY**

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### **INTRODUCTION**

Agricultural supply chains are formed by individuals and institutions responsible for carrying out activities such as production, processing, distribution and marketing of agricultural products to the end consumers [Ahumada and Villalobos 2009]. Agricultural supply chains have a highly sophisticated structure which required certain specifications and performance standards [Dolan and Humphrey 2000]. This requires are mainly sourced from product features, consumer expectations and multi-intermediated structure of supply chain. Providing of the consistency and reliability of supply can be harder and more costly than other supply chains because of the characteristic features of the agricultural supply chain [Zuurbier 1999].

Agricultural products may be subject to dual discrimination, including perishable and non-perishable. Perishable products supply chains or, in other words, fresh supply chains have more complicated processes and difficult governance than other groups. The short shelf life of perishable agricultural products, the prominence in terms of general public health and additional logistical requirements are the main reasons for this situation [Ahumada and Villalobos 2009].

Due to the above-mentioned characteristic features of fresh supply chains, it is inevitable that some inefficiencies and losses occur in these systems. However, it is necessary to review the inefficiencies and losses with a critical point of view considering the economic, social and environmental effects and to make necessary arrangements [Alexander et al. 2017].

In this paper, we focus on the losses and price differences between farmers and final consumers caused by inefficiency observed throughout the fresh fruits and vegetables supply chain of Turkey. We aimed to draw attention to the fact that these losses and price differences are far above the acceptable level and this situation adversely affects the interests of the producers and consumers, which are the weakest rings of the supply chain. We review the related literature and used secondary data. In order to control product losses and price differences and to bring them to more reasonable levels, firstly planned production should be started in agricultural production. Producers and producers’ unions should be supported to strengthen their dominance over the supply chain. Finally, the transition from a multi-intermediated supply chain structure to a non-intermediated supply chain model should be in a gradual way and focus on the development of value-added processes and activities rather than reducing the number of intermediaries.

**FRESH FRUITS AND VEGETABLES SUPPLY CHAIN STRUCTURE OF TURKEY**

It is possible to say that fresh fruits and vegetables sector has a very large and complex supply chain structure in Turkey. Farmers in Turkey usually consist of small-scale family businesses which operating with limited resources. However, the dominance of the fresh fruits and vegetables supply chain is at large retailers with high bargaining power. This structure of the supply chain increases the producers and consumers price difference and leads to very huge amount of losses.

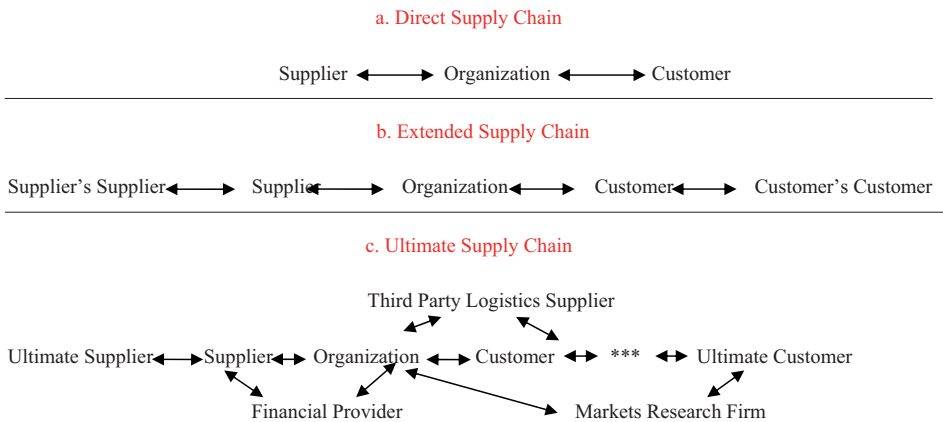


FIG. 1. Types of channel relationships  
Source: Mentzer et al. 2001.

Figure 1 shows supply chain models with general outlines that may apply to each sector. In Figure 1, “a” direct supply chain shows the shortest, direct to the customer from supplier without intermediary. On the other hand, “b” and “c” have at least one internadi-

ary, “c” has a rather complex structure than “b”. It is possible to create the supply chain in the fresh fruit and vegetable sector as shown in Figure 2 by referencing to Figure 1. In general, the structure of agricultural supply chain management follows a bidirectional path towards the final consumer from the farmer, as shown in Figure 2.

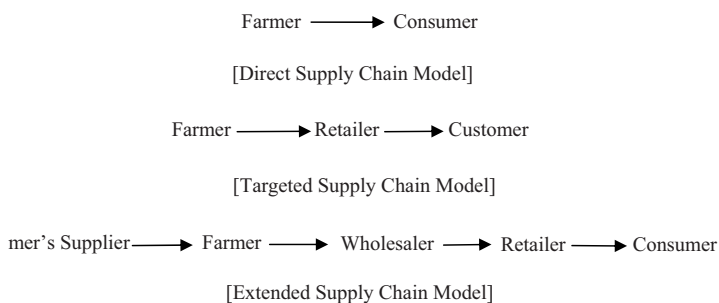


FIG. 2. Illustration of fresh fruits and vegetables supply chain  
Source: the authors.

It is possible that it can be examined the structure of fresh fruits and vegetables supply chain of Turkey in three models: Direct supply chain (farmer–customer), targeted supply chain (farmer–retailer/cooperatives–customer) and extended supply chain (farmer’s supplier–farmer–wholesaler–retailer–customer).

### **DIRECT SUPPLY CHAIN MODEL (FARMER–CUSTOMER)**

In fresh fruits and vegetables sector the shortest supply chain form is direct supply chain model. In this model farmers sell their products to the end consumers directly. There isn’t any intermediary person or institution which involved between the farmer and the end consumer. This supply chain structure is more suitable for local products generally. In this supply chain the products are presented directly to the customers after the harvest by the farmers. In the sales made to individual consumers at low volumes and handling activities such as product sorting, classification and standardization is quite limited. In Turkey due to the limited resources of local farmers certain products such as tomatoes, peppers, peaches, cherries, lettuce and beans, which have short shelf life and high degree of perishability are being evaluated in this way. Advantages of this supply chain is favourable price, freshness, and direct marketing communication between farmer and consumer. Also, farmer can determine price independently and get from higher revenue but on the other hand certain problems can appear in practically. First of all, farmer’s limited resources are not sufficient for handling, warehousing and domestic distribution activities. Inadequate resources of farmers can lead to certain marketing and financial problems and it may not be possible for the farmers to sell the product after the harvest in a short time. At the same time, the fact that a large number of farmers involved in the markets simultaneously with the same fruits and vegetables variety can lead to price fluctuations and most of the farmers can not eliminate adverse affects of this problem.

### **TARGETED SUPPLY CHAIN MODEL (FARMER–RETAILER/ COOPERATIVES–CUSTOMER)**

This supply chain structure is usually seen as contracted production in Turkey. The contracted production model is a product and marketing form where the company guarantees the purchase of the production that the farmer produces within the determined conditions [Yılmaz et al. 2013]. The farmer makes an agreement with the retailer firm before production about the production methods, quality standards, price and the other factors which related to production. In other words, production and marketing activities are entirely driven by the retailers in this supply chain structure. The greatest advantage of this structure is eliminating the problem of product marketing and evaluation problems. After the harvest product is classified and packaged in the way that it is pre-ordered and sold to the retailer company. Transportation, storage, distribution and marketing functions are performed by the retailer firm. Products that do not meet the necessary conditions as well as products that meet the standardization conditions are also bought by the retailer firm at relatively low prices. This gives the farmer the opportunity to evaluate the entire product it produces. However, the quality and quantity requirements desired by strong retail companies can only be fulfilled by certain producers.

Contractual production constitutes an important alternative to the capital and resource constraints of the producer. However, because important decisions about the production process are made by capital owners, the producer loses his independence in the production process and is alienated to the production process [Teoman and Tartıcı 2012]. The major disadvantage of contracted production for producers is that their influence and dominance over important decisions on the production process, such as input, quality, price and production decisions [Bor 2011]. In addition to this production standards, deferred payment system can also cause an interruption in continuity of product supply. On the other hand, consumer prices are not sufficiently reduced in this model due to the high logistics costs (such as transportation, storage, packaging and repackaging activities) and profit margins of retail firms. As a result of the deficiencies observed in practice and the non-generalization of the model throughout the country, contract production model is far from meeting the expectations [Yılmaz et al. 2013].

In order to better manage the contracted production process, cooperatives should be encouraged to increase bargaining power of small producers. The support of the producers' associations in the legal ground and the asymmetric power relations in the contractual production process have to be improved in favor of the producer [Teoman and Tartıcı 2012].

### **EXTENDED SUPPLY CHAIN MODEL (FARMER'S SUPPLIER-FARMER- TRADERS-WHOLESALE-RETAILER-CUSTOMER)**

In the fresh fruit and vegetable sector, a significant part of seed, fertilizer, pesticide, energy, and agricultural machinery and vehicles are supplied through imports. This situation leads to the addition of another intermediary (farmer's supplier) in the chain and naturally leads to an increase in costs. Another factor of high costs is the distance between production and consumption centers. Fruits and vegetables are brought to wholesaler,



which in production area by the farmers and then transport to wholesaler in consumption area by traders or packers. Then extended numbers of intermediary person or firm is involved in the supply chain at various stages such as handling, transport, storage, packaging, distribution etc. This long, complex and time-consuming structure of the supply chain not only reduces the quality of the product but also increases the losses and costs. It is possible to say that the main causes of product losses and associated cost increases are generally inadequate storage, transport and marketing conditions. On the other hand, this supply chain model also leads to a number of problems in terms of traceability, informality and food safety.

### **LOSSES IN FRESH FRUITS AND VEGETABLES SUPPLY CHAIN PROCESSES**

The most effective factors on the success of the supply chain are the concepts of speed and food safety due to the perishability of fruits and vegetables. Fresh fruits and vegetables are included in the supply chain considering numerous criteria such as product type, perishability degrees, marketing channels, processing techniques and distance between production and consumption center. In spite of the direct form of supply chain is being most targeted model, multi-intermediated supply chain model is often observed in practice because farmers are more interested with production than marketing [Kara et al. 2007]. Traders, wholesalers, processing firms and retailers take place between farmer and the end-consumer in this supply chain model. Intermediaries are more powerful than farmers especially in price negotiations and this is the main factor that increases consumer prices while reduce the farmer's revenues [Pezikoğlu et al. 2004].

Another disadvantage of the long and complicated supply chain structure is product losses that achieve fairly high rates occurring throughout the supply chain. Product losses can occur at different stages throughout the supply chain, including production, post-harvest (handling and storage activities), processing, packaging, distribution and consumption [Gustavsson et al. 2011]. The product losses observed at different stages throughout the fresh fruit and vegetable supply chain for Turkey are given in Figure 3.

Average product losses in fresh fruits and vegetables are between 10 and 30% and this range can vary in terms of the species and variety. According to Figure 3 fresh fruits and vegetables are lost throughout the supply chain at the rate of 4–12% in harvest, 2–8% in transportation, 5–15% in handling, 3–10% in storage and 1–5% in consumption stages. It is estimated that the production loss is about 25 billion TRY while the annual fruit and vegetable production value is 100 billion TRY. These losses adversely affect all the stakeholders that are involved in the supply chain and the country's economy, but the negative impacts are more on the consumer and farmer side. The loss ratios from farmer to the end consumer (not including consumption losses) by product groups are given in Table 1.

Product losses occur at a high level of about 22% in some products such as green onion, garlic and plum when at the rate of 5% in citrus products. The part of the product losses from farmer to the last consumer corresponds to approximately 9.5% of the annual average production. At the same time the total loss production rate is calculated as 8.5%. This rate is further increased by the inclusion of 1–5% loss rates in the consumption phase.

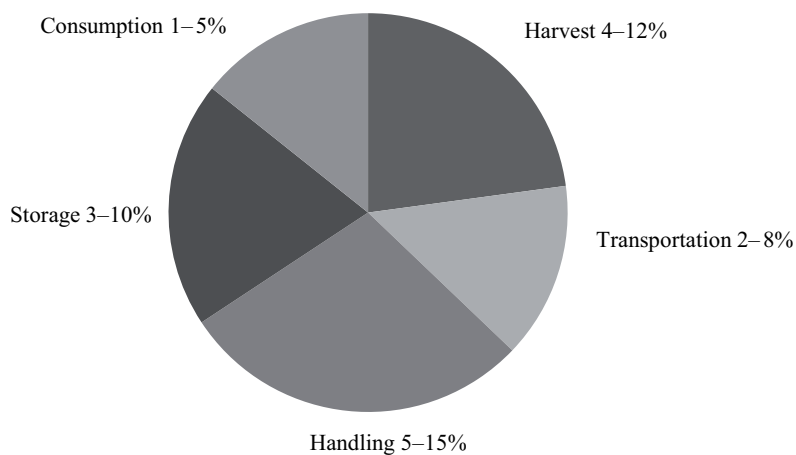


Fig. 3. Losses in Turkey fresh fruits and vegetables supply chain

TABLE 1. Product losses from farmer to consumer in fresh fruits and vegetables supply chain

Fresh fruits and vegetables	Total production values [thous. t]	Losses in 2016–2017 period [thous. t]	Loss production rate [%]
Scallion	134.5	30.4	22.6
Garlic	109.2	23.37	21.4
Plum	297.6	63.69	21.4
Banana	305.9	53.53	17.5
Mulberry	71.7	11.11	15.5
Lettuce	478.4	59.32	12.4
Watermelon	3 928.90	487.18	12.4
Melon	1 854.40	229.95	12.4
Pear	472.3	58.09	12.3
Sour Cherry	192.5	23.68	12.3
Cabbage	715	87.23	12.2
Tomato	12 600.00	1 537.20	12.2
Green Bean	638.5	75.98	11.9
Pumpkin	351.6	41.84	11.9
Spinach	211	24.9	11.8
Cherry	599.7	68.97	11.5
Cucumber	1 811.70	206.53	11.4
Apple	2 925.80	321.84	11

cont. tab. 1

Fresh fruits and vegetables	Total production values [thous. t]	Losses in 2016–2017 period [thous. t]	Loss production rate [%]
Peach	674.1	74.15	11
Pepper	2 457.80	267.9	10.9
Orange	1 850.00	186.85	10.1
Strawberry	415.2	41.1	9.9
Carrot	554.7	52.14	9.4
Onion	2 120.60	186.61	8.8
Grape	4 000.00	328	8.2
Pomegranate	465.2	31.17	6.7
Apricot	730	41.61	5.7
Grapefruit	253.1	12.15	4.8
Potato	4 750.00	223.25	4.7
Lemon	850.6	39.98	4.7
Mandarin	1 337.00	60.17	4.5
Fig	305.5	10.08	3.3
Radish	199.3	3.79	1.9
Total Production	110 728.90	9 411.96	8.5

Source: WWW 1.

It is possible to divide harvest losses of fresh fruits and vegetables into two groups as losses on the farm due to the excessive decrease in product prices and losses from harvest to sale [Gunders 2012]. The increase observed in post-harvest loss rates negatively affects the bargaining power in price negotiations and income level of farmers [Shukla and Jharkharia 2013].

Product losses from harvest to sale are due to the wrong harvest time and harvesting techniques. The lack of proper care during harvest and using of unsuitable containers cause damage to the product and shorten the shelf life. Due to the unplanned production structure, producers present their products to the markets at the same time and this cause to distort the balance of supply and demand. While the demand for the product is unchanged, the supply of the product is above the markets volume causes the producer income to fall below the costs. To reduce product losses due to the price fluctuations, producers should be directed to product types with different harvest time. In this way, it is possible to ensure the maintaining of supply and eliminating the adverse effects of price fluctuations [Yulafçı and Cinemre 2007].

Handling activities are another factor that influence losses rates and service quality. Fresh fruits and vegetables products are presented to the markets after a number of handling activities such as washing, sorting, weighing and packaging. Packaging is the most

important handling activity in the prevention of product losses. Right packaging provides a protection against the mechanical and physical environment damage and ensure to hygiene and quality requirements [Kader and Rolle 2004]. For this reason, standardization and availability of suitable packaging materials is an important factor in the performance of the fresh fruit and vegetable supply chain [Union of Agricultural Chambers of Turkey 2008]. Development and commercialization of natural packaging materials will significantly reduce post harvest losses by up to 30% [Öz and Süfer 2012].

Reduction of quality and quantity losses of fresh fruits and vegetables during the storage and transportation is closely related to ensuring adequate ambient temperature and humidity conditions. For most fresh fruits and vegetables, the optimum temperature is around 0°C, and every 10°C increase above optimum temperature leads to two or three times increase in perishability level of the product. As well as the optimum temperature values are exceeded, temperature conditions below this value also lead to deterioration of the product. Especially in tropical products, because of the freezing threshold is low these products must be kept between 5°C and 13°C during the transportation and storage phases [Kader 2002].

## **PRICE DIFFERENCES BETWEEN FARMERS AND CONSUMERS**

Providing of the consistency and reliability of supply can be harder and more costly than other supply chains because of the characteristic features of the agricultural supply chain [Zuurbier 1999]. According to Alemdar [2008], asymmetric power relation between farmer and holders is the factor that separates agricultural supply chain from the other supply chains. The asymmetric power relation occurs mostly in distribution phase but in fact it is a situation that continue throughout the supply chain from production to the consumption.

Major retailers have a strong position in the fresh fruits and vegetables supply chain, especially in the distribution and marketing phase. A large part of the supply chain activities are under the control of these companies, depending on this strong position [Zuurbier 1999].

Asymmetric power relations between farmer and retailers also can lead to exclude small farmers from the markets or force to operate with very small profit margins. This situation is observed in both developed and developing countries in inverse proportion to the state development level [Brown and Sander 2007]. Especially in economies such as Turkey where small and fragmented production structure is observed, it is becoming difficult for small producers to comply with markets conditions. The asymmetric power relation spread inevitably along the chain and cause to welfare loss of the farmer and the end consumer, which constitute the weakest rings of the chain.

It is possible that we can show the farmer and consumer price differences as the most concrete indicator of the asymmetric power relation. Farmer and consumer price differences reach huge sizes of 300% in some product groups. This situation will be better understood when Table 2 which shows the average prices for certain agricultural products for Turkey with the year 2015, and Table 3 which shows the farmer-markets price differences are examined.

TABLE 2. Average prices for certain agricultural products in Turkey

Products	Farmer			Markets		
	30.12.2015	30.12.2016	change [%]	30.12.2015	30.12.2016	change [%]
	farmer price [TYR/kg]	farmer price [TYR/kg]		markets price [TYR/kg]	markets price [TYR/kg]	
Tomato	1.87	1.47	-21.39	3.91	3.34	-14.51
Cucumber	1.29	2.5	93.91	3.2	4.19	30.74
Onion	0.69	0.33	-52.73	1.94	1.18	-39.23
Eggplant	1.83	3.58	95.36	3.83	6.02	57.43
Apple	0.96	0.67	-30.39	3.24	2.7	-16.52
Pumpkin	1.69	2.62	54.72	3.86	5.47	41.5
Spinach	1.41	1.12	-20.69	3.3	2.93	-11.11
Carrot	0.54	0.72	32.41	1.79	2.04	13.88
Potato	0.44	0.6	36.74	1.71	1.73	1.34
Pepper	2.02	2.91	43.81	4.08	5.14	25.82

Source: WWW 1.

TABLE 3. Annual price difference between farmer and markets for certain agricultural products for 2015–2016

Products	Farmer	Markets	Price difference [%] 30.12.2015	Farmer	Markets	Price Difference [%] 30.12.2015
	30.12.2015	30.12.2015		30.12.2016	30.12.2016	
	farmer price [TYR/kg]	markets price [TYR/kg]		farmer price [TYR/kg]	markets price [TYR/kg]	
Tomato	1.87	3.91	109.09	1.47	3.34	127.21
Cucumber	1.29	3.2	148.06	2.5	4.19	67.60
Onion	0.69	1.94	181.16	0.33	1.18	257.58
Eggplant	1.83	3.83	109.29	3.58	6.02	68.16
Apple	0.96	3.24	237.50	0.67	2.7	302.99
Pumpkin	1.69	3.86	128.40	2.62	5.47	108.78
Spinach	1.41	3.3	134.04	1.12	2.93	161.61
Carrot	0.54	1.79	231.48	0.72	2.04	183.33
Potato	0.44	1.71	288.64	0.6	1.73	188.33
Pepper	2.02	4.08	101.98	2.91	5.14	76.63

Source: WWW 1.

According to Table 2, the average rate of decline in farmer price of tomato is around 21%, while the rate of price decline is close to 15% in the markets. Likewise, declines in farmer prices of around 30% in apple and 53% in the dry onion are observed to be around 17% and 40% in markets respectively. So, it can be concluded that the decline in farmer prices is reflected in consumer prices at a lower rate. That is, consumer prices are not cheap enough despite the drop in producer prices.

According to Table 3, the annual increase in farmer prices is reflected at higher rates in markets prices generally. The 109% increase in farmer price of tomato is reflected in the markets price as 127% and these rates can increase from 181 to 258% in onion and 303 to 237% in apple respectively. There can be many reasons for this. According to Alemdar [2008], the main reason of this is the fact that an effective price mechanism has not developed in agricultural sector and the legal regulations and inspections which protect the producer and consumer are remain at a limited level especially in underdeveloped and emerging economies.

## DISCUSSION

The long and complex structure of the fresh vegetables and fruits supply chain leads to a loss of 30–60% of the products throughout the value chain from producer to the end consumer. The high level of sensitivity to the time and temperature values of the products leads to the loss of quality in addition to the loss of quantities. All these losses and inefficiencies increase the price difference between producers and final consumers. In other words, the current structure of the supply chain leads to welfare loss of producers and final consumers, which are the weakest rings in the chain, and the price difference is in favour of other intermediary persons or institutions on the chain.

The failure to develop a permanent solution to product valuation and marketing problems strengthens the position of the intermediaries in the supply chain and carries the asymmetric power relationship to a more advanced level. When the economic and social impacts of product quality and quantity losses are considered, it is clear that the supply chain needs a radical change and restructuring process. However, it is very difficult to realize this change in the short run, and disabling a significant portion of the chain's intermediaries may lead to damage to a certain segment of society. However, it is quite difficult to be performed this change in the short run, and disabling a significant part of the intermediaries in the chain may lead to damage to a certain part of the society. Re-employment of these intermediaries in different sectors of the economy will be difficult and time-consuming. Therefore, in the restructuring process of the supply chain, it would be more appropriate to set up value-added processes and activities rather than to leave the intermediaries completely out of the system and direct them to these areas.

Another important problem that needs to be addressed in the restructuring process is the small scale and fragmented structure of the existing production. Existing resources and capacities of farmers are not sufficient for the product presented directly to the distribution channels. It is not possible to carry out product storage, distribution and marketing activities in an effective and efficient way, at least in the short term. For this reason, it may be considered that the public sector can be considered to participate in the system

as an intermediary and regulatory entity for a certain period of time. However, this situation is a temporary alternative and the principal thing what needs to be done is solving the resource shortage and capacity problems permanently by supporting the producers and producers unions. It is not a realistic approach to completely disable the intermediaries in the current system, and this approach can also lead to more serious problems in the product distribution and supply process.

The transition to a planned production structure is very important to control product losses and price differences. It is possible to prevent the supply problems caused by the loss of income due to the surplus of the product of the farmers and the inability of the consumers to reach the product of the desired kind and quality, as the product supply and demand structure is balanced to some extent by switching to the planned production structure. Since the product supply and demand structure will be stabilized considerably by passing to the planned production structure, it will be possible to prevent the supply problems caused by the loss of income due to the surplus of the product of the farmers and the inability of the consumer to reach the product of the desired kind and quality. Although, the contract farming practices applied in Turkey for the last 20 years are an important step in the transition to planned production structure, it is observed that contracted farming practices does not meet the expectations exactly. The asymmetric power relations observed in the multi-intermediated system can also be found in the contractual production model, especially in the contractual relations between small producers and large retail firms. In fact, in this system, besides the price decisions, the domination of farmers on production decisions is also eliminated. Another important problem is that legal regulations do not have the level and competence to protect the small producers against the big retailers.

There are two different situations when contracted production practices are addressed in terms of prevention of product losses and minimization of price differences. Since various processes or activities such as storage, transportation, packaging, cold chain logistics are carried out by retail companies or under the control of these companies, product valuation and marketing problems are being resolved in large scale. However, it is difficult to say that contracted production practices are a significant influence on price differences between farmers and final consumers.

It is observed that price differences are increasing gradually when the producer, wholesaler and markets prices of a specific product are compared. In this case, it is possible to conclude that the reduction in the number of intermediaries, especially in terms of price differences, is not an effective solution, even if the amount of losses is realized at lower levels. As long as intermediaries determine their product costs without a certain inspection and control mechanism and make own pricing decision, the objective of reducing price differences to a reasonable level will not be achieved. As a matter of fact, in the case of fresh vegetables and fruit wholesalers, the profit level of the broker companies can be obtained from the product is limited to 8%, while there is no such legal regulation or limitation for large retail companies. Therefore, the difference between farmer and markets prices is quite high compared to the difference between farmer and wholesaler prices. The difference between the two intermediaries of fresh fruits and vegetables supply chain is clearly too large to be explained for any reason, such as wastage, transportation costs or operating costs.

## CONCLUSION

It is clear that the existing fresh vegetables and fruits supply chain structure needs to be revised and put into a comprehensive transformation process, in order to prevent quality and quantity losses and to control the price differences between farmers and the end consumers. However, in the restructuring process, more emphasis should be placed on adding value-added activities rather than minimising the number of intermediaries. In the change of asymmetric power relations in favour of the farmers, they should be encouraged to become middle and large scale producers, especially by increasing the resources and production possibilities of small producers. Producer and producer unions should be supported, and their dominance in the supply chain should be increased by directing them to distribution and marketing activities as well as production. With the transition of planned production structure, product valuation and supply problems can be controlled significantly. However, contractual production practices, which are one of the most effective means of transition to planned production, need to be re-examined legally in a way that will change asymmetrical power relations in favour of the producer. The restructuring process of the fresh vegetables and fruits supply chain needs to be carried out gradually and taking into account the interests of all stakeholders. In this way, at least in the short term, various negative effects can be avoided such as the damage to certain segments from the restructuring process or the emergence of more important supply problems.

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**Summary.** Turkey's bio-diversity, geographical structure and climatic conditions, makes it possible to produce a wide variety of fruits and vegetables. Although, the high production capacity, half of the vegetables and fruits are lost during the supply chain processes from farmer to the end consumer because of the long and complex structure of the supply chain. At the same time the current supply chain structure leads to huge gaps between producer and consumer prices. The aim of this study is to determine the structure of the fresh fruit and vegetable supply chain in Turkey and develop alternative supply chain forms to prevent the "price differences" and "product losses" from farmer to the final consumer. The study included descriptive analyses with secondary data as well as literature review. In addition, this study emphasizes the asymmetric power relationship in the agricultural supply chain. The asymmetric power relationship is explained by the price differences between the farmer and the final consumer. The research findings suggest that the transition from the existing multi-intermediated supply chain to the non-intermediated model must be done in a gradual way and through strengthening of the farmers.

**Key words:** agricultural supply chain, fresh fruits and vegetables, Turkey, restructuring of agricultural supply chains, food safety and food losses.

**JEL:** Q1, R38

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## **MANAGEMENT OF EDUCATION IN THE CONTEXT OF ITS FINANCIAL SUPPORT AS A PUBLIC-PRIVATE GOOD**

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### **INTRODUCTION**

An efficient education system ensures the proper formation and development of the country's human and social capital and it is one of the key aspects of the development of any state, its competitive and knowledge-based economy and high level of social standards. In the developed countries of the world, the issue of its balanced financial provision, both at the expense of the state and the non-state sector, is given considerable attention, especially in the context of the spread of the new concept of lifelong education. This concept presupposes, above all, the addition of existing national education systems to institutions (both formal and informal) that ensure the satisfaction of the educational needs not only of children or adolescents, but also of adults. In fact, the principle of continuity in the educational sphere is being introduced, which is related to the requirements of our time to the constant updating of knowledge and obtaining additional skills (for example, critical thinking, communication, team work, adaptability, etc.). However, considering the wide range of educational services within the lifelong learning system (LLS), there is no clear solution to the issue of financial support for these institutions, and therefore we propose to consider this issue through the prism of such economic theories as the theory of public and private goods that will help to identify educational services in the sphere of preferences of economic agents and identify the optimal sources of financing from an economic point of view.

### **AIM AND METHOD**

The purpose of this article is to improve the theoretical and practical foundations for the formation of the structure of financial support for the development of the lifelong learning system in the context of the optimal balance of budgetary and extrabudgetary

financial resources. To achieve this goal, the following research methods were used in the work: induction, deduction, scientific abstraction and grouping in the analysis of scientific literature on the basic theories of public and private goods theory; comparative and statistical analysis when examining current trends and problems of financing the education sector at different levels and sources of funding; analysis, synthesis, logical generalization and expert method in determining the optimal structure of financial support for the development of LLS, depending on the degree to which educational services meet the criteria for satisfying public and private goods. The information base for the study was the results of scientific research on the dissemination of the theory of public and private goods, reporting and analytical data of the State Statistical Service of Ukraine, Organization for Economic Cooperation and Development (OECD). This research was funded by the grant from the Ministry of Education and Science of Ukraine (No 0118U003569)

## LITERATURE REVIEW

The analysis of scientific literature allows us to assert that there is no unambiguous approach to the justification of the sources distribution of financing the development of LLS and its individual components. In this work it was proposed to put the key provisions of the theory of public and private goods as the basis for such a division. The notion of good is an object of research in economic theory, politics, religion, philosophy, ethics, etc. The main goal of providing goods is to meet the needs of people, to bring them benefits, in the form of certain tangible or intangible values. Needs can be viewed from the point of view of an individual (individual needs) and from the point of view of society as a whole (social needs). According to the group of authors, headed by Alekseeva, Kotina and Stepura [2015], social needs can be characterized by the following features:

- they are universal for all subjects (state, legal entities and individuals) of a certain group of society;
- they are formed under the influence of collective existence based on individual needs, but they are not personified and indivisible;
- their satisfaction affects both individual and public welfare in general and depends on the level of development of society and the country's economy, the existing political and social system, and the like.

The concept of the good and public goods has been the object of research for many centuries, the evolution of views on them is given in Table 1.

Thus, we trace the selection of two main groups of goods: private (satisfying the needs of the particular person who receives) and the public (the utility of which is transferred to a group of people or the whole of society). It should be noted that the provision of public goods is considered a direct function of the state, that is, their financing should be carried out for budgetary funds.

In the opinion of Otroshko, the goods can be classified according to the principle of non-exclusivity of their consumers as follows [Otroshko 2011]:

- private goods: they can be considered at the level of individual (food, clothing), and general consumption (public transport, performances, etc.);

TABLE 1. The evolution of approaches to understanding the category of public goods

Author	Basic views
Plato	He considers useful (wealth, physical strength, etc.), useless and unnecessary goods. The main good is wisdom [Losev et al. 1993].
Aristotle	He separates material goods, spiritual goods, peace of mind. The highest good is happiness [Kessidi 1983].
T. Hobbes	He divides goods into excellent, useful and public (primarily security) [Sokolov 1991].
A. Smith	He considers economic goods and divides them into individual and public goods. First of all, social goods include defense, social protection and services of public institutions [Smith 1937].
K. Menger	He distinguishes the first-order goods (satisfaction of basic human needs) and the high-order goods (necessary for the creation of first-order goods) [Menger 2005].
A. Marshal	He allocates the following groups of goods [Marshal 1993]: <ul style="list-style-type: none"> <li>– material goods (personal) and intangible, which in turn are divided into: internal (own qualities as knowledge, health, skill), external (business ties, etc.);</li> <li>– transmitted and non-transferable (personal qualities and abilities of a person, reputation);</li> <li>– free goods (created by nature without human labour).</li> </ul>
E. Lindahl	He explores the essence of public goods and distinguishes their main properties [Lindahl 1958]: <ul style="list-style-type: none"> <li>– indivisibility: provided to all market participants simultaneously, their consumption can not be individual;</li> <li>– inexhaustibility of consumption: the use of public goods by one market participant does not reduce the amount of this good in the market and does not reduce the opportunities for other participants to use it;</li> <li>– inclusiveness: to limit access of consumers to such a good is almost impossible.</li> </ul>
P.A. Samuelson	He provided a classical definition of the concept of public goods, which the scientist identifies with the public ones as “the benefits, the costs for production and distribution of which the state takes on, and they have the following properties [Samuelson and Nordhaus 2012]: <ul style="list-style-type: none"> <li>– non-competitiveness is due to the availability of all people to such a good;</li> <li>– invulnerability, that is, limiting the access of consumers to such a good is almost impossible;</li> <li>– indivisibility, therefore, the individual cannot choose the amount of consumption of the good himself.</li> </ul>
R. Masgreyv	He separates worthy (patronage) benefits, which are produced by the state and unworthy (bads), which should be prohibited. He is the founder of the concept of meritorious benefits which understands as “the benefits, the demand for which lags behind the desired by society and stimulates by the state, that is, the concept of a meritorics is related to the interests of the state as a whole, does not directly manifest itself in individual preferences (for example, culture, health, education and sciences)” [Masgreyv and Masgreyv 2009].
A. Rubinshteyn	He is the founder of the concept of subsidized benefit: “goods and services for the production and consumption of which the society has its own normative interest”, that is, they are produced by the state [Rubinshteyn 2008].

Source: the authors.

- public goods that can be of a local nature (for example, the lighting of certain streets), national character (for example, national defence) and international character (for example, fundamental research).

This classification in terms of public goods very well demonstrates the lack of pure public goods, because of existence of geographical, financial constraints and the like. In such cases the term mixed goods is used in scientific literature.

The approach to the classification of Dluhopolskyi [2013] is noteworthy. According to it the public goods, except for the division into pure (traffic lights, lighthouses) and mixed (health, education), further divides into:

- public services (radio and television, fundamental science);
- public property (national parks, squares, roads);
- natural monopolies (gas and water supply, railways, etc.).

Instead, Sevastyanova and Veretennikova [2016] divide the public goods by the following combinations:

- goods with low investment attractiveness (defence, recreational facilities, transport infrastructure, etc.);
- goods with high social significance (education, culture, sports, health, etc.);
- goods that have specific production technologies (postal services, utilities, public transport, rail transport, etc.).

Let's sum up the main views of scientists on the main features of pure public goods in the service sector [Andruschenko 2000]:

- the lack of competition in the provision of these services through low costs for their provision and the lack of motivation for consumers to pay for their receipt;
- the generally accessible nature of consumption for consumers of services, that is, it is quite difficult to exclude some individuals;
- the inexhaustibility of these goods for their consumers is explained by the fact that “the satisfaction of the need by one person practically does not reduce the volume and quality of satisfying the same need by other individuals”.

As noted above, the provision of public goods is one of the functions of the state for which members of society pay taxes and fees. Taxes are the price for public goods, and, if there is a violation of the equilibrium between them, there are crisis phenomena in the economy. Thus, the question of determining the components of LLS as public or other goods is directly related to the peculiarities of state intervention and their financial provision.

In accordance with the fundamentals of the theory of human capital headed by Nobel laureate Becker, educational services are considered as “mixed goods that require both general and special financing” [Becker 1994]. A group of scientists, among whom it is possible to identify Turou, Herrstein, Jenks, etc. [Turou 1999], deny the relation of educational services to public goods, and treat them solely as a private good.

State or market control over the market of educational services should be based on the possibility of identifying the real needs of consumers for educational services, and “the market is able to identify explicitly only individual or corporate needs for education embodied in the market demand for educational services (exchange sphere)” [Matyuk 2015].

We can conclude that an individual need for vocational education or its increase or change, self-improvement or development are subject to market regulation on a fee basis,

and therefore can be regarded as a private good. On the other hand, the state has its own needs for skilled workers for the effective functioning of the economy, which necessitates the stimulation of certain specialities in the field of education (here education can be considered as a meritorious or even a subsidized benefit). It should not be forgotten that the acquisition of professional education is possible only in the presence of a basic one, which is difficult to single out individual demand, and its utility is extremely high for society that also falls under the jurisdiction of the state.

The state as a separate political institution, which is represented by various actors, also can not always correctly perceive a social need. As Matyuk notes “the interests of state entities can deviate significantly from public ones, since the participants in the political process tend, first of all, to realize their own interests and the interests of those structures that led them to power [Matyuk 2015]. This requires increased control and participation by civil society, especially in countries with high levels of corruption.

### COMPARATIVE ANALYSIS

Thus, depending on the affiliation of educational services public or private benefits must prevail or budgetary or extra-budgetary funding. We propose to analyse the relationship between education costs (primary and secondary education/post-secondary/total tertiary education) by sources of funding (public and private expenditures) for selected European countries (Figs 1, 2).

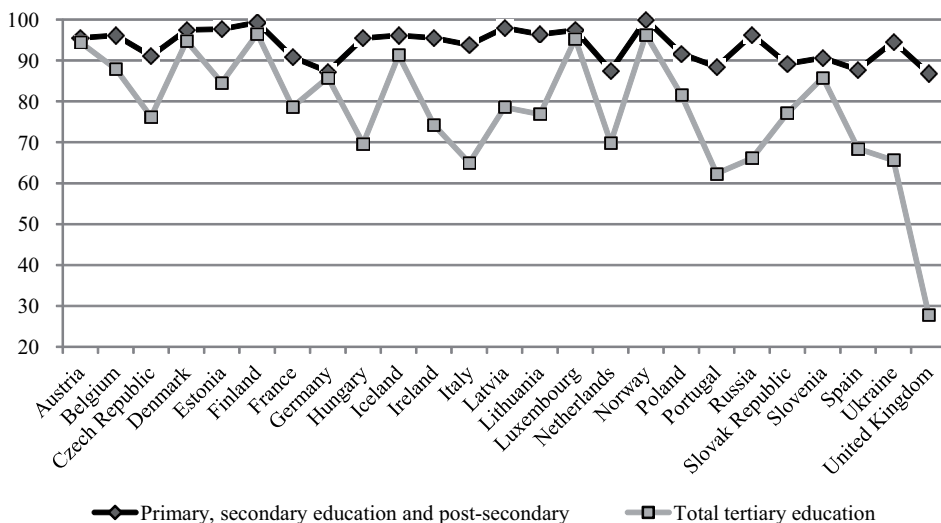


FIG. 1. Proportions of public expenditures on primary, secondary education and post-secondary/total tertiary education in European countries in 2014 [%]

Source: the authors based on OECD 2017 and Ukrainian State Statistics Service 2015.

As we can see from Figure 1, public spending is a significant part of the financing of the education sector. For primary, secondary education and post-secondary education, the smallest share of public expenditure was typical for United Kingdom, Germany, the Netherlands and Spain and fluctuated between 86–87%. For the total tertiary education level, United Kingdom (27%), Portugal, Italy and Ukraine (within the range of 62–65%) had the least funding at the expense of budgetary funds, but most of all for the Scandinavian countries (Denmark, Norway and Finland) and Luxembourg (more than 95%).

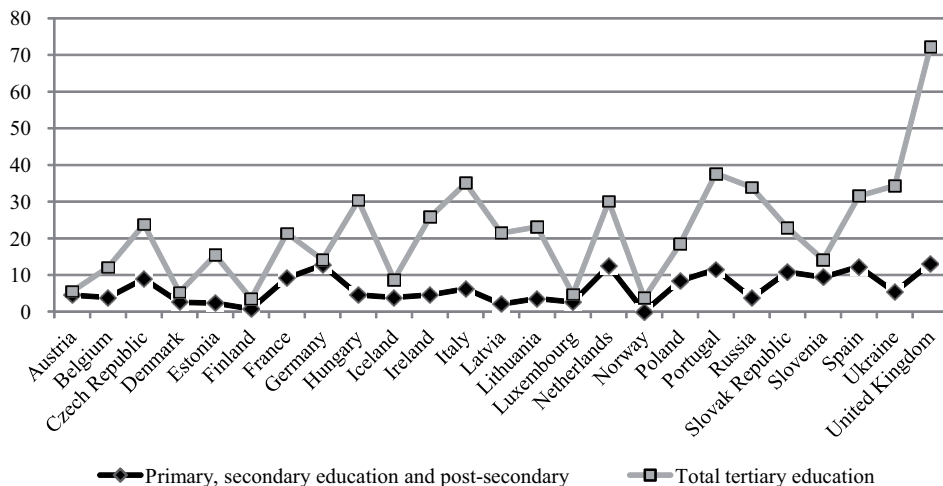


FIG. 2. Proportions of private expenditures on primary, secondary education and post-secondary/total tertiary education in European countries in 2014 [%]

Source: the authors based on OECD 2017 and Ukrainian State Statistics Service 2015.

As for private expenditures for primary, secondary education and post-secondary education, there is a reversal trend. In the general spectrum, these costs fluctuate within 0–13%. Moreover, the smallest value was recorded in the Nordic countries (Denmark, Norway and Finland), as well as Latvia, Estonia – up to 3% of private expenditures on education. Instead, the highest figures (12–13%) are Spain, Netherlands, Germany and United Kingdom. As for the total tertiary education level, for Italy, Portugal it is 35–37%, and for the United Kingdom it is 72%. The lowest rate (less than 3%) was recorded in Finland, Norway, Luxembourg, Denmark. Unfortunately, statistical data on the education of children and adults, especially in the informal component of education, is not provided in the official statistical databases. However, this component still increases the share of necessary education costs. It is in connection with this trend that the world community is discussing who should fund education. Public sector representatives emphasize that the growing need of the population for educational services is a burden on the budget and that it is the main beneficiaries (that is, the population) to pay for their education. Another trend is that reducing public financing of education is decreasing and its level of accessibility for citizens, which is a rather negative phenomenon both for the economy and for the social sphere.



In our view, the diversification of funding sources at different levels should be the basis for solving this problem. However, we propose to base this distribution on the above-mentioned theory of public and private goods.

## RESEARCH RESULTS

The pre-analysis of the theoretical foundations of the theory of public and private goods and the analysis of the main tendencies in financing the education sector in the world gives us reason to conclude that LLS's educational services are a complex mixed public-private good and their financial support must be diversified at various levels. On this basis we identify and systematize the main features for the public-private good and define the main proportions of its financing with the expert method. As a result we propose the optimal structure of financial provision for the development of LLS that depends on the level of educational services compliance with the criteria for satisfying public and private goods in Table 2.

TABLE 2. Results of determining the optimal structure of financial provision of LLS that depends on the level of conformity of educational services with the criteria for satisfaction of public and private goods

Characteristics	LLS							
	formal education						non-formal education	
	1	2	3	4	5	6	7	8
1. Nature of consumption: 1 – public 0 – individual	1	1	0	1/0	1/0	0	1/0	0
2. Consumption-prevention 1 – does not exist; 0 – exists	1	1	0	1/0	1/0	1	1	1
3. Level of competition in the provision of services: 1 – low 0 – high	1/0	1/0	0	1	1/0	1	0	0
4. Individual choice of benefits: 1 – absent 0 – is present	1	1	0	1/0	1/0	0	0	0
5. Level of social significance: 1 – high 0 – low	1	1	1	1	1	1	1	1
The share of budgetary financial support [%]	90	90	20	70	60	60	30	40
The share of extra-budgetary financial security [%]	10	10	80	30	40	40	70	60

1 – pre-school education; 2 – primary and secondary education; 3 – extracurricular school education; 4 – specialized education; 5 – vocational education and vocational education; 6 – higher education; 7 – adult education; 8 – postgraduate education.

Source: the authors.

Educational services in general are a publicly available resource; in the area of vocational education competition for budget places of study begins and sometimes for places in educational institutions as a whole. In the field of non-formal education, the financial status of a person or family becomes a significant factor, since most services are paid and their consumption becomes individual. This also affects the following feature – the exclusivity of consumption. The level of competition in basic education is rather conditional, since institutions of communal ownership are fundamentally different from each other. Instead, competition in the informal education sector is high. Within the framework of formal education, educational services are indivisible, which means the impossibility of individual choices of goods, while the situation in the field of informal education is reversed, users choose the necessary set of services independently. Educational services at all levels are inexhaustible, which means that their consumption by one user does not diminish their usefulness to others and is socially significant for individual individuals and society as a whole. Chekalovska further emphasizes the following specific features of educational services: “immaterial (that is, not tangible at the time of their acquisition, formalization of their features takes place through curricula and programs, licences, certificates and diplomas, etc.); inseparability from the subjects of production and consumers (that is, from teachers and students); volatility in quality (related to subjects, lack of strictly regulated rules of provision); individual character; the impossibility of preservation (these services can not be accumulated in advance, because for a person characteristic forgetting information, rapid aging of knowledge in connection with scientific and technical and social progress, etc.” [Chekalovska 2016].

According to the results of the analysis, the following groups of educational goods and the optimal structure of their financial support were allocated:

- basic education (includes pre-school and general secondary education), which involves obtaining basic competencies (for example, critical and systematic thinking, ability to logically justify a position, creativity, initiative, ability to constructively manage emotions, evaluate risks, make decisions, solve problems, the ability to co-operate with other people, etc.) 90% provides budget financing, 10% – extrabudgetary.
- vocational education (includes vocational, technical and higher education and higher education), which involves the formation and development of professional competencies of a person, the skills necessary to work in a particular profession in the relevant field, promoting the formation of a competitive and mobile worker and career prospects throughout the life of a person) – by 60–70% provides budget financing, 30–40% – extrabudgetary.
- additional education (includes specialized education, extracurricular education and adult education), provides for the development of personal and professional skills of a person that enables self-realization in creative and professional activities, etc. – by 20–40% provides for budget financing for 60–80% – extrabudgetary.

The main sources of funding at these levels are the following:

- budget financial support: expenditures of state and local budgets;
- extra-budgetary financial support: household expenditures, expenditures of business entities, incl. targeted funding, grant funding, charitable contributions (eg, endowment fund, community development funds), humanitarian assistance, craftfunding, etc.

Absolute exclusion from the financial mechanism of public or private financing is not effective, therefore, the tendency towards convergence of these sectors and functioning under the conditions of public-private partnership is observed in the world.

## CONCLUSIONS

As a conclusion we note that within the life-long education system, which is characterized by the opportunity to receive education at different levels and forms, the most optimal is the diversified approach to the formation of the financial support structure for various educational services. This principle is fully in line with the fundamental principles of international organizations, including UNESCO, on inter-sectoral cooperation on the financing of the lifelong learning system, the responsibility of trainees and the provision of equal educational opportunities for the population.

The conducted research gives grounds to assert that the basis of such a distinction should be placed an indicator of the level of compliance with the criteria for satisfaction of public and private goods. On the basis of the analysis, the nature of consumption, the exclusivity of consumption, the level of competition in the provision of services, the exhaustiveness of services, the level of social significance, etc. are taken into account in the main characteristics. As a result of determining the optimal structure of financial provision for the development of LLS, it was found that for educational services of different levels, the structure of financial support should be formed as follows:

- for basic education services (pre-school, primary and secondary education) – 90% of the budget, 10% of extrabudgetary funding;
- for specialized education – 70% of the budget and 30% of extrabudgetary funding;
- for vocational education (vocational education and vocational education, higher education) – 60% of the budget and 40% of extrabudgetary financing;
- for additional education services, namely for extracurricular school education – 20% of budget funding and 80% of extrabudgetary, for adult education – 30% and 70% respectively, for postgraduate education – 40% and 60%

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**Summary.** In the article the essence and main characteristics of public and private goods are investigated, their main differences are revealed. Based on this, the main features of public goods were identified, including the nature of consumption, exclusivity of consumption, level of competition in providing services, exhaustiveness of services, level of social significance, etc. A comparative analysis of the peculiarities of funding for education at different levels (primary, secondary education, post-secondary/total tertiary education) and funding sources (public and private expenditures) has been conducted. It is substantiated that the basis for determining the optimal financial support structure for LLS development should be the level of compliance of educational services with the criteria for meeting public and private goods. On the basis of this, it was found that the ratio of budget and extrabudgetary funding for basic education services should be 90 to 10%; for vocational education services – 60–70% to 30–40%; and for services of additional education – 20–40% to 60–80%.

**Key words:** financial support, lifelong learning system, public goods, private goods.

**JEL:** B10, H40, H52, I21, I22

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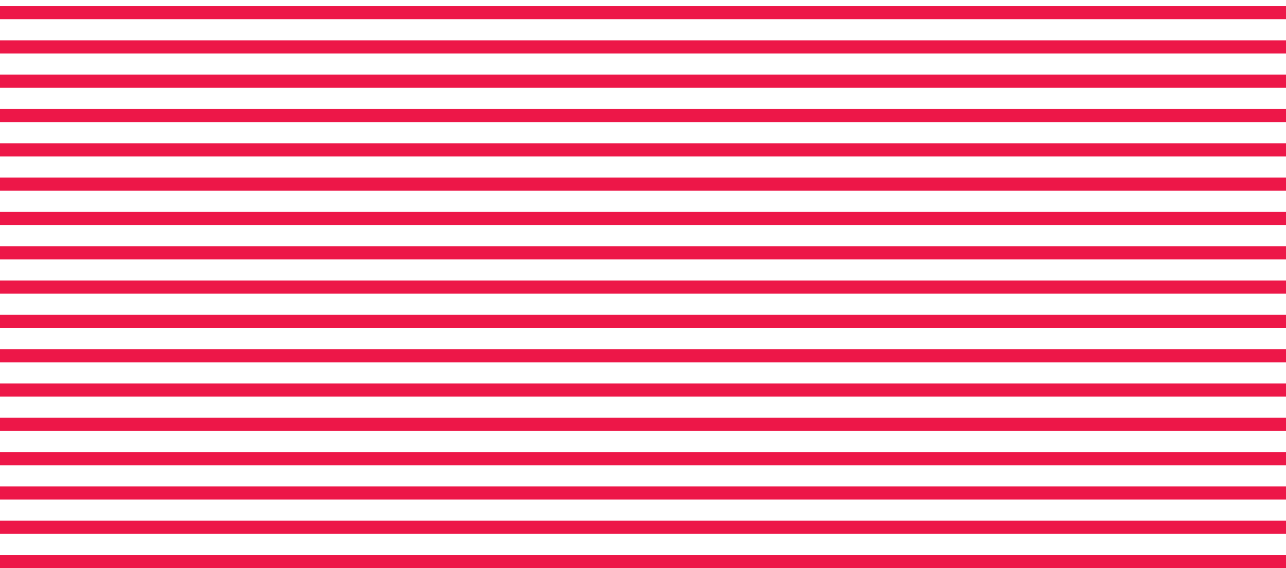
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