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Katarzyna KACZMARCZYK¹

METHODS FOR CALCULATING LOAN PROFITABILITY FOR A BANK

Credit activity is considered one of the most important tasks of the bank, both from the point of view of itself, as well as from the perspective of customers and the entire national economy. The banks transform the funds obtained from depositors and then transfer them to the borrowers. Before doing so, however, they carry out numerous analyzes and studies that make up credit procedures. The purpose of this article is to analyze and evaluate the methods of calculating the profitability of interest products for a bank in terms of the validity of their application.

Keywords: bank loan, efficiency, calculation.

JEL Classification Codes: G21.

Introduction

In the bank's management system, including pricing of loan products, an important issue is the assessment of the profitability of banking products. It helps, inter alia, in making both short- and long-term decisions, and also shows the strengths and weaknesses of the products offered, needed in the process of shaping the pricing policy. This assessment is also important from the point of view of bank management, which requires making multiple decisions regarding both current and strategic goals. Thanks to such calculations, the bank receives information about the quality and usability of individual areas of its operations. This allows you to increase the rationality of decisions made, which results in an increase in the bank's value.

¹ Ph.D. Student, K. Pulaski University of Technology and Humanities in Radom, Faculty of Economics and Legal Sciences.

The aim of the study is to analyze and evaluate the methods of calculating the profitability of interest products at the bank, on the example of the calculation of the effectiveness of active products.

Credit activity as the main source of bank's income

The Bank is an independent and self-funded enterprise whose main goal is to maximize profits. It focuses on all of its activities, seeking to acquire and retain customers who bring him the highest income, and at the same time bring the least risk.

The main sources of the bank's income include:

- interest on loans granted;
- bank commissions and fees;
- income from trading in securities;
- income from deposits placed in other banks;
- income from other services provided.

However, the largest source of income from the listed elements are loans granted. As a creditor, the bank derives benefits in the form of interest, being the equivalent of the costs of obtaining funds, which are absolutely necessary to provide it, as well as a commission that is reward for all activities related to the credit transaction (Wąsowski 2001, p. 46).

Table 1 presents a comparison of the actual numerical data from analogous periods in 2016 and 2017, showing the size of income of the banking sector in Poland due to banking activity.

Table 1. Selected elements of the results for the banking sector in Poland

	Value (PLN m)		Change (PLN million)	Change (%)
	IX 2016	IX 2017		
Result of banking operations	45 536	46 004	468	1,0
– net interest income	28 398	31 493	3 096	10,9
– net fee and commission income	9 492	10 332	840	8,8
– other result on banking activity	7 646	4 178	-3 467	-45,4
NET FINANCIAL RESULT, including:	11 391	10 540	-851	-7,5
– commercial banks and branch inst.	10 879	9 920	-959	-8,8
– cooperative banks	512	620	108	21,0

Source: own elaboration based on the report on the situation of the banks of the Financial Supervision Authority 2017.

In the period from January to September 2017, the result of banking operations in Poland improved by PLN 468 million (1.0%), mainly due to the completion of a record interest result (PLN 31,493 million), up by almost 11% from the result achieved in the

same last year. This was mainly due to recent changes in the deposit and credit policy in the recent periods, consisting in lower interest rates on deposits and, at the same time, higher interest rates on most loans (Office of the Polish Financial Supervision Authority, 2017).

There was also an improvement in net fee and commission income. In October 2017, this figure was PLN 10,332 million, which is 8.8% better than in the same period of 2016. It resulted, among others, from the increase in revenues from loans and credits granted, sale of insurance products, servicing bank accounts or investment funds (Office of the Polish Financial Supervision Authority, 2017).

A significant drop in value in the item covering the remaining activities of the bank (-3 467 million PLN), is in particular the effect of settlement in the second quarter of 2016. sale of shares in VISA Europe Limited, which was an additional income of PLN 2 465 million) (Office of the Polish Financial Supervision Authority, 2017).

Ultimately, however, whether a bank makes a profit (a positive net financial result) or a loss (a negative net financial result) decides a number of components. In addition to the results of banking operations, they include costs of the bank's operations, depreciation, balance of provisions and allowances, or results of operating activities. In the period from January to September 2017, the net financial result of the banking sector in Poland amounted to PLN 10,540 million and it was PLN 851 million (7.5%) less than it was achieved in the corresponding period of the previous year. This result was mainly the result of the aforementioned sale of shares in VISA Europe Limited. If it were not for these activities, the net financial result would certainly be higher than that achieved in the corresponding period of 2016. (Office of the Polish Financial Supervision Authority, 2017).

The analysis of the above data shows how important, due to the bank's income, is the credit activity and what is connected with it - the methodology for assessing the profitability of banking products. It applies to active and passive balance products, ie those related to raising capital as well as its involvement in active products. Off-balance sheet items, eg guarantees or derivative instruments, are not taken into account in this case. The main idea of this methodology is that the product's profitability is determined by the average cost of obtaining financing sources, taking into account the bank's reserve and operating costs. The result of such an assumption is the calculated margin, which is a measure of effectiveness (Wąsowski 2001, p. 194).

Methodology for assessing customer effectiveness

Each of the transactions concluded by the bank affects the financial result. For this reason, the effectiveness of the transaction is so important in the assessment of effectiveness. When it is conducted with clients, the bank may first determine the benefits it wants to achieve as a result of these activities. The main task of the efficiency calcula-

tion is to determine the long-term lower price limit, also taking into account the actual costs. Thanks to this calculation, the bank has the opportunity to modify its position on subsequent transactions. In individual cases, when prices are shaped by the market, the bank is forced to accept an ineffective transaction, however important from the point of view of further cooperation with a given customer. Earlier, however, he makes an assessment of how the result of the bank would affect the resignation of these activities. It can be argued that the bank's operating costs are to a large extent fixed costs, which in the perspective of further cooperation with the client affects the acceptance of the transaction, but not always. You can meet estimates that 80% of clients give 20% of losses, or 20% of clients give 80% of profits (Wąsowski 2001, p. 199).

The effectiveness of cooperation with the client in the scope of the bank's credit activities can be determined by calculating individual components, such as:

- interest income;
- financing costs according to market rates;
- operating costs;
- the cost of risk (Wąsowski 2001, p. 199).

The main cost associated with the loan is the interest rate. It depends on the total value of accrued interest that the client pays on the loan taken, as well as the amount of the installments. It also affects the creditworthiness, which should be the higher the lower the interest rate on the loan. The interest rate is determined on the basis of the base (reference) rate and the bank's margin. The reference rate is the yield on the NBP bills issued by the National Bank of Poland in conducting open market operations. In other words, it is the interest rate at which the largest banks grant loans to other banks on the international market. The base rate for loans in the Polish currency is WIBOR (1M, 3M or 6M, for loans in PLN), EURIBOR (1M, 3M or 6M, for loans granted in EUR) and LIBOR (1M, 3M, or 6M, for loans granted in US dollars). This form is called the nominal interest rate. There is also a concept of real interest, which also includes other charges, such as commission and often insurance. These factors are of particular importance to consumers.

In order to determine the final interest rate, the bank adds a margin to the market reference rate. It constitutes the bank's remuneration for borrowed money. Its amount is determined individually by each bank depending on the policy adopted by it, taking into account several criteria, including loan amount, purchase of additional products (credit card) or negotiations with the bank. Margin is determined before the loan agreement is signed, and then it is fixed throughout the loan period. Its change is possible only in the form of an annex to the contract (Czerwiński, 2011).

However, the margin size will not help in determining the actual impact on the financial result, taking into account the scale of the given instrument. The financial instrument, which is characterized by a low margin or profitability but a high share, is more

binding than an instrument with a high margin, but a small share (Wąsowski 2001, p. 194).

An example of loan profitability calculation for a bank is presented in Table 2.

Table 2. Example of customer efficiency assessment for active transaction - credit

	Value	Rate %	Market rate	Profit margin %	Income	Operating costs	The cost of risk	The final income
Active transaction –Credit	3000	22	20	2	60	15	5	40

Source: own study based on Wąsowski 2001, p. 200.

According to the sample calculation presented in Table 2, although the bank, after determining the interest rate, can calculate the income it receives from a given loan, to estimate the final income, it must include additional operating costs and risk costs. In practice, the often-appearing term is the APRC, which means nothing more than the already mentioned annual percentage rate of interest. It should take into account all the basic costs borne by the borrower in connection with the concluded loan agreement. It is mainly about:

- loan interest rate;
- commissions for lending;
- insurance;
- payment for additional services (eg consultant visit at home);
- payment for processing a loan application;
- changes in the value of money over time and the repayment period.

In many banks, in the case of loans to people and housing, the interest rate is set at the same level for all clients, although it happens that it is calculated individually depending on the client's assessment. In the case of commercial loans, the rule is to differentiate the loan based on the risk assessment associated with a given client (Dobosiewicz 2007, p. 169). Risk is a common phenomenon in bank activities. It is of a complex and multi-dimensional nature. Majority of risk factors derive from information asymmetry. This phenomenon consists in the fact that the scope of information which is in the possession of the parties entering into transaction is varied (Olszewska 2018, p. 68). The higher the risk borne by the bank, the higher the interest rate is set, which in practice means transferring risk to the client (Dobosiewicz 2007, p. 169).

The following factors affecting the cost of the loan can be distinguished:

- loan period;
- individual customer assessment by the bank;
- the bank's policy regarding the loan portfolio;
- quality of security (Dobosiewicz 2007, p. 169).

Banks make a detailed individual analysis of the financial situation of the client before granting him a loan. The lower interest rates can be found in the more affluent, more dynamic companies, long-term cooperation with the bank, commercial banks on which the bank earns through various settlements, but also those clients that the bank wants to win. By the way, the bank raises the interest rate on loans to customers, which it will identify as particularly risky (Dobosiewicz 2007, p. 169).

Another factor having a significant impact on the cost of the loan is the bank's policy regarding the loan portfolio. Banks do not have the ability to have specialists who can assess every area of the economy. The assessment of loan applications from some of them is so problematic that it requires raising their price. And vice versa. Credits in areas where the risk of making a mistake is smaller are cheaper (Dobosiewicz 2007, p. 169).

An equally important rule applicable when calculating the cost of a loan is to refer to the quality of collateral for a given loan. The more questionable their quality, the higher the interest rate charged (Dobosiewicz 2007, p. 169).

Methods for calculating the profitability of loans for a bank

Traditional methods for assessing the effectiveness of interest products

A very important role in the bank's management system, including pricing of loan products, is the assessment of the profitability of banking products. It helps in taking both short- and long-term decisions, shows the strengths and weaknesses of the products offered for the pricing policy process, setting the planned balance sheet structure, or identifying the reasons for a possible drop in the profitability of products and the search for its solutions (Szadziwska, 2005). In order to determine the interest margin for the activity conducted by the bank on the basis of data from financial accounting, an interest balance is prepared, containing average assets and liabilities with their interest rate. However, this balance shows only a general picture of how individual balance sheet items affect the total net interest income of the bank. In order to determine the share of banking products on the total interest margin, two groups of methods are used: traditional and market-based. The first group includes the one pool method and the layered balance method. On the other hand, the group of market methods contains only the method of market interest (Iwanicz-Drozdowska 1999, p.109).

The method of one pot assumes that:

- liabilities form one pool that finances active operations, irrespective of the selling periods and interest rates,
- assets form the second pool, thus constituting a portfolio of deposits for acquired liabilities, regardless of their differentiation.

The total interest margin creates in this case the difference between the average interest rate on assets and liabilities. Financing of active operations is carried out at the average cost of obtaining liabilities, whereas passive operations are invested at the average interest rate on assets. On this basis, it is possible to determine the individual margins of individual items. In order to calculate the margin achieved on specific products – assets, two formulas are used:

METOD 1

$$M = \frac{r_A - r_P}{2}$$

where:

M – margin

r_A – interest rate on assets

Δr_p – average interest on liabilities

METOD 2

$$M = r_A - \Delta r_P - \frac{MC}{2}$$

where:

M – margin

r_A – interest on an asset item

Δr_p – average interest on liabilities

MC – total margin

In the case of liabilities, formula formulas change, but the principle of sharing the margin developed by the bank on two sides of the balance sheet is maintained. Each of them is allocated half of the total margin. Method 2, however, allows for a more stringent evaluation of banking products, showing products with negative and near-zero, as well as very high margins (Iwanicz-Drozdowska 1999, p.112).

Table 3 shows the advantages and disadvantages of the one pool method.

Table 3. Evaluation of the one pool method

Measurement method	Benefits	Disadvantages
One pool method	<ul style="list-style-type: none"> – simple to use – assets are assigned to a portion of interest costs, while part of revenues is allocated to liabilities – makes it possible to evaluate the effectiveness of individual interest products 	<ul style="list-style-type: none"> – does not take into account the relationship between individual items of assets and liabilities – the contribution of active operations to the bank's result depends on the pricing policy applied to liabilities, and the contribution of passive operations to the result depends on the bank's investment policy – does not take into account current market conditions

Source: own study based on <https://metafinanse.pl/co-to-jest-rrso-kredyt-koszty/>

The second traditional method used to measure the profitability of products is the layered balance method. It does not give the opportunity to estimate the effectiveness of each of the balance products, but the balance sheets. These layers are distinguished on the basis of three criteria:

- profitability (interest rates on assets and liabilities);
- liquidity;
- compliance with prudential norms affecting the structure of assets and liabilities (Iwanicz-Drozdowska 1999, p.114).

In the case of the first criterion, which is the interest rate, there is the problem of allocating the required reserve. It can be placed in the layer of assets with the lowest interest rate, as well as in the layers with liabilities, from which a specific part of the reserve is discharged. The next criterion – liquidity, assigns balance sheet items to specific layers based on contractual dates or dates remaining until the end of the transaction (maturities). Sometimes, however, it is impossible to specify such terms (Iwanicz-Drozdowska 1999, pp. 114–115).

The tiered layer method, by means of linking specific items of assets and liabilities, illustrates the impact of particular layers on the global interest margin. However, it does not help in assessing the profitability of banking products. In addition, it is possible to create problems when interpreting the results. Table 4 shows the advantages and disadvantages of the stratified balance method.

Table 4. Evaluation of the stratified balance method

Measurement method	Benefits	Disadvantages
Layer balance method	<ul style="list-style-type: none"> – allows to estimate, – effectiveness of balance sheet layers, – takes into account the relationship between asset and liability items. 	<ul style="list-style-type: none"> – it does not show the effectiveness of individual banking products, – there is no unambiguous division into layers (there are several ways to divide), – does not take into account market conditions at the time the transaction is made

Source: own study based on <https://metafinanse.pl/co-to-jest-rroso-kredyt-koszty/>

Market methods for assessing the effectiveness of interest products

The market method for assessing the effectiveness of interest products is the market interest method (interest rate method). It was first used in the 1970s in American money-center banks to assess the effectiveness of loans granted and deposits accepted (Iwanicz-Drozdowska 2010, p.98).

It is based on the assumption that an alternative transaction on the financial market is possible for every active or passive transaction. Her main goals are:

- calculation of margins on transactions or portfolio of transactions, as well as an assessment of their impact on the total bank's margin;
- determining the pricing policy;
- providing bank managers with information on the valuation of transactions that do not meet expectations in this area (Iwanicz-Drozdowska 2010, p.9899).

Determining the profitability of the effectiveness of individual active positions using the bank interest method takes place in practice according to the scheme shown in Figure 1.

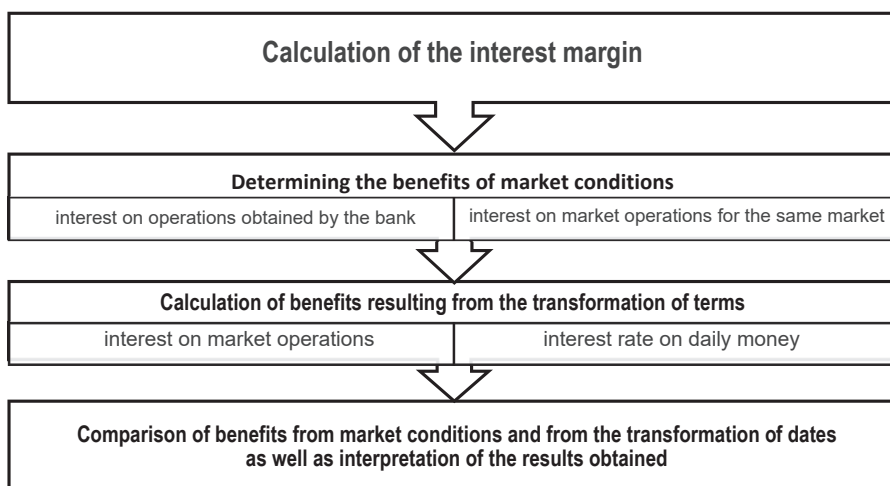


Figure 1. Stages of the calculation of the effectiveness of banking products using the market interest method

Source: own study based on <https://metafinanse.pl/co-to-jest-rrso-kredyt-koszty/>

The total interest surplus in this case can therefore be divided into three groups of benefits: resulting from market conditions, from the transformation of dates and from the transformation of currencies. They are estimated based on the concept of "costs of lost profits". The interest surplus on active transactions can be recorded using the formula:

$$MOD_A = r_{trans} - r_{alt}$$

where:

MOD_A – interest margin on active transactions

r_{trans} – interest rate obtained from the transaction

r_{alt} – alternative interest rate

The results obtained from the assessment carried out using the market interest method provide a source of information for the assessment of individual products as well as organizational units and clients (Iwanicz-Drozdowska 2010, pp. 98–99).

The application of the interest rate method allows for taking into account market conditions in the process of calculating the effectiveness of interest products. The possibility of using it also for the assessment of organizational units or specific clients increases its usefulness in banking practice (<https://metafinanse.pl/co-to-jest-rrso-kredyt-koszty/>).

The features of the market interest method in the form of a presentation of advantages and disadvantages are summarized in Table 5.

Table 5. Evaluation of the market interest method

Measurement method	Benefits	Disadvantages
Market interest method	<ul style="list-style-type: none"> – takes into account the current market conditions, thanks to which it allows to estimate whether the completed transaction was concluded on terms more or less favorable to those prevailing on the market, – helps to set a minimum interest rate in terms of achieving the planned result, and thus making a decision about concluding a given transaction, – It allows not only to carry out the calculation of the effectiveness of banking products, but also the bank's clients and organizational units. 	<ul style="list-style-type: none"> – the difficulty of obtaining information by the bank about the interest rates sought, – a free capital and money market is assumed, which is not always true, – it is not an instrument for managing the balance sheet structure, because it does not ensure automatic coordination of assets and liabilities, – no possibility of calculating new transactions in isolation from previously concluded transactions (jointly determines revenues from past and future transactions).

Source: own study based on <https://metafinanse.pl/co-to-jest-rrso-kredyt-koszty/>

The discussed both traditional and market methods for assessing the effectiveness of active products form the basis for the simulated calculation of the effectiveness of banking products.

Simulation calculation of the effectiveness of interest products

One pool method

In order to more fully discuss the methods of calculating the effectiveness of active products based on them, exemplary simulations have been developed. As the basis for calculations in these methods is the interest balance, it was presented as the first in Table 6 and will be used to perform the simulation using the single pool method.

Table 6. Interest rate balance of a commercial bank X

Assets	Value	Average interest rate	liabilities	Value	Average interest rate
1. Cash, operations with the Central Bank	382,00	0,00	1. Liabilities due to the Central Bank	110,00	14,50
2. Receivables from the financial sector:	955,00		2. Liabilities to the financial sector:	783,00	
– up to three months	594,00	4,50	– up to 3 months	211,00	3,50
– above 3 months to 1 year	284,00	6,50	– above 3 months to 1 year	532,00	5,25
– over 1 to 5 years	57,00	9,50	– over 1 to 5 years	28,00	7,85
– over 5 years	20,00	12,00	– over 5 years	12,00	10,25
3. Receivables from the non-financial sector:	3 375,00		3. Liabilities to the non-financial sector:	6 175,00	
– up to 3 months	203,00	6,50	– up to 3 months	3 149,00	4,75
– above 3 months to 1 year	539,00	11,50	– above 3 months to 1 year	2 594,00	9,25
– over 1 to 5 years	1 284,00	13,85	– over 1 to 5 years	373,00	12,50
– over 5 years	1 349,00	16,15	– over 5 years	59,00	15,15
4. Receivables from the public sector:	730,00		4. Liabilities to the public sector:	424,00	
– up to 3 months	11,00	5,80	– up to 3 months	382,00	4,20
– above 3 months to 1 year	192,00	9,60	– above 3 months to 1 year	15,00	8,50
– over 1 to 5 years	365,00	11,75	– over 1 to 5 years	17,00	8,75
– over 5 years	162,00	15,50	– over 5 years	10,00	10,25
5. Securities	2 857,00	12,50	5. Liabilities from securities	252,00	10,25
6. Intangible assets	27,00	0,00	6. reserves	128,00	0,00
7. Tangible fixed assets	211,00	0,00	7. Equity capital	665,00	0,00
Sum / Average weighted interest rate	8 537,00	11,34	Sum / Average weighted interest rate	8 537,00	6,39

Source: own study based on <https://metafinanse.pl/co-to-jest-rroso-kredyt-koszty/>

In Table 6, you can find not only amounts and weighted averages of interest rates on assets, but also liabilities that are necessary to make calculations using selected methods. First, however, you can calculate the total interest margin.

$$MOD = r_A - r_p$$

where:

MOD – gross interest margin

r_A – interest rate on assets

r_p – interest on liabilities

$$MOD = 11,34\% - 6,39\%$$

Interest margin = 4.95%

Based on the data from table 6 and the formulas, partial margins can be estimated. The results of the calculation are presented in Table 7.

Table 7. Example calculations of partial margins for selected asset items using the single pool method

Assets	Interest margin – METHOD 1	Interest margin – METHOD 2
1. Receivables from the financial sector:		
- up to 3 months	$(4,50\% - 6,39\%)/2 = -0,945\%$	$4,50\% - 6,39\% - 2,475\% = -4,365\%$
- above 3 months to 1 year	$(6,50\% - 6,39\%) = 0,055\%$	$6,50\% - 6,39\% - 2,475\% = -2,365\%$
- over 1 to 5 years	$(9,50\% - 6,39\%)/2 = 1,555\%$	$9,50\% - 6,39\% - 2,475\% = 0,635\%$
- over 5 years	$(12,00\% - 6,39\%)/2 = 2,805\%$	$12,00\% - 6,39\% - 2,475\% = 3,135\%$
2. Receivables from the non-financial sector:		
- up to 3 months	$(6,50\% - 6,39\%) = 0,055\%$	$6,50\% - 6,39\% - 2,475\% = -2,365\%$
- above 3 months to 1 year	$(11,50\% - 6,39\%) = 2,555\%$	$11,50\% - 6,39\% - 2,475\% = 2,635\%$
- over 1 to 5 years	$(13,85\% - 6,39\%) = 3,73\%$	$13,85\% - 6,39\% - 2,475\% = 4,985\%$
- over 5 years	$(16,15\% - 6,39\%) = 4,88\%$	$16,15\% - 6,39\% - 2,475\% = 7,285\%$

Source: Own study based on <https://metafinanse.pl/co-to-jest-rroso-kredyt-koszty/>

As you can see, the type of counting method used allows you to get different results. However, taking into account the amount of partial margins obtained, the order of interest products in terms of their profitability is the same. Receivables from the non-financial sector with a repayment date of over 5 years turned out to be the most profitable. In the process of analyzing the results obtained, the marginal mark is of particular importance. In the case of results close to zero, or below zero, this is a signal of low efficiency or even ineffectiveness of a given product.

Layer balance method

The basis for the next simulations will be a somewhat simplified layout of another interest balance, which is presented in Table 8.

Table 8. The system of interest balance of the commercial bank Y

Assets	Value	Average interest rate	liabilities	Value	Average interest rate
1. Cash and bill at the central bank	150,00	0,00	1. Deposits a vista	320,00	7,00
2. Receivables from clients (12 months)	650,00	24,50	2. Term deposits (6 months)	550,00	19,50
3. Value parcels (6 months)	200,00	19,00	3. Issued securities (6 months)	130,00	17,00
Sum / Average weighted interest rate	1000,00	19,37	Sum / Average weighted interest rate	1000,00	15,24

Source: own study based on Iwanicz-Drozdowska 1999, p. 109.

According to the assumptions of the stratified balance method, it is necessary to calculate the margin for particular layers of the balance sheet, after prior arrangement in accordance with the interest rate as well as the manner of allocating the required reserve. In this case, the layers were shaped on the basis of asset items, and the mandatory reserve was included in the last layer (Iwanicz-Drozdowska 1999, p. 109). Necessary mandatory reserves are presented in Table 9.

Table 9. Reserve requirement

Reserve requirement	%	Amount
Deposits <i>a vista</i>	20,11	64,00
Term deposits	11,00	60,50
Issued securities	11,00	11,00

Source: own study based on Iwanicz-Drozdowska 1999, p. 116.

The following tables 10, 11 and 12 contain the assignment according to the interest rate to individual layers when the reserve requirement is included in the last band.

Table 10. Layer I

Specification	%	Amount
Receivables from clients (12M)	24,5	650,00
Total layer I	24,5	650,00
Term deposits (6M)	19,50	550,00
Issued securities (6M)	17,50	130,00
Total layer I	19,12	680,00
Layer margins	5,38	

Source: own study based on Iwanicz-Drozdowska 1999, p. 116.

Table 11. Layer II

Specification	%	Amount
Securities (6M)	19,00	200,00
Total layer II	19,00	200,00
Surplus from layer I	19,12	30,00
deposits <i>a vista</i>	7,00	320,00
Total layer II	8,04	350,00
Layer margins	10,96	

Source: own study based on Iwanicz-Drozdowska 1999, p. 117.

Table 12. Layer III

Specification	%	Amount
Reserves required from contributionsa vista	0,00	64,00
Mandatory reserves on term deposits (6M)	0,00	60,50
Mandatory reserves on securities issued (12M)	0,00	11,00
Cash and a bill at the central bank	0,00	14,50
Total layer III	0,00	150,00
Surplus from layer II	8,04	150,00
Total layer III	8,04	150,00
Layer margins	-8,04	
OVERALL MARGIN	4,49	

Source: own study based on Iwanicz-Drozdowska 1999, p. 117.

The presented simulation showed that the assets with the highest interest rate are receivables from customers (24.5%), while liabilities – term deposits (19.5%) and they were in the first layer of the balance sheet. However, due to the fact that the amounts of these items are not equal, it was necessary to equalize the amount of the layer. This was done by adding to the term deposits the second highest position of liabilities in terms of the interest rate. After the operation of adding to the layer I issued securities (17.5%), there was a surplus on the liabilities side, which is transferred to the lower layer. For Tier I, the weighted average interest rates on assets (24.5%) and liabilities (19.12%) were calculated. The difference between these results is the margin of the layer and amounts to 5.38%.

Layer II consists of assets and liabilities with an average interest rate. In addition, there was a surplus from layer I in the form of thirty monetary units (19.12%). The procedure in this layer is identical to the previous one. The difference occurred in the case of layer III. First of all, the surplus from Tier II occurred on the liabilities side. Secondly, there was a total margin position. Its calculation is carried out counting the weighted average margin of individual layers. The condition is, however, to take into account when weighing the amounts reported for each layer on the asset side.

Traditional methods of calculating the effectiveness of interest products do not take into account prevailing market conditions at the time the transaction is concluded. It is not compared whether the effects achieved by the bank were worse than those possible to achieve on the market or whether they could be better. This defect can be eliminated using the market interest method.

Market interest method

An example of the calculation of the effectiveness of interest products using the last of the discussed methods – the market interest method, was developed based on the Y commercial bank interest balance and assumptions that the market interest rates for assets and liabilities are the same and the calculations are made annually. This variant is shown in table 13.

Table 13. Market interest method – simulation

Specification	Amount	Interest rate	The market rate (in%)	Daily money market rate (in%)
Assets				
Cash and a bill at the central bank	150,00	0,00	0,00	16,00
Receivables from clients (12M)	650,00	24,50	18,00	16,00
Securities (6M)	200,00	19,00	19,50	16,00
Total assets	1000,00	19,725	15,600	16,000
liabilities				
Depositsa vista	320,00	7,00	16,00	16,00
Term deposits (6M)	550,00	19,50	19,50	16,00
Issued securities (6M)	130,00	17,50	19,50	16,00
Total liabilities	1000,00	15,240	18,380	16,00

Source: own study based on Iwanicz-Drozdowska 1999, p. 117.

The calculation of the margin in this case should start with calculating the interest surplus. The results are shown in Table 14.

Table 14. Interest surplus – market interest method

Specification	Amount	%
Interest income	197,25	19,725
Interest costs	152,40	15,240
Interest surplus	44,85	4,485

Source: own study based on Iwanicz-Drozdowska 1999, p. 122.

The calculation of benefits resulting from market conditions is presented in Table 15.

While calculating the benefits resulting from market conditions, the market interest rate was deducted from the obtained interest, whereas in the case of liabilities, the interest rate was deducted from the market interest rate. The last part of the calculation is to determine the benefits of the transformation of terms by referring to the daily money interest. These calculations are given in Table 16.

Table 15. Benefits from market conditions

Specification	Amount	%
Assets		
Cash and a bill at the central bank	0,000	0,000
Receivables from clients (12M)	42,350	6,500
Securities (6M)	-1,000	-0,500
Total assets	41,250	4,125
liabilities		
Deposits <i>a vista</i>	28,800	9,000
Term deposits (6M)	0,000	0,000
Issued securities (6M)	2,600	2,000
Total liabilities	31,400	3,140
SUM	72,650	7,265

Source: own study based on Iwanicz-Drozdowska 1999, p. 122.

Table 16. Benefits of the transformation of terms

Specification	Amount	%
Assets		
Cash and a bill at the central bank	-24,000	-16,000
Receivables from clients (12M)	13,000	2,000
Securities (6M)	7,000	3,500
Total assets	-4,000	-0,400
liabilities		
Deposits <i>a vista</i>	0,000	0,000
Term deposits (6M)	-19,250	-3,500
Issued securities (6M)	-4,550	-3,500
Total liabilities	-23,800	-2,380
SUM	-27,800	-2,780

Source: own study based on Iwanicz-Drozdowska 1999, p. 123.

The simulation showed that the bank gains the greatest benefits from deposits and *vista* as well as receivables from customers. Investment securities issued ineffective turned out to be ineffective despite the fact that traditional methods described them as effective. The transformation of deadlines brought losses to the bank (Iwanicz-Drozdowska 1999, p. 123).

Conclusions

The assessment of the effectiveness of banking products is very important from the point of view of bank management, which requires making multiple decisions regarding

both current and strategic goals. Thanks to such calculations, the bank receives information on the quality and usability of individual areas of its operations. This is important because it allows you to increase the rationality of decisions made, which in the long-term affects the growth of the bank's value. The methods of measuring the profitability of interest banking products show that the bank has the option of choosing different calculation methods. As it turns out, none of them is a flawless solution. These methods have both advantages and disadvantages resulting from the use of certain simplifications. The presented measurement methods are part of the bank's efficiency statement, which is one of the controlling instruments. It allows you to evaluate the strengths and weaknesses of interest products and, as a result, their impact on the financial result. It also supports the conduct of pricing policy in the range of services offered.

After comparing the three methods of calculating the profitability of interest products, including bank loans, it can be stated that compared to traditional methods it is more advantageous to use the single pool method, which compares the margins of individual banking products (eg loans) by assessing the profitability of each of them. The stratified balance method allows only for estimating the effectiveness of previously specified balance sheets. However, these methods have a particular drawback, which is the failure to take into account current market conditions. In this respect, the method of market interest rates (market interest) turns out to be more profitable, which, taking into account the current market conditions in the calculation process, allows to estimate whether the transaction executed by the bank was concluded on terms more or less favorable than those prevailing on the market. In addition, it allows you to set a minimum interest rate in terms of achieving the intended result.

In summary, the methods of calculating the profitability of banking products, although not ideal, give a lot of information that allow identifying and developing product groups with the highest profitability, help determine the reasons for the unprofitability of services and search for corrective solutions, as well as control the development of new products. It is important, however, that each bank should develop and operate according to its own system for measuring the profitability of interest services, in line with the specificity of its operations. This is very important because of the possibility of falsifying reality in the event of an incorrect assessment system. This, in turn, may lead to a decline in the profitability of the bank's operations.

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Paweł SOSNOWSKI¹

LEGAL NATURE OF THE URBAN PLANNING PROFESSION

When regulating the urban planning profession in 2000, the legislator established a professional association and deemed that it had the status of a profession of public trust. This state of affairs lasted for fourteen years, when the so-called Deregulation Act of 9 May 2014 on Facilitating Access to Certain Regulated Professions (Journal of Laws, item 768, hereinafter referred to as: Deregulation Act.) abolished the professional association of urban planners and provided that the urban planning profession lost its status of a profession of public trust. The above Act was appealed to the Constitutional Tribunal, which was to examine its compliance with the Constitution of the Republic of Poland. In its judgment of 24 March 2015 (Case file no. K 19/14, Journal of Laws of 2015, item 476.), the Constitutional Tribunal ruled that the norms of the above Act did not violate the Constitution; however, it did not address the legal nature of the urban planning profession at all. The aim of this article is to show, on the basis of the above-mentioned judgment of the Constitutional Tribunal, characteristic features of the urban planning profession, compare it with the professions of architect and civil engineer, and determine whether, owing to its characteristics, it is a profession of public trust or not. According to the author, the urban planning profession has the status of a profession of public trust, which should be of key importance for the Constitutional Tribunal's assessment of the constitutionality of legal norms contained in the aforementioned Act.

Keywords: Urban planner, Urban planning profession, Legal nature of the urban planning profession, Deregulation Act, Professional Association of Urban Planners.

JEL Classification Codes: K23.

¹ Assistant Professor, Ph.D., Warsaw University of Technology, Faculty of Law and Administration.

Introduction

On 9 May 2014, the Sejm of the Republic of Poland adopted an Act on Facilitating Access to the Practice of Certain Regulated Professions (Journal of Laws of 2015, item 768. Hereinafter referred to as the „Deregulation Act”). The above-mentioned Act was appealed to the Constitutional Tribunal as unconstitutional. On 24 March 2015, the Constitutional Tribunal rendered a judgment ordering that the provisions of the aforementioned Act be examined to confirm whether they are constitutional. In its decision, the Constitutional Tribunal concluded that the profession of urban planner is not the profession of public trust.

Apparently, the profession of urban planner has the quality of the profession of public trust, which was indicated by the legislator itself when it subjected this profession to the provisions of the Act of 15 December 2000 on Professional Associations of Architects, Civil Engineers and Urban Planners (Journal of Laws of 2001, no. 5, item 42). What were the reasons for the legislator’s 2014 decision concluding that urban planner was no longer the profession of public trust? An answer to this question is simple: a desire to „slacken” the requirements to be met in order to be admitted to this profession and possibility of urban planning acts being prepared by a considerably larger group of people than before.

One may wonder what circumstances underlined the decision of the Constitutional Tribunal, which deemed the Deregulation Act, as regards the abolition of the profession of urban planner as the profession of public trust, constitutional.

Urban planner as the profession of public trust

The first argument against the judgment rendered was related to the assessment of the profession of urban planner alone. The Constitutional Tribunal assumed that the profession of urban planner is not the profession of public trust. This conclusion (item 5.5. of the reasoning part) was reached by the Tribunal after it previously defined the notion of the profession of public trust (item 3.4. of the reasoning part) and juxtaposed this term with the assessment of the profession of urban planner (item 5.2. of the reasoning part). According to the Tribunal, the profession of urban planner did not match the model adopted; nonetheless, the Tribunal groundlessly excluded derogation due to the unique and specific nature of the profession.

Definition of the profession of urban planner

First, the notion of the profession of public trust has not been defined in the Constitution, so one could have doubts as to what extent the elements (components) of this notion indicated by the Tribunal constitute its *essentialia negotii*.

By invoking current court decisions and doctrine, the Tribunal, as regards the understanding of the notion of the profession of public trust, assumed that the characteristics of such profession include:

- a) Necessity to ensure the proper practice of the profession consistent with the public interest, due to the importance of a given area of professional activity in the society;
- b) Benefits provided and contacts with natural persons established by representatives of the professions discussed in case of potential or real threat to the good of special nature (e.g. life, health, freedom, dignity, good reputation);
- c) Care and diligence exercised by representatives of the professions discussed in respect of the interests of persons taking advantage of their services, caring for their personal needs, and ensuring that individual subjective rights guaranteed by the Constitution are protected;
- d) Requiring specific qualifications that need to be met in order to be able to practise the professions discussed, covering not only proper, formal education, but also experience acquired and warranting proper practice of the profession consistent with the public interest, taking into consideration specific rules of professional deontology;
- e) Acquiring personal information and information concerning private life of persons taking advantage of the services provided by representatives of the profession of public trust; this information constitutes professional privilege, which may be waived under the provisions of the Code of Criminal Procedure of 6 June 1997 (Journal of Laws No. 89, item 555);
- f) Relative independence of practising the profession.

The aforementioned list indicated by the Tribunal should be deemed proper insofar as that it is actually based on the characteristics of the profession of public trust, elaborated in the court decisions. Also the doctrine points to the element of specific relationship with the customer (Wojtczak, 1999).

Since the notion of the profession is very broad, decoding and clarifying what is meant by the definition of the profession of public trust does not seem possible, in particular if, as a result, a complete and universal definition was to be coined. The Tribunal disregarded the fact that each profession is specific, so there may be individual cases when a given profession will not meet the criteria indicated by the Tribunal despite that it has social trust. It should be assumed that the criteria indicated by the Tribunal are not constant and mandatory, so derogation from them should be allowed in justified cases.

Further, it seems that the Constitutional Tribunal failed to notice the specific nature of the profession of urban planner, barely discussed its essence and characteristics, coming to the conclusion that it did not have the quality of the profession of public trust. Consequently, the Tribunal, when justifying the legal classification of this profession

drew attention to: (I) lack of a particular bond between urban planners and natural persons and (II) lack of a threat to personalised good of individuals, which may be threatened as a result of improper exercise of professional activities.

The problem of special relations with natural persons

As regards the people professional activities are addressed to, the Tribunal indicated that the services of urban planners are mainly addressed to territorial government authorities, which commissioned drafts of relevant plans or decisions. In the reasoning part, it was pointed out that, pursuant to Article 9 (1) and Article 14 (1) of the Spatial Planning and Land Development Act of 27 March 2003 (Consolidated text in the Journal of Laws of 2015, item 199, hereinafter the „Spatial Planning and Land Development Act.”), the municipal council takes initiative to determine spatial policy of the municipality and purpose of the land, also for the public purpose investments, and the manner of their development, whereas the executive authority (municipality head, mayor, president of the city) is responsible for the urban planning procedure, preparing a draft of the local spatial development plan and draft of the study of land use conditions and directions of the municipality. The drafts of those documents may be prepared only by persons possessing the knowledge of urban planning, pursuant to Article 5 (1) of the Spatial Planning and Land Development Act. However, the above conclusions constitute only part of the whole range of relations (relationships) established by urban planners in the course of their work.

Undoubtedly, the relations established by urban planner are specific due to that they are established with numerous subjects. In fact, they are addressed to a group of individuals rather than one individual. In the performance of their professional activities, urban planners establish particular relations with the Mayor (Municipality Head / President of the City), but not with the municipal council itself, which obviously adopts a resolution of intent at the beginning of the procedure and a resolution on the plan at the end of the procedure, but for the remaining (middle) part of the procedure the executive authority is actually responsible. At this point, there are virtually no contacts with the municipal council. It should be borne in mind that such urban planning services are commissioned by the Municipality, i.e. the community of residents. Eventually, as a result of the exposition of documents and consultations, also the relations with residents (supporters or opponents of the solutions suggested in the draft) are established. One should not forget about investors, mainly developers, interested in the maximum land use, in particular as regards the development density.

However, this multitude of relations, as a permanent characteristic of the profession, does not disqualify it as the profession of public trust. On the contrary, by demonstrating its unique nature, it confirms that among complex inter-subjective relations with the executive authority, legislative authority, urban planning commission, individual councillors,

the ultimate and direct beneficiary are actually owners of real properties located within the area of urban planning activities as well as local and supra local social groups. They are the persons who will make use of the planned road, recreational and sports, or service infrastructure. Thus, those relations, despite their multitude, are ultimately addressed to natural persons. This is because urban planner's care for space also affects both collective problems of the whole local community and its individual representatives who possess legal titles to the real property. In the scope of ownership, such subjects constitute a group of individuals who can be precisely identified. They are not unspecified subjects, and the level of interference in their property is permanent and possible to be precisely specified.

Specially protected good when practising the profession of urban planner

In the reasoning part of the judgment (item 5.4.) the court held: *„As a result of the activities of urban planners the personalized good of individuals is generally not threatened”*. This is also reiterated at the end of the reasoning part (item 9.5). It seems however that, contrary to what the Tribunal holds, this good includes both the spatial order, as a category capable of being individualized in a given area, and sustainable development. It is after all the protection of property as the specific good to which specific subjects are entitled. At the same time, the Tribunal is aware of the existence of that good, to which it explicitly points in the reasoning part (item 5.3.), defining the spatial order as a „value of major importance”. In the judgment, the spatial order was deemed part of protection of natural environment and was provided for in Articles 5 and 74 of the Constitution. Nonetheless, it was not given the status of specially protected good. The spatial order alone not only determines sustainable development, but affects the quality of present and future life of residents. In the authors' opinion, there are no grounds to think that poorly designed cities pose a lesser threat to the health of their residents than poorly designed houses or systems, and the professions of civil engineer or architect have been deemed the professions of public trust after all.

It should be also added that the search for threats to specially protected good, which is the condition for classifying a profession as the profession of public trust and which the Tribunal could not find, is the ownership protected by the Constitution. Obviously, the ownership may be restricted by the act, whereas spatial development plans constitute local law acts of non-statutory nature (Although they are issued under acts, in particular local government acts and spatial planning and development act.). Thus, drafting urban planning documents of such major importance should be done with full social trust in persons who possess relevant qualifications for preparing them.

Thus, the Tribunal noted that practising the profession of urban planner means meeting the needs of the population. Nonetheless, this circumstance did not lead to the conclusion that the profession they practise is the profession of public trust. The

argument against the judgment at hand is not that the judgment completely omitted the aforementioned good, but that it classified it in the wrong way.

Furthermore, this profession is proved to be unique not only because it establishes ownership rights in connection with developing urban planning acts. It is unique because it also combines the relevant relations between the customer, owners or investor's economic interests, and the urban planner, who is a buffer in such relations and often the only subject, who, following good practices, takes into account also public interests. It seems that in a short (Half a page, item 5.3, out of 29 pages of the reasoning has been devoted to urban planning) description of urban planning the Tribunal did not see the role of urban planner, who, equipped with multidisciplinary knowledge, should be able to resist pressure of persons and authorities pursuing economic and political interests. Thus, urban planner is not (and at least by the nature of the profession should not be) a craftsman to draw streets and squares or a person to determine the purpose of land as ordered by specific investors. It also does not seem justified that urban planner should take into account all guidelines of the municipality authorities, since they may arise from political motives. The fact that the orders are placed most often by the Municipality cannot mean that urban planner should be absolutely obedient to the ordering party, because in such a case supra local interests will remain unprotected. Independence of urban planner is thus justified from the perspective of public interest.

Purpose of urban planning activities

The essence of the profession of urban planner and the quality of the profession of public trust are really determined by the purpose of professional activities, which is based on the protection of the common good. This is related to the need to ensure proper practice of the profession consistent with public interest, which, in the case of professions of public trust, is verified by the professional association. No one else possesses such expertise as to be able to assess whether urban planning assumptions are optimal and consistent with the regulations and deontology rules. Thus, the profession of urban planner, who not only affects the ownership, which is the good protected by the Constitution, through the draft plans, but also, owing to proper plans, shapes the standards of the protection of life and health and additionally protects the common good, e.g. the good related to the protection of cultural and natural heritage, as well as the protection of natural environment, is the profession of public trust. Among all professions of public trust it is hard to find those, which are focused on the protection of the common good in a similar manner.

Additionally, it seems that local communities incessantly demand that certain spatial functions in a given area be preserved, e.g. they file petitions for preservation of green areas (parks, green squares, forests, squares), designing additional streets or public utility areas. These persons engage in such activities to improve the standard of life and

protect their life and the environment, invoking civilization diseases and stress, which may indirectly result from defective urban planning solutions. Dependence between the protection of health and professional activities cannot be thus assessed only from the perspective of direct nature of the cause and effect relationship. Such perspective is too short and needs to be revised. It is hard not to notice that defective transport solutions (contributing to accidents or traffic jams), burdensome neighbourhood (which is a result of being designed in the vicinity of other onerous elements) affect human health.

The purpose of the profession is the protection of common values, which is at the same time combined with the protection of individual's values. This function, consisting in balancing various interests as well as the individual and collective good, at the same time points to professional difficulties, which urban planner comes across in the performance of professional activities. This makes the profession unique.

Profession of urban planner vs. professions of architect and civil engineer

In the Tribunal's opinion, the legal status of the compared professions of urban planner, architect and civil engineer is different, despite that the scope of professional associations was regulated in the same act. Thus, the Tribunal held that there was no prerequisite of legal inequality, meaning that only urban planners were wrongly deprived of the professional association. Consequently, Article 29 (1) of the Deregulation Act and Article 3 of the Act on Professional Associations were deemed compatible with Article 32 (1) of the Constitution. The Tribunal's conclusions derived from a simple assumption that, since those are not similar professions, it is difficult to assess their similar treatment or constitutionally justified differentiation.

The Tribunal began analysing the allegations of unequal treatment in respect of the professions indicated with a short characteristics of the professions of architect and civil engineer. Referring to the provisions of the Construction Law of 7 July 1994 (Journal of Laws of 2013, item 1409, as amended.) and the Act of 15 December 2000 on Professional Associations of Architects, Civil Engineers and Urban Planners (Journal of Laws of 2013, item 932, consolidated text, as amended.), the Tribunal indicated that those two professions include the activities, such as: design, verifying architectural and construction projects, author's supervision, managing a construction site or other construction works, managing the production of construction elements, supervision and technical inspection of the production of such elements, investor's supervision and technical inspection of the maintenance of building structures. The Tribunal held (item 9.4. of the reasoning part) that the work of architect is characterized by designing construction site plans, extension and modernization of building structures or their parts, and in particular preparing project assumptions, taking decisions on construction and material solutions, developing projects with arts- and space-wise, as well as designing direct surroundings of the structure and developing its plot. Whereas the duties of civil engineers include the

activities, such as planning and designing of building structures, preparing construction technology, inspection and supervision of each stage of construction or improving the structure of buildings or their parts.

The aforementioned activities of architects and civil engineers, in the Tribunal's opinion, are related to the need to protect individual's life and health (in particular during the construction process), that is the good of special nature. It is proper preparation of an architectural and construction project, and then its proper execution that safety and health of building users depends on. With regard to the profession of urban planner, it should be pointed out that it is the proper development of draft urban planning acts that the quality of life and health of residents depends on. However, the Tribunal presented no arguments to support the claim that a person preparing an industry design provides better protection of human life and health than a person preparing a draft urban planning act, in particular a local development plan. Defective design or execution of a number of industry designs has no big influence on human health and life. Such defects are for the most part related to functionality, and design-implementation defects may be removed without any effect on human health.

Thus, it is difficult to logically prove that professional activities, consisting in designing a sanitary system necessary for instance for smooth operation of a kitchen, are „superior” to a draft urban plan of part of the city or housing estate. Notwithstanding the importance of the profession of civil engineer, it cannot be rationally explained why only the profession of civil engineer is the profession of public trust, whereas engineers working in the motor or air industry do not benefit from this privilege. The accuracy of their projects determines after all the safety and life of users of aircraft and land vehicles.

It should also be noted that the activities carried out by urban planners may have a financial impact on communes. Such impact can be positive or negative and will affect the commune's budget. The already prepared planning acts (local zoning plans) will either increase the commune's budget revenues, e.g. from the planning fees, property taxes, etc., or increase the expenditure in connection with the need to buy out properties intended for public investments (streets, squares, etc.) or in connection with the need to pay compensation as a result of decrease in the value of the property.

Increased disbursement of funds from the commune's budget for the above-mentioned objectives may consequently lead to the limitation of financing for the implementation of commune's other tasks, which will have an impact on the quality of their implementation. Poorly prepared and then adopted local plans and limited financial possibilities may also contribute to not so much limitation as inability to carry out the commune's tasks at all (e.g. in the case of communes in a poor financial condition or in the case of failing to include the commune's needs in the local plans and failing to allocate the land for the commune's important purposes).

Also a badly drafted act of the commune's spatial policy (study of conditions and directions of spatial development of the commune), failing to take account of the com-

mune's needs in the long run (at least 20-30 years), will affect the commune's development possibilities and increase or decrease the commune's budget revenues.

That is why it is so crucial to adequately prepare persons responsible for drawing up planning acts and to ensure they systematically improve their professional qualifications, including not only the ability to design and develop space or the knowledge of legal principles of drawing up planning acts, but most of all economic knowledge, which includes forecasting the financial impact the adopted planning acts may have.

Considering the model of the profession of public trust, indicated by the Tribunal, it should be noted that an average citizen never comes in contact with civil engineers, who perform works commissioned by developers or architects. So, there is no close relation between a representative of the profession and a person who actually makes use of their work and whose health is to be the most important purpose of the activities performed. General experience shows that an average user of a household system has no influence on design solutions and, what is equally important, s/he does not know the author of such solutions. Additionally, such relations are often missing in the work of architect, who prepares a design commissioned by an investor, not a user. There is no contact with an architect if copyrights to recurring designs are purchased. For this reason, it should be reiterated that this element of the profession does not constitute a necessary prerequisite which determines its nature. While there are differences between the professions indicated (because they are different professions), this fact does not determine the lack of the quality of the profession of public trust as regards urban planners.

Final remarks

In the years 2000–2014, the profession of urban planner had a status of the profession of public trust (Mrozek, 2014). At the same time, the legislator entrusted the supervision over the quality of urban planners' skills and the quality of urban planning acts prepared by them to the professional association at the national (national chamber of urban planners) and district (district chambers of urban planners) levels. The professional association of urban planners was dissolved by the Act of 9 May 2014 on Facilitating Access to the Practice of Certain Regulated Professions. At the same time, by the aforementioned Act the profession of urban planner was deregulated, meaning that the qualification requirements authorizing a person to practise the profession were lowered.

The profession of urban planner has, in my opinion, the quality of the profession of public trust. Even if one assumed that it has no such quality, it would be difficult to point out fundamental differences (obviously to the detriment) of the profession of urban planner if compared with the professions of architect or civil engineer. Therefore, it is necessary to revert to legal solutions, giving a special status to the profession of

urban planner. Additionally, it should be noted that within the area of spatial planning (preparing urban planning acts, and in particular local spatial development plans) the conflicts of national, local and individual interests are very common. Furthermore, adopting urban planning solutions, which have not been thought through, in the local spatial development plan leads to the lack of facilities, social services or hindered access to work, school or other places within a given municipality. As outlined above, it may also affect the finances and the ability of communes to carry out their own tasks. As a result, educating properly the persons practising this profession becomes extremely important. They must possess not only extensive expertise in urban planning but also consolidated knowledge of law and finances. Apart from knowledge, it is also necessary to possess good negotiating or conciliatory skills. It would be wrong to assume that all persons engaged in urban planning activities (as at the date of liquidation of the professional urban planners' self-government there were 1,458 urban planners, including 963 architects – data obtained from the last chairmen of District Councils of Urban Planning Chambers) in communes (as at 1 January 2019 there were 2,477 communes in Poland, including 1,537 rural communes, 638 urban-rural communes, 302 urban communes) will improve their skills on their own. Given the above, the legislator should consider granting a special status to the profession of urban planner and in particular the requirements for the persons applying for admission to practise this profession need to be regulated and the issues of systematic improvement of professional qualifications. It also seems justified, in the context of the above considerations, to re-establish the professional urban planners' self-government, which would provide training and workshops for people professionally involved in urbanization of land.

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Małgorzata MISIAK¹

PROFESSIONAL LIMITATIONS AND CAPABILITIES OF PEOPLE WITH VARIOUS DISABILITIES

The availability for work and durability of employment of disabled people depends on a range of factors. These are factors of demographic-social, cultural, economic, legal, organizational-institutional nature. These are also factors of biomedical nature (psychological-personal and medical) that shape individual functional abilities of the individual, i.a. the nature of cognitive processes, knowledge acquisition, development of skills and competences that are significant from the point of view of professional path, efficiency of work that is provided, mobility, flexibility or adaptability skills. The aim of this paper is to discuss functional nature of people with various disabilities in the context of professional limitations and capabilities.

Keywords: disability, functional issues of people with various disabilities, professional possibilities of people with various disabilities.

JEL Classification Codes: E24.

Introduction

The availability of work and durability of employment are determined by a series of factors of economic and non-economic nature. In case of disabled people the chances to begin and to provide work are shaped by a series of external factors that result from the nature of given disability. The disability negatively affects professional capabilities; on one hand, this is the case due to reduced level and/or scope of functionality, and on the other hand, a stereotypical approach to these limitations. This is the case because of the fact that the existence of problems on the biological level reduces the scope

¹ Ph.D. Student, K. Pulaski University of Technology and Humanities in Radom, Faculty of Economics and Legal Sciences.

of human functional capabilities that shape potential professional opportunities of the individual. The collectivity of disabled people is highly varied in this matter. Although, in majority of the cases, the biomedical factors indicate only a partial loss of possibilities to provide work (Majewski, 2007a, p. 12), the vast majority of disabled people has difficulties with getting a job, which leads to socio-economic dependency (Borek, Olszewski, 2017, p. 27).

The level of their professional activity and employment has been very low for many years (see more: Borek, 2005, 2006) and regardless of the fact that they have the right to work, and broadly speaking, to have an active and independent life (Karta Praw Osób Niepełnosprawnych, 1997), they cannot be subject to discrimination, and the process of their activation is supported with public funding (Borek, 2012, pp. 125–132). One of the key factors that are responsible for these circumstances is stereotypical, generalized attitude towards the professional capabilities of the disabled people (Borek, 2017, p. 156), which explains the need to promote knowledge about functional nature and professional capabilities of people with various disabilities.

The method of a critical analysis of the literature was used in this article, on the basis of which the cause-and-effect relationships between the availability for work and disability were determined. On the basis of these findings, the application conclusions were formulated, which serves to improve the efficiency of the professional activation process of the disabled people.

The factors that determine the availability for work

The review of subject literature indicates the existence of numerous systems that „order” the above-mentioned factors.

According to Gorczycka (2005), they may be divided into three groups. The first one includes factors related directly to the person, social environment of his/her life (people important to such person) and environmental factors of institutional nature, and more general nature with respect to the other indicated factors. In case of individual dimension, a significant impact is made by psychophysical features of a human (level of disability, personality and attitude towards self), socio-demographic features (approach to own disability that is shaped by the family, education, profession, skills, qualifications and other factors that determine the social status of an individual).

In the field of social environment of life, the key role is attributed to the role of work in a value system that is followed by closest family members, a function fulfilled by the disabled person in the family and attitude of the closest people to his/her professional activity and support of the environment (family, peers, neighbors, work, organizations and associations) within the scope of taking up and performing work. The category of the so called general-institutional factors relates to the influence of demographic and

economic conditions, including the situation on the job market. This also applies to functionality of physical environment of life and place of residence of the disabled person, knowledge and social attitudes towards disabled people and their rights, including the right to work, provisions of law, pension-retirement system. This also applies to the influence of government and non-government organizations, mass media and broadly-understood cultural conditions (Gorczycka, 2005, pp. 46–54).

Slightly different classification of determinants was proposed by Safilios-Rothschild (1976) who stated that the capabilities to take up and perform work are determined by 5 groups of factors, i.a.: professional variables, socio-demographic, psychosocial, personal and medical conditions (Safilios-Rothschild, 1976, p. 89). The professional variables include the influence of individual qualifications, need-demand relationships that apply on the market, professional work hierarchy and membership in trade unions. The socio-demographic conditions indicate the importance of the influence of age, sex, education and family-material situation of the person. The psycho-social factors also include the influence of attitudes represented by social work environments with respect to disabled people and their rights, self-evaluation of the disabled person with respect to his/her level of independence from the surrounding, his/her professional aspirations and aspects of private life (i.a. ways to spend free time, sex life, etc.). The medical conditions are related to the influence of the causes (type) and level of disability and its duration (the moment of occurrence), and also the subsequent professional complications that result from damage to the organism (psycho-physical and psychiatric) and that determine the ability to function and a subjective evaluation of own health conditions and chances for its improvement. The personal factors include the level of intelligence, adaptability skills of the individual, the ability of emotional self-control, and self-criticism and motivation to work.

According to Kryńska and Poliwczak, the factors that determine professional activity of the disabled people include socio-demographic (education, sex, age, occurrence of disability, family and material situation), psycho-social (evaluation of own level of independence) and personal factors (intelligence, motivation, adaptability skills, ability of emotional self-control and self-criticism) (Kryński, Poliwczak, 2013, p. 9).

The classifications that are indicated herein order the factors that shape the professional opportunities of each individual, including the disabled people. Thus, the unfavorable professional position of the disabled people is the aftermath of relatively lower functional ability that determines the possibility to educate, develop or work efficiently. The knowledge of functional nature of people with various disabilities makes us aware that many of them may work and do it relatively efficiently on condition that the work entrusted to them and the location for its provision consider individual functional limitations.

Nature of functioning of people with various types of disabilities

The subject literature proves the existence of numerous definitions of disability. They may be considered according to the following categories:

- general definitions that represent generalized approach to disability;
- definitions for particular purposes that are developed on the basis of particular criteria for the purpose of particular disciplines; and
- definitions of particular categories of disabled people (that reflect internal differentiation of collectivity and functional nature of particular groups) (Majewski, 1994, p. 139), structures of hierarchy that were developed, among others, in provisions that regulate the issues of granting the certificate of disability and its level.

In view of the provisions that are indicated, the collectivity of disabled people was divided into 12 groups (Rozporządzenie Ministra, Gospodarki, Pracy i Polityki społecznej w sprawie orzekania o niepełnosprawności i stopniu niepełnosprawności, 2003), each of which was assigned a particular numerical-literal symbol recorded on the certificate that is an integral element of application document of the disabled person that seeks employment. The analysis of functional nature of particular disabilities indicates that the collectivity of the disabled people is highly varied with respect to bio-medical features that are important in terms of professional work (Boryczka, 2006, p. 27). This fact makes it impossible to develop a strict catalogue of recommendations and contraindications for employment of people with particular types of disabilities (Kowalczyk, 2003, p. 50, Majewski, Szczpankowska, 1998, p. 23) and justifies the need for individual approach in this matter.

People with intellectual disability (01-U). This disability is shaped during the developmental period and its substance consists of complex interactions that occur between the delay of maturation, development and regress (Kirenko, 2004, pp. 172–173). It is of global nature. The disorders are related to adolescence, development of personality, social maturity, psychomotor development, speech, orientation-cognitive processes, learning rate, acquisition of skills and effect durability (Majewski, 2007a, p. 68; Mrugalska, 1996, pp. 117–138). From the professional point of view, these difficulties are related to work that requires skills within the scope of objective evaluation of reality, concentration, analysis and drawing conclusions, interpretation of phenomena, communication, decision making and problem solving (Gesternkornowa, 2007, pp. 17–20; Majewski, 2007a, p. 69). The source may also be the hyperactivity or even aggression or phlegmatism (Gesternkornowa, 2007, p. 72) and co-existing disabilities that frequently accompany the individual (such as: disability related to the sight, hearing, movement, autism, epilepsy, etc.) (Mrugalska, 1996, pp. 117–138). The common pejorative attitude towards their professional capabilities (Kirenko, 2006, p. 49) condemns majority of these people to economic and social dependency (Barczyński, 2006, p. 23). The professional activation of this group requires overcoming numerous barriers in employment (barriers from

the side of employers, parents). The employers often believe that people with mental disability cannot be good employees since there are unpredictable, irresponsible, dependent and are not able to learn due to their resentment towards change and lowered intellectual capability.

The employers are also worried about additional duties, costs and potential bias by other employees. Lack of knowledge about professional capabilities and nature of intellectually disabled people among the employees, constitutes an obstacle in employment. The attitudes of the parents also contribute to limited professional activity of people with intellectual disability, since they do not believe that their children may be good employees. They see the work environment as a threat to their children. The parents are often overprotective and do not accept higher independence or autonomy of the adult child (Malik, 2011, p. 70). The views in this matter are overturned by achievements of science, in view of which the indicated disability is of dynamic nature. This means that the vast majority of people that suffer from it, who are covered by thorough rehabilitation that is started early, is able to reach a level of social maturity and professional abilities that make it possible to work; whereas the level of its difficulty should take functional limitations into consideration. However, it is not recommended to entrust these people with complicated work that requires development and independence, where the process of decision making exceeds the 60% of the working time (Łuczak, Kurkus-Rozowska, Kamińska, 2007, p. 22; Mrugalska 1998, pp. 130–138; Tokarski et al., 2007, p. 9). High employment opportunities for people of the above-mentioned group are created i.a. in gardening, laundry rooms, cleaning works, care services, trade/warehouses (packing and delivering goods to the customers), element cutting and assembly (Tokarski et al., 2007, pp. 69,73), agriculture, public service, gastronomy, leisure and hotels, recycling (Barczyński, 2006) work as locksmith-carpenter, tailor, bricklayer, mechanic (Majewski, Miżejewski, Sobczak, 2007, pp. 62–67) etc.

Mental illnesses (02-P). People with mental disability, from the point of view of functional limitations and professional capabilities, are a highly varied groups. The mental disability may result from endogenous diseases (schizophrenia, affective disorders, congenital defects of the central nervous system of metabolic origin), causal factors of exogenous origin (e.g. reactive depression after loss of someone close) and organic brain damage (as a result of skull trauma, inflammation of the central nervous system, poisoning, addiction to alcohol, drugs, etc.) (Majewski, Miżejewski, Sobczak, 2007, pp. 67–69; Meder, 1998, pp. 145–162). The main functional issues related to the disorders of the mental sphere, emotional sphere and activity (hyperactivity, apathy), personality, consciousness and intellectual disorders (Majewski, Miżejewski, Sobczak, 2007, pp. 67–69) and deficiencies within the scope of social skills (Oleś, 1998, p. 10). Relatively frequent periods of normal functioning and periods of severity of symptoms accompanied by improper behaviors, occur interchangeably. In many cases, with treatment conditions maintained, the remission occurs rarely. The issues related to professional

activation, besides functional nature, are caused by side effects of therapies that are applied (e.g. mild dementia, slowness, etc.), highly limited predictability within the scope of remissions and stereotypical attitude towards the disease. People with mental disorders are often subject to the process of self-exclusion due to concerns related to judgment by society, which does not favor their professional activation. Very often, they are not able to talk about it and are afraid of it, as they are afraid of the social reaction to their professional activation (Duda, Kukla, Zając, 2014, p. 103).

Considering the role of functional aspects that are being disordered by the illness in the process of human professional activation, people with intellectual disability are one of the most disadvantages groups of the job market (see more: Borek J., Borek E., 2015; Borek, Krysik, Brosz, Chludziński, 2008) which is proven by i.a. relatively higher value of support that compensates the higher costs of their employment) (Borek, 2008, p. 72). The most serious issues are related to people with significant deficiencies of the emotional sphere (Kołodziej, 2005, pp. 93–94; Kołodziej, 2006, p. 148) and the alternative to the employment is supported employment. Current experience indicates, however, that people that belong to this group may be activated, and work positively affects their social and biomedical functioning. Work on the open market conditions is recommended mainly for people in case of whom the severe symptoms resolved for the benefit of relatively long periods of relative good health (Majewski, 2007a, pp. 78–79). The contraindication for people with mental illness is work under constant stress, work at nights, or at heights. However, it is recommended to employ them for work that requires movement that stimulates their interests, sense of achievement and responsibility (Hulek, 1969). Significant opportunities are created in i.a. agriculture, gardening and handcraft (leather accessories, tailoring, assembly works, etc.), gastronomy and hotel industry, laundry services (Majewski, Miżejewski, Sobczak, 2007, p. 69–73) and animal breeding (Barczyński, 2006)

Voice, speech, and hearing disorders (03-L). This group includes people with slight damage (20–40 db) and medium damage (40–70 db) and significant damage (70–90 dB) and profound damage (over 90 dB) the two latter are deaf and deaf without speech (Szczepankowski, 1998, pp. 67–70). The substance of the disability is inability to hear, problems with audio communication (on various levels), and sometimes damage to the tympanum, and also problems with body balance. It is indicated that hearing disability is a significant social problem. A significant role in the communication process is lip reading (Kuc-Woyciechowska, 2007, p. 11). The people that belong to this group do not have any major difficulties with performing their professional duties, and the exception are people with balance disorder. The source of their struggles is a limited and/or lack of availability of acoustic signals from co-workers and from the work environment (Majewski, 2007d, p. 29) that affect orientation, safety and efficiency. It may also apply to limitation of intellectual abilities and unprepared social work environment (Majewski, Miżejewski, Sobczak, 2007, pp. 62–67) or lack of actions that aim at developing the

skills of communicating with the surrounding environment (Coutler, 1974). According to Walkowska, a certain obstacle may also be issues with understanding particular words. The dictionary of the deaf people does not include some words as they are replaced with simpler ones that are not always accurate. The more specialized words, the more problems there are with communication (Walkowska, 2008, p. 158). Works that are contraindication are works that require very good hearing, clear verbal communication and that are threat to the remaining senses where there are many acoustic signals, works at heights, with machines and devices in motion (Łuczak, Kurkus-Łozowska, Kamińska, 2007, p. 22; Szczepankowski, 1998, p. 78–80). In case of this group, there are no other contraindications related to their employment. It is also important that the work that they are entrusted with considers individual deficits and potential, including intellectual potential (these people are also able to work under stress) and adaptation techniques (based on e.g. replacing the acoustic signals with visual ones, including written communication, body language, etc.) (Tokarski et al., 2007, p. 10)

Eye diseases (04-0). This group includes people who are completely blind (or who have the sense of light) and people with minimum vision that include people with damage to central vision, high short-sightedness, damage to the peripheral vision and people with greatly reduced vision with stereoscope (binocular) vision disorders. These limitations and capabilities correspond with the scope and nature of the indicated disability, the level of dysfunction stability (Majewski, 2004, pp. 15–22) and the moment of its occurrence (Majewski 2007b, p. 33). The substance of limitations, from the professional point of view, are difficulties related to receiving visual stimuli that result in i.a. lowered motor ability (manipulative and locomotive activities) and difficulties within the scope of decision making (Majewski, Miżejewski, Sobczak, 2007, p. 56). The contraindications are related to work that requires much physical effort, good vision, good assessment of distance, frequent moving within the area and performing activities at heights with the use of hazardous machines and devices under electric voltage (Tokarski et al. 2007, p. 10), driving vehicles and other transporting devices (Hampel, Gadzinowska, 2017, p. 100).

Despite many years of professional discrimination of members of this collectivity, especially in case of the open market (Majewski, 1995, p. 111), they may perform professional work (Kotowski, 1998, p. 59). An important role is fulfilled by compensational role of hearing (Kowalik, 2006, pp. 34–36) and touch (*Teczka informacyjna. Sprawni niepełnosprawni*, 2005, p. 10). The necessary adjustments are related to i.a. proper lighting, application of particular colors (Majewski, 2004, p. 15). Special opportunities for employment of these people are created by intellectual work, especially with the use of computers (Bogusiewicz, Boczkowska, 2006, p. 42), as well as services, minor production and manual work (Majewski, 2007b, p. 33). People with blindness and highly reduced vision work in positions where sight and non-verbal stimuli are not so important in performing their work (Suchińska, 2008).

Musculoskeletal dysfunctions (05-R, motor). This group includes people with limited ability of upper limbs, lower limbs and spine (i.a. diseases, damages and deformations of the skeletal, muscular, nervous system (Moskalewicz, 1998, p. 105), palsy and paresis – monoplegia, hemiplegia, paraplegia and tetraplegia) (Majewski, 2005b). From the professional point of view, a classification was acquired that divides the members of this group into people with: upper limb dysfunction due to damage to the spinal cord, lower limb dysfunction that does not result from damage to the spinal cord, joint dysfunctions (hip joint dislocation, stiff hip joint, arthritis, ankylosing spondylitis and club foot) and dysfunctions of motor organs of cerebral origin or damages to the spinal cord (infantile cerebral palsy, increased muscle tone, or consensual movements symptoms, damage to the cervical, thoracic, or lumbar part of the spinal cord) (Migas, 2007, p. 16). The substance of these limitations is related to i.a. motor ability, moving around within the space, learning rate and capacity of memory (Górska, 2007, p. 25). The contraindications include demanding physical work that requires walking or standing (lower limb dysfunctions) or that requires full manual ability (upper limb dysfunctions) or a forced position (Górska, 2007, p. 25; Tokarski et al., 2007, p. 10). A significant role is fulfilled by compensation mechanisms such as functions of upper limbs that are partially intercepted by lower limbs. Similarly to other disabilities, individualized approach to the issue of adequacy of the entrusted work and location for its performance is required with respect to the functional capacities of the candidate. This applies i.a. to adjustment of position, and the level of complexity to the intellectual capacities, adjustment of the necessity to move to the abilities or the adjustment of the nature of activities to manual capabilities (Górska, 2007, pp. 25–28; Majewski 2005a, pp. 16–17, 2007c, pp. 9–10). This also applies to the equipment of the work station (Kirenko, 1998, pp. 93–99; Moskalewicz, 1998, pp. 108–116), organization of means of transportation to work, adjustment of the building. High work opportunities e.g. in case of people with lower limb disability are created by office work, especially by the computer.

Epilepsy (06-E). The substance of the disability are repeated non-convulsive seizures (the so called auras with clouding of consciousness) and short seizures (short loss of consciousness, objects slipping through a persons' hand). The seizures may also be complex (the so called temporal, the feature of which are clouding of consciousness and automatic performance of complex activities such as sticking out the tongue, swallowing, rubbing hands, smacking, correcting clothing, etc.). The symptoms may be of motor, sensual, vegetative and emotional nature and lead to a major seizure) and result in major seizure that is accompanied by convulsions, loss of consciousness and balance, jaw spasms, biting the tongue or memory loss. Also, the changes in personality (characteropathy) may occur. Epilepsy may be a basic unit or may accompany other diseases of mental or neurological origin (Jakubowska, Kuran, 1998, pp. 168–169). Epilepsy limits human capabilities on various levels. Some patients present no visible features

of disability but sometimes the disease prevents independent existence. Thus, the work opportunities for these people vary significantly (Noskowicz-Bieronowa, 2000, p. 129).

The nature of symptoms determine professional capabilities of the individual. People with significant disorders are usually incapable of working, and in case of more profound lesions, the supported employment is preferred. The remaining groups of people may work on the open job market in properly adjusted conditions. The contraindications related to the employment include work that imply significant physical effort, at heights, near fire or water reservoirs, with machines in motion, with live machines as well as independent work and work performed at night (Jakubowska, Kuran, 1998, pp. 168–169; Tokarski et al., 2007, p. 10). People who suffer from epileptic seizures should also avoid working underground and under water (Hopkins, Appleton, 1999, p. 128). The opportunities for employment are created also in gardening and wide range of services that do not require live operating machines or devices in motion or work performed at heights.

Respiratory and cardiovascular diseases (07-S). This group includes people who are disabled due to cardiovascular (blood vessels and heart) and respiratory (i.a. chronic asthmatic bronchitis, silicosis, allergic bronchial asthma, tuberculosis, chronic obstructive lung disease (COLD) emphysema, asthma) (Borak-Kwapisz, 1998, p. 183–189). These diseases, similarly to cancers, are considered one of the most significant health hazards in the well-developed and developing countries (Stan zdrowia ludności, 2004). The substance of limitations due to cardiovascular issues are related to cardiac muscle contractility, pain, anxiety, depression, hypochondria or hysteria. In case of people with respiratory disability, the issues are related to proper oxygen intake and its delivery to cells, which may lead to lesions that result from oxygen deficiency; there is also an excessive exhaustion and sweatiness, weakness, anxiety. Both categories constitute a contraindication for work connected with significant psycho-physical pressure and unfavorable work rhythm, significant mobility and unfavorable temperature. In case of people who are disabled due to respiratory system disorders, the contraindications include work in unfavorable microclimate conditions (presence of substance that irritate the respiratory tract in the form of fumes, dusts, excessive humidity, etc.) (Tylka, 1998, pp. 183–201).

Digestive system diseases (08-T). This group includes people who are disabled due to chronic diseases of intestines, esophagus that lead to long-term disorders, stomach resection complications, maldigestion syndrome, chronic pancreas diseases and GI cancers. The functional nature of people with disability that result from digestive system diseases is connected mainly to pain, improper digestion, digestion and defecation disorders, weakness and nerve tensioning. The contraindications for employment include only work in conditions that make it impossible to take medication and eat meals on a regular basis (Łuczak, Kurkus-Rozowska, Kamińska, 2007, p. 23), and in justified cases, performing hard work, work under pressure or work at varying temperature (Hampel, Gadzinowska, 2017, p. 101)

Urogenital system diseases (09-M). This group includes polycystic kidney disease, urinary tract disorders that lead to kidney failure, uremia, and malignant cancers of urogenital system. The contraindications include work in conditions of varying humidity and air temperature, low temperature with a fixed schedule and breaks and in conditions that lead to severity of symptoms (Łuczak, Kurkus-Rozowska, Kamińska, 2007, p. 23; Polak-Sopińska, 2008, p. 210).

Neurological diseases (10-N). This group includes people, the disability of whom results from diseases of the nervous system, namely the peripheral nerves, spinal cord and brain. This includes i.a. multiple sclerosis (SM or SD), the consequence of which is chronic exhaustion by cognitive activity, deterioration of visual acuity, paresis and motor, sensual, sphincter, speech, balance and motor coordination disorders (Johnson, Amtmann, Yorkston, Klasner, Kuehn, 2004). The selection of work should consider the type and severity of symptoms and potential necessity for their further adjustment due to the fact that the disease is usually of progressive nature. High employment opportunities include intellectual work (Kuran, 1986). The group in question includes people who are disabled due to brain strokes, in case of whom the determinant of ability is symptom dynamics (Tokarski et al., 2007, p. 11). It is stated that these people should not perform any work at heights, work that requires physical effort or forced position, near hazardous machines in motion or work that implies exposure to neurotoxic substances (Jakubowska, Kuran, 1998, pp. 165–180; Łuczak, Kurkus-Rozowska, Kamińska, 2007, p. 23).

Other (11-I), including endocrinologic, metabolic and enzymatic diseases, communicable diseases of animal origin, defacement, hematologic diseases. The variety of contraindications and professional capabilities of members of this group depends strictly on the nature of particular diseases (Łuczak, Kurkus-Rozowska, Kamińska, 2007, p. 23) and the criterion of their evaluation may be a dysfunctional organ or forms of treatment. Usually, the contraindication is the so called hard work.

Holistic developmental disorders (12-C). The main unit of this category is autism that usually presents itself during first three years of life in the form of neurological disorder that affects the brain functions (DSM-IV-TR) (APA – American Psychiatric Association. Diagnostic..., 2000). It is often considered a mental disease due to life-long difficulties within the scope of cognitive, emotional and social functions (Szczypta, 2007, p. 228). It is accompanied by problems with communication, interpretation of non-verbal messages that is adequate with respect to the content and messages that contain messages of abstract nature and understanding of new terms (Matson, Benavidez, Compton, Paclawskyj, Baglio, 1996, pp. 433–465). Also, the disorder affects the abilities within the scope of control of behavior and principles of social life (Goodman, Scott, 2000, p. 64), processes of understanding behaviors and human emotions and interpretation of signals from the surrounding environment, which often leads to presentation of emotions that is inadequate to the situation (anger, aggression, auto-aggression, lack of obedience

(Danielewicz, 2005, pp. 31–42; Mesibow, Handlan, 1997, pp. 309–322). The people who suffer from autism are often withdrawn, they isolate, convey their thoughts in non-precise manner, tend to lose their own “self” and are emotionally labile (Willims, 2005), which increases the risk of social isolation (Horner, Carr, Strain, Todd, Reed, 2002, pp. 423–445). Due to complex consequences of autism, people who suffer from this disease are very difficult to activate professionally. The estimated data shows that only 1% of autistic people actually works. Regardless, people who suffer from autism must be prepared proportionally to their ability to live independently, including work.

Summary and conclusions

From the point of view of possibilities to take up and perform work, the special group are people, the disability of whom results from two or more causes – the so called complex disabilities. This group includes i.a. deaf people, people with intellectual disability and damaged motor organ, people with intellectual disability with epilepsy, blind people with intellectual disability and epilepsy, people with cardiovascular system failure and diabetes.

The simultaneous damage to at least two organs or systems leads to a series of consequences that limit functional capabilities of a person in almost all walks of life. Thus, in many cases people who suffer from complex disability do not qualify for any work. They may, however, take part in therapies that are carried out through occupational therapy. However, it is not a general rule, since the capabilities and limitations regarding employment must be determined individually on the basis of a type and level of co-existing disabilities (Tokarski et al., 2007, p. 11). Similarly to people with other types of disabilities, there is a need to select activities and professional tasks that are adjusted to individual capabilities of a person and there is a need to adopt the station or a workplace (Majewski, Miżejewski, Sobczak, 2007, pp. 74–75). The evaluation of functional problems and determination of professional capabilities of people included in the same group also requires individualized approach since in particular cases, the disability may only hinder, and in other cases limit, and in yet other cases make it impossible for particular person to perform work.

Conclusions

The analysis that is presented in this paper makes it possible – draw the following conclusions:

- 1) the review of determinants of professional activity indicates that the availability of the person for work and durability of such employment is determined by a series of factors. These include factors of socio-demographic, cultural, economic, legal institutional-organizational nature and also the especially important, from the

- point of view of professional capabilities of person who suffer from disabilities, factors of biomedical nature (psychological, personal and medical);
- 2) the biomedical conditions determine possibilities for development of the individual within the scope of knowledge acquisition, development of skills and competences that are significant in terms of professional development and efficiency of work that is provided by such individual, professional mobility, flexibility and a level of adaptability skills;
 - 3) the analysis of functional nature of people who suffer from disability proves that they are a collectivity that is highly varied according;
 - 4) the factors that are significant in terms of influence of biomedical conditions on the scope and level of limitations and potential opportunities to provide work by people who suffer from disability, include: cause and level of disability, moment of its occurrence and severity of symptoms;
 - 5) the review of functional capabilities of people who suffer from various disabilities proves that majority of them is able to find job and perform work that takes professional limitation into consideration. Failure to consider them in the process of professional activation negatively affects the efficiency of work and constitutes a threat to employment durability and availability of positions for people who suffer from disabilities;
 - 6) the evaluation of potential possibilities of employment of a person with disability should be of individual nature that considers limitations and professional capabilities, requirements of the workplace, position and scope of activities and chances to alleviate the existing limitations (as determined through available tools that support professional activation of people who suffer from disabilities);

Regardless of the fact that the evaluation of the ability to work on a given position is carried out by occupational medicine physician, the decision regarding potential employment is to be made by the employer. This fact justifies the need for common education of the employers within the scope of professional capabilities of people with various disabilities and tools that make it possible to alleviate the barriers that hinder the process of their activation.

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