

BEHAVIOR ON THE LABOR MARKET IN POLAND IN ANALYSIS OF BEHAVIORAL ECONOMY

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Abstract: The issues of the labor market in Poland in recent years have been the subject of interest of many researchers. The occurring changes necessitate the verification of previously used theories for its interpretation. The purpose of the article is an attempt to capture the problems of general interpretation of the labor market, which does not reflect the diversity of behaviors in its space resulting from the socio-economic conditions of individual as well as individual preferences of labor market participants. To analyze the problem, the GUS statistics on the labor market and unemployment will be used, as well as the literature on the subject to understand the broader conditions on the labor market and behavioral factors. The analysis will allow to answer the question whether the general definition of today's labor market in Poland as an employee market refers to the entire labor market or only reflects certain trends of leading regions.

Keywords: behavioral economics, labor market, employee market.

1. Introduction

Criticism of mainstream economics means that the models adopted so far are being reconsidered. Homo oeconomicus functioning in economics gives way to homo realis, thus a completely new approach to analyzing market behavior. Economics faces an openness and a more interdisciplinary approach. A direction that is increasingly explored by researchers is the inclusion of psychological considerations in economic thinking (Rzeszutek, Szyszka, 2017). Modeling reality fails when we are dealing with decisions made by people. Hence the reflection appears to depart from the model where human decisions are not only predictable but also rational. This decision, however, is a huge challenge for the entire economy, which is based on the actions of people.

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The labor market in Poland is subject to many changes. The Polish labor market has evolved strongly after joining the European Union. Not only the European Union policy in the field of combating unemployment was important, but also structural funds giving new opportunities for development and employment. The whole globalization process has also changed the perception of the labor market and human labor. Operation in a turbulent environment has increased the importance of the human factor. It is man who has become the most valuable and most unknown resource of the organization (Puzio-Waławik, 2007). Globalization is also a progressive social stratification, and the rules of the game in the global economy are not always clear and very variable (Stiglitz, 2004)

Emerging attempts at analyzing changes are trying to identify the factors that have the greatest impact on the labor market. The diversity of the country in terms of socio-economic development makes it difficult to isolate general factors that will be appropriate for the entire country. In addition, the specificity of the labor market results from the large role of decisions taken by individual market participants. An attempt to capture the complexity of this problem leads to behavioral economics, treating man as an individual, whose decisions do not comply with generally applicable patterns.

2. Behavioral economics

Economics is a science that deals with human behavior. In traditional economics, we are talking about a man - homo oeconomicus, who is devoid of emotions and in no way adheres to the statements of cognitive and social psychology. The defense of this economic model took two directions, one of which ensured that such understanding of man was correct, and the other believed that such an approach was simpler in making further considerations. In the traditional model of human behavior, three characteristics are adopted: unlimited rationality, unlimited willpower and unlimited egoism. In behavioral economics, all three features have been negated (Thaler, Mullainathan, 2018).

Behavioral economics has gained in importance in recent years and is becoming the subject of research for an increasing number of researchers. However, this does not mean a short history of this economy, but only some appreciation of its analysis in recent years. In the literature, it is assumed that in ancient times Xenophon and Aristotle reflects on the relationship between economics and psychology. Also the famous work of Adam Smith from 1759 – *The Theory of Moral Sentiments* draws attention to emotions that affect decision making (Zaleśkiewicz, 2011).

When considering in the field of behavioral economics one should pay attention to the most important concepts that are used in this trend.

Among the concepts related to decision making we distinguish:

- 1) Heuristics – a method for discovering, as well as a procedure for solving problems. Heuristics help reduce possible answers and solutions to a given problem. They provide some kind of summary thinking, thanks to which a person omits some data when making decisions;
- 2) Framing – involves displaying the adopted perspective, for example, it can emphasize the importance of losses or benefits;
- 3) Mental accounting – is related, as previous principles, to the behavior of people, according to this principle people segregate various expenses on "mental accounts" and consider them in terms of benefits and losses.

In the group of concepts explaining anomalies in decision making, the following are important:

- 1) unwillingness to lose – investors take many actions to prevent a negative position from closing,
- 2) the effect of drowned costs – people are ready to stick to the decision once made, if it was associated with a large expense,
- 3) the effect of ownership – a greater value is attributed to things that can be lost than those that can be gained,
- 4) status quo effect – reluctance to change,
- 5) disposition effect – avoiding regret resulting from loss, and maximizing profit-driven pride (Zygan, 2013).

In economics, the traditional factors of production indicated by A. Smith in the work *Nature and Causes of the Wealth of Nations*, are land, capital and labor. In the considerations of many authors, there is a reflection that the possibility of using material factors depends on work, and therefore on human capital. Focusing on this area of management is therefore fully justified from the point of view of the development of individual enterprises and the entire economy.

The most important feature of human capital, which testifies to its special value, is the fact that it cannot be separated from man and one cannot speak of such consumption of human capital as in the case of physical resources. Of course, there are issues related to occupational burnout or insufficient improvement of competences, which means that the value of human capital decreases, however these issues are of interest to HR policy. Generally speaking, human capital can be defined as the amount of professional knowledge accumulated by an employee, as well as his knowledge and skills (Begg, Fisher, Dornbusch, 1998).

Behavioral economics has allowed for a more rational approach to man as a participant in social and economic life. Its impact is also noticed on the labor market, which cannot be explained by simple dependencies.

3. Labor market in Poland

Work is a unique resource for which market laws operate: supply and demand. The employee offers his work on the market, while the employer acts as a buyer, providing remuneration for work. The factors that affect the amount of remuneration are both the demand for work and the rarity of the qualifications offered.

The labor market in Poland has been known for several years as the employee market. There are headlines in the media about the shortage of labor resources and ever new practices on the part of employers who are to keep current and attract new employees. To verify this hypothesis, the author will use unemployment statistics collected by the Central Statistical Office. Table 1 presents unemployment in Poland in 2015-2019. According to the compiled data, unemployment in Poland is getting lower year by year. At the end of 2015 it was 9.7%, while at the end of 2018 it was 5.8%. According to the available data, it amounted to 5.2% in July 2019, so it is likely that the downward trend will be maintained at the end of 2019.

Table 1.
Unemployment in Poland in 2015-2019

Specification	December 2015		December 2016		December 2017		December 2018		July 2019	
	1.	2.	1.	2.	1.	2.	1.	2.	1.	2.
Poland	1563,3	9,7	1335,2	8,2	1081,7	6,6	968,9	5,8	868,4	5,2
Lower Silesia Province	100,0	8,5	86,0	7,2	68,8	5,7	62,8	5,2	57,3	4,7
Kujawy-Pomerania Province	107,3	13,2	98,5	12,0	81,5	9,9	72,7	8,8	64,0	7,8
Lublin Province	107,9	11,7	95,6	10,3	4,1	8,8	74,4	8,0	67,3	7,3
Lubuskie Province	39,3	10,5	32,4	8,6	24,6	6,5	22,2	5,8	18,9	5,0
Łódź Province	109,5	10,3	91,0	8,5	72,7	6,7	66,0	6,1	60,8	5,6
Małopolska Province	119,6	8,3	96,5	6,6	79,4	5,3	71,5	4,7	63,7	4,2
Mazovia Province	216,5	8,3	188,9	7,0	154,1	5,6	136,5	4,9	125,6	4,5
Opole Province	36,2	10,1	32,4	9,0	26,1	7,3	22,7	6,3	20,3	5,6
Podkarpace Province	123,5	13,2	107,6	11,5	91,0	9,6	82,9	8,8	74,5	7,9
Podlasie Province	55,0	11,8	48,4	10,3	40,0	8,5	36,8	7,8	33,1	7,0
Pomerania Province	77,7	8,9	64,1	7,1	49,7	5,4	46,1	4,9	41,1	4,4
Silesia Province	148,5	8,2	120,0	6,6	94,7	5,1	80,1	4,3	70,6	3,8
Świętokrzyskie Province	66,1	12,5	57,1	10,8	46,6	8,8	44,1	8,3	40,6	7,6
Warmia-Masuria Province	83,5	16,2	73,1	14,2	60,0	11,7	53,1	10,4	44,5	8,7
Wielkopolska Province	93,3	6,1	77,7	4,9	58,9	3,7	50,9	3,1	46,1	2,8
West Pomerania Province	79,4	13,1	65,8	10,9	52,6	8,5	46,0	7,4	40,1	6,5

Note. 1. - *Unemployed persons in thousands*, 2. - *Unemployment rate in %* Adapted from: Own study based on: GUS Bezrobotni stopa wg. Powiatów: 12.2015, 12.2016, 12.2017, 12.2018, 07.2019.

Unemployment by individual voivodships is presented in a more diverse way. Figure 1 illustrates this inequality. The lowest unemployment at the end of 2018 was in the Wielkopolskie Voivodship and amounted to 3.1%. This value is also below the overall level of unemployment in Poland at that time. The highest unemployment in Poland at the end of 2018

was in the Warmian-Masurian Voivodship and amounted to 10.4%. It should also be noted that only in five voivodships unemployment was lower than the national average, in one voivodship it was the same, and in 10 voivodships it was above the national average.

It should be noted, however, that despite the large variation in unemployment between voivodships, in each of them unemployment was getting lower year by year. This allows you to notice the general trend regarding unemployment, but the issue of the large variation between voivodships is still puzzling.

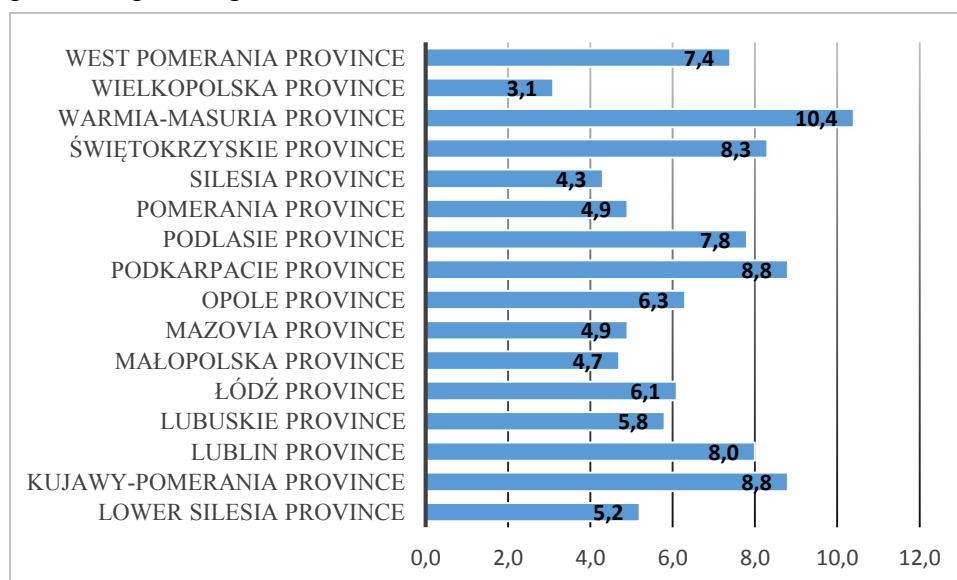


Figure 1. Unemployment by voivodships at the end of 2018 (in %). Note. Adapted from: Own study based on: GUS Bezrobotni stopa wg. Powiatów 12.2018.

An attempt to explain these differences is to look at provincial cities. It is these cities that represent the greatest potential of each region and the level of unemployment occurring in them, indicates some potential for the allocation of labor resources. Table 2 lists the voivodships – from the lowest to the highest level of unemployment. Then, the capitals of individual voivodships were added along with the level of unemployment recorded in them at the end of 2018.

Table 2.

Unemployment in voivodships and voivodship capitals in 2018 (in%)

Voivodships	Unemployment rate in %	Voivodship capitals	Unemployment rate in %
Wielkopolska Province	3,1	Poznań	1,2
Silesia Province	4,3	Katowice	1,6
Małopolska Province	4,7	Kraków	2,4
Mazovia Province	4,9	Warszawa	1,5
Pomerania Province	4,9	Gdańsk	2,6
Lower Silesia Province	5,2	Wrocław	1,8
Lubuskie Province	5,8	Gorzów Wielkopolski	2,6
		Zielona Góra	3,4
Łódź Province	6,1	Łódź	5,5
Opole Province	6,3	Opole	3,3
West Pomerania Province	7,4	Szczecin	2,5

Cont. table 2.

Podlasie Province	7,8	Białystok	6,2
Lublin Province	8,0	Lublin	5,5
Świętokrzyskie Province	8,3	Kielce	5,4
Kujawy-Pomerania Province	8,8	Bydgoszcz	3,6
		Toruń	4,8
Podkarpacie Province	8,8	Rzeszów	5,2
Warmia-Masuria Province	10,4	Olsztyn	3,4

Note. Adapted from: Own study based on: GUS Bezrobotni stopa wg. Powiatów 12.2018.

In all voivodships, it turned out that unemployment in the voivodship is lower than in the voivodship itself. In addition, unemployment was only higher than the national average at that time in four capitals. In one city it was at the same level, and in 11 cities it was lower. The lowest level of unemployment was recorded in Poznań – 1.2%, Warsaw came second – 1.5% and Katowice third – 1.6%.

On the basis of large agglomerations, however, it is impossible to assess the level of unemployment in the entire voivodship, let alone in the whole country. Despite the fact that average unemployment has already been analyzed, it is still worth looking at the poviats with the highest level of unemployment. Table 3 gathers three poviats and/or cities from each voivodship with the highest unemployment at the end of 2018. In case of the same level of unemployment in several regions, each of them was included in the table.

Table 3.

Poviats with the highest unemployment in individual voivodships

Specification	Unemployment rate in %
Poland	5,8
Lower Silesia Province	5,2
górowski	15,2
złotoryjski	14,5
wałbrzyski	13,8
Kujawy-Pomerania Province	8,8
radziejowski	16,9
lipnowski	16,7
włocławski	16,0
Lublin Province	8,0
włodawski	15,5
chełmski	13,3
hrubieszowski	13,2
Lubuskie Province	5,8
międzyrzecki	12,2
strzelecko-drezdenecki	10,9
zagański	9,3
Łódź Province	6,1
kutnowski	8,9
łaski	8,0
pajęczański	7,4
tomaszowski	7,4
Małopolska Province	4,7
dąbrowski	10,9
tatrzański	9,4
nowosądecki	8,2

Cont. table 3.

Mazovia Province	4,9
szydłowiecki	24,3
przysuski	18,3
radomski	17,7
Opole Province	6,3
prudnicki	9,5
głubczycki	9,5
brzeski	8,9
Podkarpacie Province	8,8
niżański	16,6
leski	16,5
brzozowski	15,6
Podlasie Province	7,8
kolneński	14,3
grajewski	13,7
sejneński	12,7
Pomerania Province	4,9
nowodworski	13,3
malborski	12,5
bytowski	9,8
człuchowski	9,8
sztumski	9,8
Silesia Province	4,3
m. Bytom	9,5
będziński	7,8
zawierciański	7,4
Świętokrzyskie Province	8,3
skarżyski	15,7
opatowski	13,7
konecki	11,5
Warmia-Masuria Province	10,4
braniewski	21,0
bartoszycki	18,8
kętrzyński	18,5
Wielkopolska Province	3,1
koniński	9,0
śłupecki	7,7
złotowski	7,0
West Pomerania Province	7,4
łobeski	19,9
białogardzki	18,5
choszczeński	16,4

Note. Adapted from: Own study based on: GUS Bezrobotni stopa wg. Powiatów: 12.2015, 12.2016, 12.2017, 12.2018.

According to the data in Table 3, a higher unemployment rate is recorded in poviats than cities. According to the adopted criteria, only one city was found in the table: Bytom. Mazowieckie is the voivodship with poviats with the highest unemployment in Poland. The capital itself, as previously indicated, has one of the lowest unemployment rates in Poland, but this does not translate into other regions in this province. In the Szydłowiecki powiat, unemployment at the end of 2018 was 24.3%, in the Przysuski powiat 18.3% and in the Radom powiat 17.7%. Also in Warmia-Masuria Province there was unemployment above 20%, in Braniewski powiat and it was exactly 21%. In this voivodship, in the Bartoszycki powiat,

unemployment was 18.8, in Ketrzyński powiat 18.5%. These are not the only provinces where unemployment is so different from the national average given. In West Pomerania Province in the powiat of Łobeski unemployment amounted to 19.9%, in the powiat of Białogardzki 18.5% and in the powiat of Choszczeński 16.4%. In many voivodships, unemployment exceeded 10%. In Kujawy-Pomerania Province, separate powiats had unemployment at the level of about 16%. Unemployment in Podkarpackie Province was similar. Above 10% unemployment was also in Świętokrzyskie Province, Pomerania Province, Podlasie Province, Małopolska Province, Lubuskie Province, Lublin Province and in Lower Silesia Province. Below 10% were powiats from the following provinces: Wielkopolska Province, Silesia Province, Opole Province and Łódź Province.

Analyzing such data, it is difficult to state unequivocally that we are dealing with the employee market in Poland. Low unemployment is undoubtedly the domain of large metropolises. In building the approach to the labor market, however, one must not forget about the diversity that we face across the country. As indicated by Ł. Komuda, the employee's market is the slogan used by entrepreneurs who have recently had problems recruiting. He also points out that opinions about the employee deficit come from the capital, where there is low unemployment. In Poland, however, most people live in small towns and villages, where the situation is different (Żebrowski, 2019).

Confirmation of the diversity in terms of jobs offered are data on job vacancies in individual voivodships. These data have been compared with the level of unemployment in individual voivodships in Table 4. The largest number of vacancies is in the Mazowieckie Voivodship, however the comparison of the number of vacancies with the number of the unemployed still indicates the largest deficit in this voivodship. A large deficit of jobs remains in the Podkarpackie, Lubelskie and Kuyavian-Pomeranian voivodships. It should also be noted that in each voivodship labor supply is much lower than demand for it.

Table 4.
Vacancies in individual voivodships

Specification	Unemployed persons in thousands	Job vacancies by voivodship at the end of the fourth quarter of 2018 (in thousands)	Number of missing jobs
	968,9	139,3	-829,5
Lower Silesia Province	62,8	12,2	-50,6
Kujawy-Pomerania Province	72,7	4,1	-68,6
Lublin Province	74,4	2,7	-71,7
Lubuskie Province	22,2	7,4	-14,8
Łódź Province	66,0	7,5	-58,5
Małopolska Province	71,5	12	-59,5
Mazovia Province	136,5	33,7	-102,8
Opole Province	22,7	2,3	-20,4
Podkarpacie Province	82,9	3,9	-79,0
Podlasie Province	36,8	1,4	-35,4
Pomerania Province	46,1	7,9	-38,2

Cont. table 4.

Silesia Province	80,1	18,4	-61,7
Świętokrzyskie Province	44,1	1,8	-42,3
Warmia-Masuria Province	53,1	2,7	-50,4
Wielkopolska Province	50,9	14,7	-36,2
West Pomerania Province	46,0	6,6	-39,4

Note. Adapted from: Own study based on: GUS, Popyt na pracę w IV kwartale 2018 roku.

4. Determinants of making decisions on the labor market

Making decisions about choosing a workplace is a complex and multifactorial process. In addition, the factors determining the choice of workplace have different weights for individual people. Both internal factors - related to a person's natural predispositions and life situation, as well as external factors related to the situation on the market of a given profession and the situation of a given region are important.

Analyses that focus only on the individual's abilities reduce the decision to choose a workplace to traditional human decision making, where the concept of unlimited selfishness exists. In fact, however, decisions about choosing a workplace are based on a much broader network of relationships in which everyone is involved. The cold calculation in this regard does not reflect the reality in which emotions cannot be excluded from the model.

In relation to the analysis regarding the diversity of unemployment in Poland, it is important to consider whether only socio-economic factors have an impact on the large variation in terms of the level of unemployment. People living in regions with high unemployment could theoretically be employed elsewhere in the country. However, this decision does not only apply to the workplace, but also to many areas of life for individuals. This is most often associated with changing the place of confusion, which affects family and social life. The second issue is the culture of multi-generational assets in Poland, which also retains potential employees in the place of residence.

On the other hand, employers in industries and regions with high demand for employees are taking new steps to attract employees. These tools, however, are associated with a certain lifestyle that may not be of interest to all people of working age. Employers are also looking for specific competences to perform clearly defined tasks. On the other hand, there are employees with their preferences, which do not always meet the expectations of potential employees. The problem of diverging demand and supply on the labor market is presented in Figure 2.

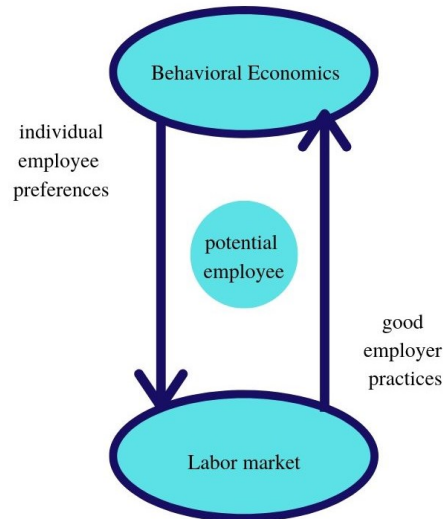


Figure 2. Diverging labor demand and supply. Adapted from: own study.

Analyzing Figure 2 it can be concluded that very low unemployment in some regions will not cause a sudden influx of job seekers. Each person on the labor market has individual preferences, while the policy of seeking employees by companies is often quite profiled. Employers offer a number of benefits from taking up a job, but very often these are the preferences of existing employees that do not coincide with what potential candidates would expect.

5. Summary

The heterogeneous labor market means that a variety of tools are needed to manage it. Monitoring of local labor markets allows for a real assessment of demand and supply for individual regions and allows for the implementation of relevant measures (Ginter, 2014). The analysis indicates that monitoring should be carried out not only in terms of voivodships but also poviats whose diversity within one voivodship is very large.

Behavioral economics proves that every human being is different and cannot be reduced to homo oeconomicus. Therefore, the approach to the labor market should also be more diversified. In addition, in a situation where there are poviats in Poland with over 20% unemployment, there is no general functioning of the employee market. Such a tendency appears, but only in large agglomerations, where there is a small percentage of all inhabitants of the country. Such vague analyzes also lead to errors in the implementation of staff policy by employers and thus to a divergence in labor demand and supply. Behavioral economics gives a great opportunity for a new look at processes in the labor market. To understand them, however, it is necessary to reject all general judgments.

The article indicates that in Poland you can not talk about the overall functioning of the employee market. The country's diversity in terms of unemployment is very high. In further analyzes, it is necessary to look at local labor markets, taking into account the needs of individual expectations. This path will allow for a comprehensive approach to the labor market in Poland.

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