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THE ANALYSIS OF ENTREPRENEURIAL ACTIVITY IN THE AREA OF BROD-POSAVINA COUNTY FOR THE PERIOD FROM THE YEAR 2014 TO THE YEAR 2018

Abstract:

The main objective of this paper is to determine total investments by activities in Brod-Posavina County, revenues and expenditures level, number of entrepreneurs by activities, including the achieved financial results of entrepreneurs of the Brod-Posavina County over the past five years. During research of facts and possibilities that currently exist, the following research methods are used in a different combination: historical method, the method of analysis and synthesis, classification, description method and generalization.

Keywords:

Entrepreneurs; investments; financial results; Brod-Posavina County

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Introduction

Entrepreneurship has historically been one of the most widely investigated topics in economic literature [1]. Traditionally related with the creation and growth of economic activities [2], entrepreneurship has been studied with multiple facets over the past years. It has been identified as one of the main elements of economic growth and GDP increases [3] as a factor fostering the economical sustainability of developing countries [4] as a factor influencing regional development through jobs creation [5] as one of individual responses to unemployment [6] in times of economic recession [7] as a driver of innovation and new product creation [8].

Croatia is at the top of the EU in terms of entrepreneurial activity, but this hidden component of the country's entrepreneurial capacity is not well recognized by employers. With incentive compensation programs within the company, this entrepreneurial activity of the employees would very effectively contribute to the creation of new products, and thus to a better utilization of invested in the technological equipment of the company and competitiveness.

There are on average 5 times more people entering the EU for entrepreneurial activity because of the perceived opportunity, and in Croatia, there are only 1.9 times more such entrepreneurs. At the same time, Croatia in the period 2016-2018 keeps the density of "adult" enterprises (number of "adult" enterprises per 100 adult population) at 4.2%, which is only 62% of the EU average. Such a low level of presence of "adult" enterprises is a long-

standing characteristic of the Croatian economy, which continues to point to the low basis of generating new value. Perhaps the reason is that one of the basic characteristics of the Croatian economy is the great difference in the development of individual regions - counties. The most intensive growth of entrepreneurial activity is shown by Dalmatia, and Istria, Primorje and Gorski Kotar. The biggest decline in entrepreneurial activity is in Lika and Banovina, where the level of entrepreneurial activity is the lowest, but at the same time, the motivational index is improving. Throughout the observed period, the lowest positive perception of the situation is in the regions of Lika and Banovina and Slavonia and Baranja, and the highest in Istria, the Primorje and Gorski Kotar and in Dalmatia. (<http://www.novilist.hr/Vijesti/Gospodarstvo/GE-M-istrazivanje-Najintenzivniji-rast-poduzetnicke-aktivnosti-pokazuju-Dalmacija-Istra-Primorje-i-Gorski-Kotar>)

For 2018, 131,117 annual financial statements of corporate income taxpayers without banks, insurance companies and other financial institutions were collected and processed in the Register of Financial Agency, based on which the data in this paper were processed. Part of the register is the data and documentation of entrepreneurs from the Brod-posavina county on the basis of which the analysis was made. (Brod-posavina county, Administrative Department for the Economy)

Methods of analysis, synthesis and compilation and statistical method of data processing were used in the paper. Data were processed using the Microsoft Excel and StatSoft Statistica software

tools. The most important shortcomings of the statistical method used in this paper are quantitative, numerical definiteness of phenomena and the question of possibility cognitions of the general on the basis of the individual and the special.

Entrepreneurial activity of the Brod-posavina county

In the Brod-posavina county in 2018, according to the number of annual financial statements processed, 2,042 were headquartered, employing 18,398, which is a 6.4% increase in the number of employees. In 2018, county entrepreneurs generated total revenues of HRK 9.8 billion (8.6% more than in 2017), total expenditures of HRK 9.5 billion (10.4% more), profit periods in the amount of HRK 434.1 million (1.1% less), loss of the period of HRK 271.9 million (87.9% more) and net profit of HRK 162.2 million (44.9% less). Gross investment in new fixed assets increased by 55.6% over the previous year. Imports increased by 13.3% and exports by 6.7%, with a trade surplus of HRK 1.7 billion. The average monthly net earning was HRK 4,925, which is 3.7% more than in 2017. (County of Brod-Posavina, Administrative Department for the Economy)

Name of the city / municipality	Number of entrepreneurs		Number of employees	
	Number	Rank in Croatia	Number	Rank in Croatia
Slavonski Brod*	1.157	15	12.040	10
Nova Gradiška*	249	67	2.051	58
Oriovac**	51	252	637	149
Gornja Vrba**	36	311	504	175
Oprisavci**	28	360	405	198
	Total income		Net profit / loss	
	Number	Rank in Croatia	Number	Rank in Croatia
Slavonski Brod*	5.741.197	15	218.592	24
Nova Gradiška*	1.642.397	49	84.787	53
Oriovac**	365.726	148	29.892	117
Gornja Vrba**	348.628	153	3.182	382
Oprisavci**	285.083	173	20.316	155

Table 1. Top list of 5 largest cities* / municipalities** of Brod-posavina county by criterion of total entrepreneur income in 2018 thousand kn

Source: Register of Annual Financial Statements

In the ranking of 28 cities and municipalities of Brod-posavina county, Slavonski Brod entrepreneurs are the first by number of entrepreneurs (1,157), by number of employees (12,040), by total revenue (HRK 5.7 billion), by period profit (HRK 218.6 million.) and after the loss of the period (HRK 214.8 million), while the first entrepreneurs of Nova Gradiška (HRK 58.9 million) made net profit. The Brod-posavina county is in 13th place in comparison with other counties in terms of the number of employees with entrepreneurs. In terms of total income and net profit, it is in 16th place, and in terms of number of

entrepreneurs and labour productivity indicator, measured by the ratio of total income and number of employees, it is in 17th place. According to the labour productivity indicator, measured by the ratio of net income to the number of employees, it is ranked 18th, and in economic efficiency it ranks 19th among all counties.

The analysis of entrepreneurial activity in the area of Brod-posavina county

In this chapter will be analyzed entrepreneurial activity in the area of Brod-posavina county for a period of five years, from the year 2014 to the year 2018.

N o.	Sym bol	Activity
1	A	Agriculture, forestry and fishing
2	B	Mining and quarrying
3	C	Manufacturing
4	D	Electricity, gas, steam and air conditioning supply
5	E	Water supply; sewerage, waste management and remediation activities
6	F	Construction
7	G	Wholesale and retail trade
8	H	Transportation and storage
9	I	Accommodation and food service activities
10	J	Information and communication
11	K	Financial and insurance activities
12	L	Real estate activities
13	M	Professional, scientific and technical activities
14	N	Administrative and support service activities
15	O	Public administration and defence; compulsory social security
16	P	Education
17	Q	Human health and social work activities
18	R	Arts, entertainment and recreation
19	S	Other service activities
20	T	Activities of households as employers
21	U	Activities of extraterritorial organisations and bodies

Table 2. Activities division according to NKD 2007

Source: Croatian bureau of statistics

Table 2. shows activities divided according to NKD 2007. Based on this division, in the following tables will be analyzed the entrepreneurial activity in the Brod-posavina county.

Activity/Year	Number of entrepreneurs				
	2014	2015	2016	2017	2018
A	72	77	75	72	80
C	281	298	321	335	338
F	190	229	231	235	263
G	332	358	367	356	382
H	71	80	82	88	94
I	61	87	103	104	118
J	53	59	62	69	73
M	195	215	228	226	249
N	21	29	31	36	42
P	12	25	20	19	28
Q	16	29	17	16	29
BPC	1427	1627	1679	1695	1842
	Number of employees				
	2014	2015	2016	2017	2018
A	473	546	550	573	737
C	7326	7284	7654	7886	8621
F	1782	1918	2068	2043	2459
G	1326	1438	1353	1408	1585
H	225	274	345	358	355
I	260	315	406	404	493
J	294	337	364	450	492
M	705	966	1083	980	985
N	100	171	165	210	212
P	40	93	86	87	139
Q	49	140	40	50	176
BPC	13451	14416	15051	15407	17301

Table 3. Number of entrepreneurs and employees

Source: Authors according to data from Croatian Chamber of Economy

According to Table 3, the largest number of entrepreneurs are in the following activities:

Manufacturing, Construction, Wholesale and retail trade and Professional, scientific and technical activities. It is interesting that entrepreneurship is not developed in activities such as: Public administration and defence; compulsory social security, Activities of households as employers and Activities of extraterritorial organisations and bodies. In the last observed year, the number of entrepreneurs by the activities is the highest.

The largest number of employees is in the activity of Manufacturing. If Public administration and

defence; compulsory social security, Activities of households as employers and Activities of extraterritorial organisations and bodies are excluded, the smallest number of employees is in Financial and insurance activities, Real estate activities and Arts, entertainment and recreation activity. In most activities, the number of employees increases through the years.

Activity	Number of entrepreneurs					Number of employees				
	Mean	Min	Max	Variance	Std.Dev.	Mean	Min	Max	Variance	Std.Dev.
A	75,2	72	80	11,7	3,421	575,8	473	737	9529	97,615
C	314,6	281	338	602,3	24,542	7754,2	7284	8621	295799	543,874
F	229,6	190	263	678,8	26,054	2054	1782	2459	64206	253,388
G	359	332	382	333	18,248	1422	1326	1585	10250	101,24
H	83	71	94	75	8,66	311,4	225	358	3516	59,298
I	94,6	61	118	473,3	21,755	375,6	260	493	8137	90,207
J	63,2	53	73	63,2	7,95	387,4	294	492	6668	81,657
M	222,6	195	249	389,3	19,731	943,8	705	1083	19976	141,335
N	31,8	21	42	61,7	7,855	171,6	100	212	2069	45,49
P	20,8	12	28	37,7	6,14	89	40	139	1233	35,107
Q	21,4	16	29	48,3	6,95	91	40	176	3918	62,594
BPC	1654	1427	1842	22477	149,923	15125,2	13451	17301	2031233	1425,213

Table 4. Number of entrepreneurs and employees descriptive statistics

Source: Authors according to Table 3

According to the data in the table, for the observed period 2014-2018, the average number of entrepreneurs in Brod-posavina county is 1654. In 5 years, the increase is 20%. The largest representation of entrepreneurs is in the Wholesale and retail trade, Manufacturing, Construction and Professional, scientific and technical activities. Regarding to changes in the number of entrepreneurs by activities, i.e. variance, the following activity are significant: Construction, Manufacturing, Accommodation and food service activities, Professional, scientific and technical activities and Wholesale and retail trade.

In Brod-posavina County, the average number of employees per year in 5 year period is 15125. Most employees are in manufacturing, over 50%. The biggest changes in the number of employees are in the activity manufacturing and construction.

Activity/Year	2014	2015	2016	2017	2018
A	555741019	529468467	696378605	595015505	796966994
C	2915157738	3365800630	3333175612	3992219607	4300907139
F	744176362	1129304278	917241360	621177082	988999902
G	1004776242	1062611543	1024639253	1130448238	1577793769
H	98457099	124777390	158865843	185933465	142079998
I	47780127	61494606	74666289	80063548	96590274
J	51930954	55626556	66497679	79952046	104055875
M	341474851	413283641	693933697	425111861	434990799
N	22930387	32240543	34344961	43356151	45915968
P	10719438	22686523	15999641	18655562	28978966
Q	4948168	13569505	4442651	4203634	20123263
BPC	6220832981	7252968454	7455227473	7596902467	8997968260

Table 5. Total income in kn

Source: Authors according to data from Croatian Chamber of Economy

The table shows the total income of the entrepreneurial activities over a period of 5 years. By far the largest income have the following activities: Manufacturing and Wholesale and retail trade. If the initial and final year of the reference period for Manufacturing activity are compared, the income has increased by 47,54%.

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Activity	Mean	Minimum	Maximum	Variance	Std. Dev.
A	634714118	529468467	796966994	12254470505361482	110699912
F	880179797	621177082	1129304278	40214430611725960	200535360
G	1160053809	1004776242	1577793769	56831596002092256	238393783
H	142022759	98457099	185933465	1101803084883594	33193419
I	72118969	47780127	96590274	343426565532350	18531772
J	71612622	51930954	104055875	447798915296404	21161260
M	461758970	341474851	693933697	18195694059883016	134891416
N	35757602	22930387	45915968	84958262488986	9217281
P	19408026	10719438	28978966	47506571718969	6892501
Q	9457444	4203634	20123263	50938244750402	7137103
BPC	7504779927	6220832981	8997968260	988120545989487490	994042527

Table 6. Total income, descriptive statistics in kn

Source: Authors according to Table 5

The average income of entrepreneurial activities in the observed period was HRK 7.5 billion, average per year. The largest contribution to income is made by Manufacturing, Wholesale and retail trade, where variance is highest. Other activities, in total, are below 40% of income.

Activity/Year	2014	2015	2016	2017	2018
A	554875927	523616099	686988072	579379548	779349373
C	2931414693	3404868352	3242546215	3775679009	4109022084
F	791129547	1078911661	906987061	617253895	962627008
G	989146853	1048615487	1003645325	1118525945	1548532430
H	99001745	121608539	154603234	176681338	136021409
I	45414708	58160522	70006392	80730338	93629427
J	48787596	52047172	61772314	74992785	96536732
M	333104591	418060001	707353098	442706222	570687318
N	22134076	30709777	33670275	42848225	45297150
P	8677077	19631864	14851762	15636079	25161878
Q	5045467	12921234	4325370	4504463	19158886
BPC	6247191114	7229813545	7317854000	7323931459	8813829397

Table 7. Total expenditures in kn

Source: Authors according to data from Croatian Chamber of Economy

As revenues were highest in Manufacturing and Wholesale and retail trade, as expected, expenditures are also the largest in these activities as it is which is evident from the Table 7. Comparing 2014 and 2018 year, in Manufacturing activity, expenditures have increased by 40,17%. Comparing the same years for activity Wholesale and retail trade, expenditures have increased by 56,55%. The minimum expenditure was recorded in Financial and insurance activities, in 2018. it amounted 2.009.660 thousand kuna's, which is 1,26% more compared to 2014 year.

Activity	Mean	Minimum	Maximum	Variance	Std. Dev.
A	624841804	523616099	779349373	11235857880588322	105999330
C	3492706071	2931414693	4109022084	211315635242692670	459690804
F	871381834	617253895	1078911661	30920870502944960	175843312
G	1141693208	989146853	1548532430	54261486300899512	232940950
H	137583253	99001745	176681338	891125901880946	29851732
I	69588277	45414708	93629427	354313064835308	18823205
J	66827320	48787596	96536732	379690370652521	19485645
M	494382246	333104591	707353098	21421256588779680	146360024
N	34931901	22134076	45297150	88327232117713	9398257
P	16791732	8677077	25161878	37268084266269	6104759
Q	9191084	4325370	19158886	44024206292958	6635074
BPC	7386523903	6247191114	8813829397	842117920805378430	917669832

Table 8. Total expenditures description statistics in kn

Source: Authors according to Table 7

The average of total expenditures of entrepreneurial activities in the observed period amounted to HRK 7.4 billion. The largest contribution to total expenditures is made by Manufacturing, Wholesale and retail trade. Variances for mentioned activities are highest. Other entrepreneurial activities make less than 40% of total expenditures in Brod-posavina county. By comparing data of income and total expenditures, it is clear that entrepreneurs in Brod-posavina county realized total profits of HRK 0.1 billion average per year.

Activity/Year	2014	2015	2016	2017	2018
A	11698666	12999983	6947206	3628219	5898324
C	146578462	227308053	182080484	119050248	199080581
F	7859602	22487898	16537305	10137665	9194072
G	5702528	7951352	7263657	2531886	6174817
H	7044338	3955762	8734268	2635852	5133575
I	5726929	2641150	5223557	148946	513326
J	900865	469182	54001	145319	371169
M	55987287	73173055	60071745	4848874	3253595
N	153037	217662	75211	1143818	103098
P	208960	543088	1151140	17227	762543
Q	71081	133567	21448	15000	283244
BPC	600951907	666287408	371002085	181848973	270670156

Table 9. Investments in kn

Source: Authors according to data from Croatian Chamber of Economy

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According to Table 9. investments were not recorded in the penultimate and last year of the observed period for activity Mining and quarrying, and in the last year for the Real estate activities. Investments were highest in the following activities; Manufacturing, Water supply; sewerage, waste management and remediation activities, Construction and Wholesale and retail trade. The largest investments were recorded in Manufacturing, in 2018. it amounted 199.080.581 thousand kuna's, which is 3.124,07% more compared to Wholesale and retail trade in the same year.

Activity	Mean	Minimum	Maximum	Variance	Std. Dev.
A	8234480	3628219	12999983	15760735773284	3969979
C	174819566	119050248	227308053	1826033957976515	42732119
F	13243308	7859602	22487898	37834620356422	6150985
G	5924848	2531886	7951352	4380807454325	2093038
H	5500759	2635852	8734268	5891937130209	2427331
I	2850782	148946	5726929	6677461666122	2584078
J	388107	54001	900865	110088412553	331796
M	39466911	3253595	73173055	1085849723036723	32952234
N	338565	75211	1143818	205567651402	453396

P	536592	17227	1151140	201462006842	448845
Q	104868	15000	283244	12204586293	110474
BPC	418152106	181848973	666287408	43700029016497368	209045519

Table 10. Investments description statistics in kn

Source: Authors according to Table 9

In terms of investment, Manufacturing and Water supply, sewerage, waste management and remediation activities are most represented. Other businesses entities are making 30% of total investments. The largest variances are in the activities of Water supply; sewerage, waste management and remediation activities. The reason for this is the contracted project funded by the EU fund.

Comparison of variables in the domain of entrepreneurial activity for the Brod-posavina county

In this chapter, the variables that were analyzed separately in the previous chapter will be compared, also for a period of five years, from the year 2014 to the year 2018.

Figure 1. shows a comparison between number of entrepreneurs and number of employees of Brod-posavina county from the year 2014 to the year 2018. through all activities.

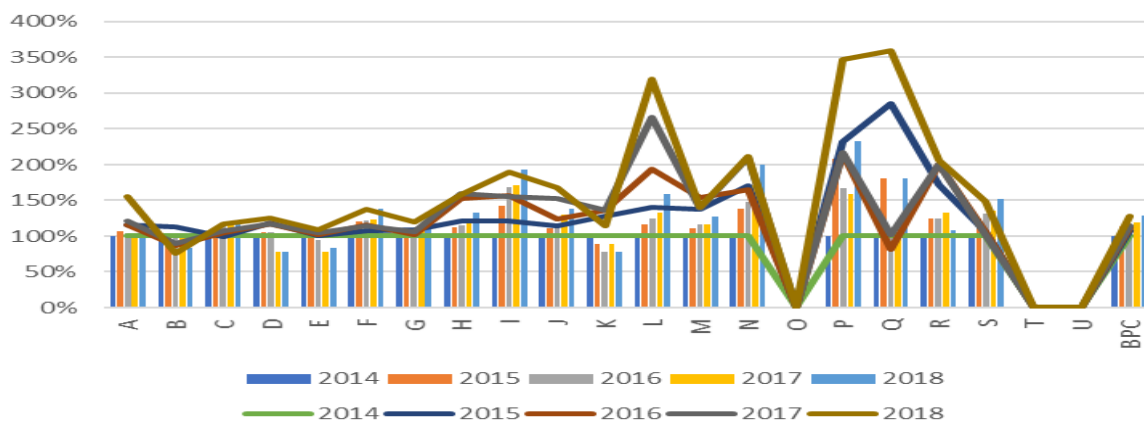


Figure 1. Comparison between number of entrepreneurs and number of employees of Brod-posavina county from the year 2014 to the year 2018. through all activities

Source: Authors according to Table 3 and Table 5

The Figure 1. shows the relationship between the changes of number of entrepreneurs and number of employees. The Figure 1. shows matches in most activities. Inequalities are seen in the number of changes in the number of employees in activities: Real estate activities, Human health and social work activities; compulsory social security and education.

Next figure (Figure 2.) shows a comparison between number of entrepreneurs and total income from the year 2014 to the year 2018. through all activities.

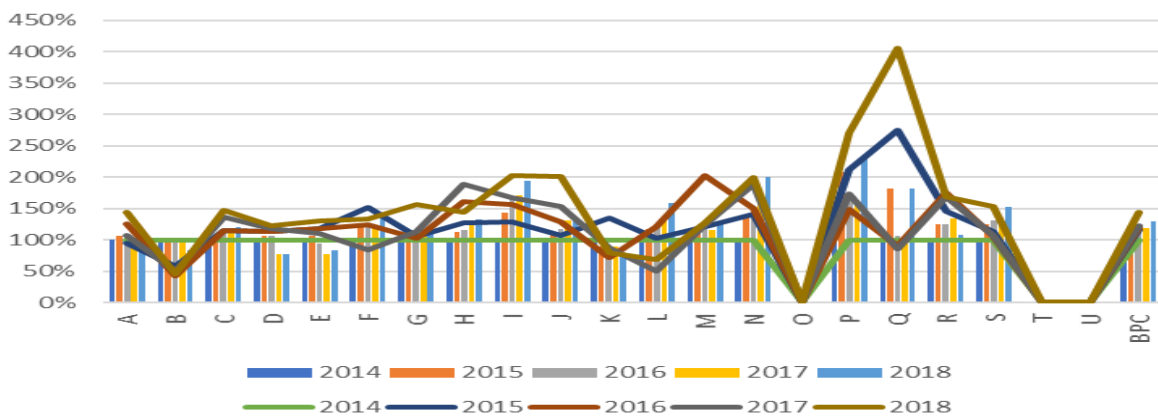


Figure 2. Comparison between number of entrepreneurs and total income from the year 2014 to the year 2018. through all activities

Source: Authors according to Table 3 and Table 7

The Figure 2. shows relationships of number of entrepreneurs and total income. The figure shows matches in most activities. Inequalities are seen in following activities: Professional, scientific and technical activities, Public administration and defense; compulsory social security and education.

Figure 3. shows a comparison between number of entrepreneurs and total expenditures from the year 2014 to the year 2018. through all activities.

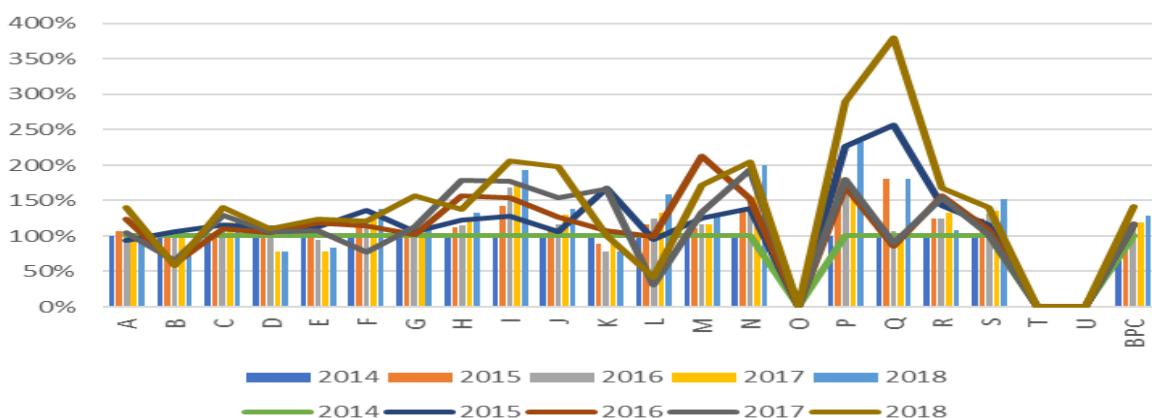


Figure 3. Comparison between number of entrepreneurs and total expenditures from the year 2014 to the year 2018. through all activities

Source: Authors according to Table 3 and Table 9

The Figure 3. shows relationships of number of entrepreneurs and total expenditures. The figure shows matches in most activities. Inequalities are seen in following activities: Professional, scientific and technical activities, Public administration and defense; compulsory social security and education.

Following figure (Figure 4.) shows a comparison between number of entrepreneurs and total investments from the year 2014 to the year 2018. through all activities.

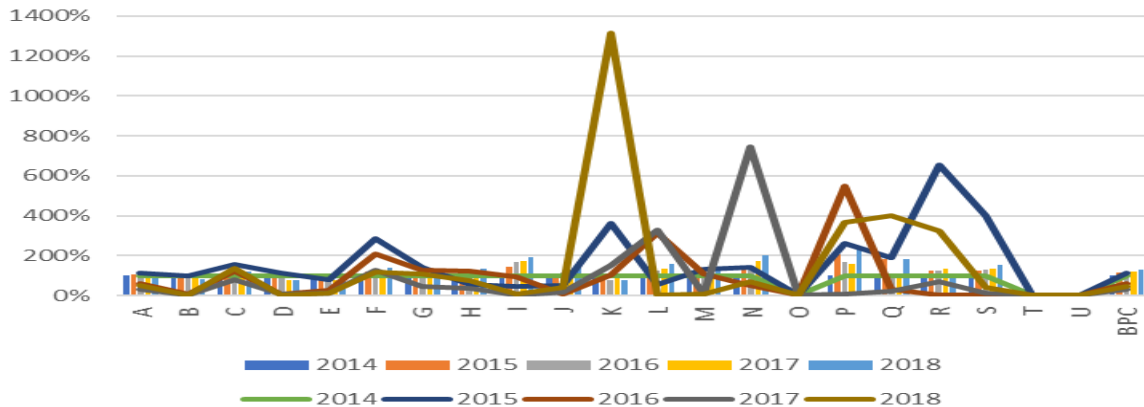


Figure 4. Comparison between number of entrepreneurs and total investments from the year 2014 to the year 2018. through all activities

Source: Authors according to Table 3 and Table 11

The Figure 4. shows changes over the years in number of entrepreneurs and investments. The figure shows matches in most activities. Inequalities are seen in following activities: Financial and insurance activities, Arts, entertainment and recreation, Administrative and support service activities, Education and Construction. Inequalities in activities in individual years can be linked to contracted projects of EU funds.

Conclusion

The following can be deduced from the analyzes carried out in the paper:

- The largest number of entrepreneurs are in the following activities: Manufacturing, Construction, Wholesale and retail trade and Professional, scientific and technical activities.
- In 2018, there were 1,842 entrepreneurs, an increase of 8.67% over the number of entrepreneurs in 2017 and 29% compared to 2014,

- There were 17,301 employees employed by entrepreneurs, an increase of 12% compared to the number of employees in 2017, and 29% compared to 2014,
- In 2018, the revenue from entrepreneurial activity was 18% higher than in the previous year, and 45% higher than in 2014,
- In 2018, total expenditures were 20% higher than in 2017 and 41% higher than the first year in the observed period,
- Investments were highest in 2015, 146% higher than in 2018, and 266% higher than in 2017 when they were smallest.

Observed data were obtained indirectly from the Croatian Chamber of Economy. In future research, it is possible to take data from a primary survey of business entities and analyze them with additional business indicators. In this way, a broader perception of businesses in Brod-Posavina County could be obtained. Furthermore, the data in this paper were taken to Brod-Posavina County. Future work may take data from a wider area.

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