

## SYNERGY OF THE AMOUNT OF SOCIAL SECURITY BENEFITS AND ECONOMIC ACTIVITY IN LATVIA

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### Abstract

**Research hypothesis:** a synergy exists in Latvia between the average amounts of state social security benefits and the regions' economic development.

The research aim is to identify interaction between the average amount of state social security benefits and economic development in Latvia.

The synergy between economic development and the average amount of security benefits, which was identified in this paper, can be regarded as a research novelty.

Latvia's social safety system includes state social insurance, state social benefits, social services, and social assistance that are financed from both the central government's basic budget and special budget and the budget of local governments.

Latvia's social insurance includes state pensions and state social security benefits. In accordance with Latvia's legislative acts, its state social security benefits are classified into two groups: unemployment benefits and maternity and sickness benefits. The present research showed that the average amount of state social security benefits gradually increased in the regions of Latvia in the period 2005-2009. The increase in the amount of benefits is related to an increase in wages, an increase in and the legalisation of employment, as well as amendments to legal acts of the Republic of Latvia.

To compare economic development levels according to various indicators in Latvia's districts, a cluster analysis was performed. For the cluster analysis, 11 statistical indicators were selected. A cluster analysis showed that a monocentric economic development trend is specific to Latvia, as a result of which there are significant differences between Latvia's capital city of Riga and the other districts of Latvia (a unit of administrative and territorial division in Latvia till the middle of 2009). The economic development level in many Latvian border districts (Aluksne, Balvi, Gulbene, Kraslava, Ludza, Valka) is low, as a result of which the socio-economic differences increase and differences in the average amounts of social security benefits paid in Latvian regions increase.

According to the research results, there are interactions – synergies – among the amounts of unemployment, maternity, paternity, and parental benefits, the distance of districts to the country's capital city, as well as the economic development level of districts.

**Key words:** state social security benefits, economic development, synergy.

### Introduction

In avoiding social tension and in ensuring the wellbeing of society, an important role is played by the capacity of social security system and sustainable development that protect individuals in case of social risk and provide disabled individuals with means of existence.

To provide a sustainable social security system in Latvia, maintaining its financial stability and fostering its development as well as achieving the society's better understanding of the role of social insurance system were set as the key tasks to be solved in the "National Development Plan 2007-2013".

After analysing the amounts of state social security benefits in Latvia and its regions during 2005-2009, Mistre B. and Dobele A. emphasise that there are significant differences among these benefit amounts in various Latvian regions (Mistre B, Dobele A., 2010).

Social insurance problems, including changes in the amount and number of social security benefits, were revealed in several studies conducted by the Ministry of Welfare (*An Optimal Tax ...*, 2007; Cunska Z., Muravska T, 2008; National Strategy Report ... , 2008).

However, presently in Latvia, few studies on the synergy of amounts of social security benefits and economic

development, which is a complementary precondition for sustainable development in its regions, have been done.

Therefore, the synergy between economic development and the average amount of security benefits, which was identified in this paper, can be regarded as a **research novelty**.

**Hypothesis:** a synergy exists in Latvia between the average amounts of state social security benefits and the regions' economic development.

The **research aim** is to identify interaction between the average amount of state social security benefits and economic development in Latvia.

To achieve the research aim, the following **tasks** were set forth:

1. to investigate the economic and legal aspects of the country's state social security benefits;
2. to examine the economic development of Latvia's districts;
3. to compare the average amounts of state social security benefits with the results of cluster analysis.

The present research is based on the monographic method, analysis and synthesis, deduction and induction, factor analysis, as well as the economic and statistical method.

Mostly legal acts of the Republic of Latvia, data of

the Central statistical Bureau (CSB) and the State Social Insurance Agency (SSIA), and researches done in Latvia in the field of social insurance were used in the present research. The research covers the period 2005–2009, analysing data by statistical region and district (a unit of administrative and territorial division in Latvia till the middle of 2009).

### Economic and legal aspects of state social security benefits

A social safety system is established in any country, which to a great extent depends on the social and economic situation as well as on the social policy implemented in it.

Latvia's social safety system includes state social insurance, state social benefits, social services, and social assistance that are financed from both the central government's basic budget and special budget and the budget of local governments.

The goal of social insurance system is to insure individuals and their dependent individuals against the risk of losing

their earned income due to sickness, disability, maternity, unemployment, old age, accidents at work or occupational disease, as well as against additional expenses related to child care and the death of insured persons or their dependents.

Latvia's social insurance includes state pensions and state social security benefits.

In accordance with Latvia's legislative acts, its state social security benefits are classified into two groups: unemployment benefits and maternity and sickness benefits. Based on the unpublished data of the SSIA, the authors analysed only trends in the amounts of state social security benefits paid in Latvia due to the limitation set for the paper.

An amount of state social security benefits paid depends on the amount of earned income used for computing state social insurance contributions. To determine the amount of state social security benefits in Latvia, the average wage subject to insurance contributions of a socially insured person is taken into consideration.

**Table 1. Changes in the average amount of state social security benefits in Latvia's statistical regions in 2005–2009, on average per month or period, LVL**

Type of benefit	Region	2005	2006	2007	2008	2009	Average absolute increase
Unemployment benefit	Rīga	86.14	107.75	142.73	185.62	197.26	27.79
	Pierīga	67.59	85.67	115.04	158.97	178.66	27.77
	Vidzeme	53.39	62.66	84.82	114.98	141.87	22.12
	Kurzeme	55.62	66.86	88.47	125.24	154.55	24.73
	Zemgale	56.65	70.24	98.09	140.48	158.4	25.44
	Latgale	44.44	52.93	70.99	92.73	123.69	19.81
Sickness benefit	Rīga	150.77	178.19	214.37	280.78	353.51	50.69
	Pierīga	122.08	144.29	178.56	245.87	314.82	48.19
	Vidzeme	110.15	124.63	151.55	201.28	265.71	38.89
	Kurzeme	108.41	128.38	151.8	206.16	266.8	39.60
	Zemgale	107.07	123.95	154.15	208.65	270.09	40.76
	Latgale	92.65	106.00	128.26	173.62	231.22	34.64
Maternity benefit	Rīga	721.74	823.44	1046.92	1300.89	1468.38	186.66
	Pierīga	564.75	664.33	835.9	1120.81	1245.29	170.14
	Vidzeme	399.65	485.46	623.96	859.00	957.09	139.36
	Kurzeme	414.87	471.6	618.74	802.69	943.77	132.23
	Zemgale	462.91	526.39	693.52	917.4	1028.34	141.36
	Latgale	378.69	443.79	574.48	741.98	888.38	127.42
Paternity benefit	Rīga	109.16	131.71	161.92	201.42	274.06	41.23
	Pierīga	88.98	111.37	139.65	180.39	236.41	36.86
	Vidzeme	66.22	80.06	102.92	123.15	171.24	26.26
	Kurzeme	66.06	88.64	117.27	140.48	190.11	31.01
	Zemgale	71.64	88.83	115.19	142.81	203.5	32.97
	Latgale	62.10	74.51	92.34	116.98	167.84	26.44

Source: computed by the authors using SSIA data

Table 1 does not include changes in the amount of parental benefits paid, as this type of state social security benefits was introduced in Latvia in 2008.

According to the data of Table 1, one can conclude that there are differences in the amounts of social insurance benefits among Latvia's regions.

An analysis of the changes in the average amounts of state social insurance benefits in Latvia's regions from 2005 to 2009 shows that they have significantly increased in all the regions. The increase in average absolute figures indicates that the state social insurance benefits have increased most

in the regions of Rīga and Pierrīga, whereas the smallest increase was in Latgale region.

The procedure of granting and paying **unemployment benefits** is regulated by the law "On Insurance in Case of Unemployment" (1999). A person being granted the status of unemployed and having a period of insurance for not less than 1 year, if obligatory social insurance contributions for unemployment have been paid or had to be paid in the Republic of Latvia for at least nine months during the recent 12 month period prior to the date of gaining the status of unemployed, is entitled to unemployment benefit. The

amount of unemployment benefit is determined according to the period of insurance and the amount of earned income from which contributions are made.

Table 1 shows that the average amount of unemployment benefits gradually increases in all the regions of Latvia over the entire period of analysis. The increase in the average amount of unemployment benefits is related to an increase in wages in the national economy, a decrease in unemployment, and the legalisation of employment, i.e. social insurance contributions were made from all incomes, thus gradually reducing the phenomenon of under-the-table wages. (Cunška, Muravška, 2008).

Table 1 also shows that the average amount of unemployment benefits increased in 2009 as well when Latvia's national economy faced an economic crisis that was fostered by both structural and cyclical and endogenous factors. The economic recession significantly impacted the labour market – the rate of registered unemployment increased, the rate of employment decreased, the indicators of economic activity sharply declined, and **wages significantly decreased** (The Conception of..., 2010). The economic crisis did not significantly impact the average amount of unemployment benefits in 2009, as a six months period of contributions made by a socially insured person from the average wage subject to insurance contributions that ends two months before the person obtained the status of unemployed is taken into account when computing the amount of an unemployment benefit. (On Unemployment insurance, 1999).

A **sickness benefit** is granted if a person does not go to work and thus loses job income or if a self-employed person loses income in the following cases: disability due to sickness or trauma, medical care or prevention is needed, isolation due to quarantine is necessary, treatment at a medical institution during the period of recovery after sickness or trauma if such treatment is needed to restore working capabilities, care, prosthesis, or orthosis for a child under 14 years of age at hospital.

Since 2009, a sickness benefit is granted and paid for a period from the 11th day of incapacity for work till the day of restoring working capabilities, but for not more than 26 weeks from the first day of incapacity for work if the incapacity is continuous or for not more than 52 weeks within a three year period if the incapacity returns interruptedly. Until 2009, any sickness benefit was granted and paid for a period starting with the 15th day of incapacity for work until the day of restoring working capabilities, but for not more than 52 weeks from the first day of incapacity for work if the incapacity is continuous or for not more than 78 weeks within a three year period if the incapacity returns interruptedly.

A sickness benefit in the event of taking care of a sick child under 14 years of age is granted and paid for a period from the first day of incapacity for work until the 21<sup>st</sup> day of incapacity for work (On Maternity and ..., 1995).

Table 1 shows that the average amount of sickness benefits, too, gradually increased in all the regions of Latvia over the entire period of analysis. Since the amount of this benefit is affected by the amount of income (wage) from which state social insurance contributions are made and owing to a gradual increase in wages over the period of analysis and a decrease in the rate of unemployment until 2008 in Latvia, which indicated an economic boom and (almost) full employment,

the average amount of this benefit rose as well.

Table 1 shows that the average amount of maternity and paternity benefits, too, gradually increased in all the regions of Latvia over the entire period of analysis.

The economic boom in the country in the period until 2008 caused an increase in available funds for welfare and, therefore, significantly impacted an increase in expenditures on state social security benefits. Amendments to the legislative acts significantly affected this increase in government expenditures.

The amount of child care benefits did not depend on an individual's social insurance contributions until 2005. Beginning with that year, the benefit depends on the amount of income earned and only partially can be regarded as a social benefit, besides, it features a family planning instrument. After the amendments were made to the legislative acts, the average child care benefit, in terms of money, increased. The "mother's wage" policy was a stimulating factor for families to plan and afford one more child, especially in 2006-2007, when an economic boom was observed in Latvia. The number of beneficiaries of child care benefits in Latvia gradually decreased until 2007, but this number rose by 4525 in 2007 compared to the previous year, but in 2008 it sharply decreased again, as this government support increased mostly owing to an increase in child births and during the first year of life of children; after the second year of their life this support decreases. It means that support for children in Latvia is intended only for a relatively short period (2 years), that is why it does not provide a real support for families and does not promote an increase in child births (Cunška Z., Muravška T., 2008).

According to the legislation of the Republic of Latvia from 2005 to 2007, the amount of child care benefit was determined:

- person taking care of a child **up to one year of age** if this person is employed – is deemed to be an employee or self-employed person in accordance with the "Law on State Social Insurance" (1997) and is on parental leave or is employed during the period of childcare, but is not on parental leave – 70 % of the average monthly wage subject to insurance contributions, but not less than LVL 56 per month and not more than LVL 392 per month;
- person taking care of a child **up to one year of age** if this person is not employed – is not deemed to be an employee or self-employed person in accordance with the "Law on State Social Insurance" (1997) – LVL 50 per month;
- person taking care of a child from **one year up to two years of age** – LVL 30 per month.
- An increase in the amount of benefits was also caused by a new provision of the law giving a right to an employed individual who cares for a child aged less than 1 year to be employed and, at the same time, to get a full child care benefit, thus stimulating child benefit requests by those parents who earned larger wages. (National Strategy Report ..., 2008).

In accordance with the 2008 budget draft law, the government agreed to the amendments to several laws submitted by the Ministry of Welfare, which stipulated the introduction of a new social insurance benefit, i.e. parental

benefit that partially replaced child care benefits. Since 2008, employed individuals receive a parental benefit, but unemployed individuals keep getting a child care benefit. The amendments to laws stipulated that no maximum limit of LVL 392 will be in effect since 1 January 2008, respectively, an individual caring for a child aged less than 1 year will receive a benefit equal to a wage earned after tax deductions. The minimum parental support is LVL 63 a month since 2008.

A **parental benefit** is granted and paid to a socially insured person that *nurses his/her child aged less than one year* if this person is employed on the day of granting the benefit and is on leave for child care or does not gain income from self-employment due to child care.

The average amounts of state social security benefits differ among the districts of Latvia (see Table 2).

**Table 2. Average amounts of state social security benefits in the districts of Latvia in 2008-2009, LVL**

District	Unemployment benefit		Sickness benefit		Maternity benefit		Paternity benefit		Parental benefit	
	2008	2009	2008	2009	2008	2009	2008	2009	2008	2009
Riga city	186	197	281	354	1301	1468	201	274	399	515
Riga	176	201	271	350	1321	1437	216	281	406	521
Jelgavas	168	184	222	300	1061	1214	171	230	322	432
Ogre	168	183	232	287	1158	1248	182	242	395	451
Ventspils	162	187	252	318	882	1067	173	231	338	428
Aizkraukle	147	155	224	270	865	1022	157	195	303	355
Limbazi	140	149	214	273	852	995	127	182	265	341
Valmiera	139	158	228	278	939	1019	135	188	295	372
Bauska	138	166	221	280	963	1051	144	217	294	373
Cesis	136	146	226	300	902	1083	123	162	274	354
Tukums	136	161	242	314	951	1110	162	197	319	380
Dobele	134	155	202	283	865	980	128	211	268	329
Liepaja	131	159	203	257	803	918	146	175	280	347
Saldus	118	153	205	259	805	957	131	187	275	322
Jekabpils	115	132	175	217	833	874	114	164	237	310
Valka	114	142	212	276	782	879	127	172	245	311
Talsi	112	134	178	247	710	851	123	180	242	299
Madona	111	135	187	247	860	987	110	175	238	320
Daugavpils	107	141	163	205	716	847	109	155	235	295
Kuldīga	103	139	193	252	812	926	129	177	243	315
Rezekne	99	133	184	243	781	946	123	173	249	298
Gulbene	98	135	164	225	836	872	90	141	207	276
Preili	93	116	181	230	828	967	119	172	232	318
Aluksne	92	135	191	267	835	902	123	162	240	298
Ludza	90	117	186	270	732	886	113	160	230	300
Balvi	87	123	186	257	769	923	123	188	270	310
Kraslava	80	112	142	183	627	761	116	159	220	240

Source: computed by the authors using SSIA data

The explicitly largest state social security benefits are received by beneficiaries in Riga district and the city of Riga: the average unemployment benefit ranged within LVL 197-201, the average sickness benefit was within LVL 350-354, the average maternity benefit ranged within LVL 1437-1468, the average paternity benefit – LVL 274-281, and the average parental benefit – LVL 515-521 in 2009.

Over the analysed period, the smallest unemployment benefits were received by beneficiaries living in the districts of Kraslava, Balvi, Ludza, Preili, Aluksne, and Rezekne. The smallest sickness benefits were paid to residents of the districts of Kraslava, Daugavpils, Gulbene, Jekabpils, and Talsi. Yet the smallest maternity, paternity, and parental benefits were received by beneficiaries in the districts of Kraslava, Ludza,

Daugavpils, Jekabpils, Gulbene, and Valka.

The economic development of the regions has to be analysed to provide a deeper analysis of the differences in amounts of state social security benefits.

### **Evaluation of economic development in Latvia's districts**

To compare economic development levels according to various indicators in Latvia's districts, a cluster analysis was performed. For the cluster analysis, 16 statistical indicators were selected: number of residents at the beginning of 2009; change in the number of residents (from the beginning of 2005 to that of 2009, %); population density at the beginning of 2009 (people per 1 km<sup>2</sup> of territory); number of employees at their basic work in 2008 (thsnd.); demographic burden per 1000 residents as of the beginning of 2009; net wage in the private sector in 2008 (LVL); net wage in the public sector in 2008 (LVL); number of economically active legal entities or entrepreneurs and businessmen per 1000 residents in 2008; number of businessmen per 1000 residents in 2008; total revenues of the basic and special budget in 2008 (LVL); revenues of the basic budget in 2008 (LVL); revenues of the basic budget per 1 resident in 2008 (LVL); gross domestic product budget in 2006 (thsnd. LVL); gross domestic product budget per 1 resident in 2006 (LVL); nonfinancial investments in 2006 (mln. LVL); nonfinancial investments per 1 resident in 2006 (LVL) (see Table 3).

These statistical indicators were summarised for all the 26 districts of Latvia. Riga city or the country's capital was excluded from Riga district.

Analysis of variance (ANOVA), which is included in the module Cluster Analysis of SPSS for Windows, showed that all the selected indicators, except five: change in the number of residents, demographic burden per 1000 residents, net wage in the private sector, number of economically active legal entities or entrepreneurs and businessmen per 1000 residents, and nonfinancial investments per 1 resident are statistically significant for grouping the districts into clusters. Their significance did not exceed a level of 0.05. The statistically insignificant indicators were omitted by the authors.

The cluster-to-cluster distances obtained in the analysis prove that there is a relationship among the clusters. The clusters being closer to each other can move to another level if a new distribution of them is performed, and they can create new clusters or cluster groups.

In clustering the statistical data, several numbers of clusters were considered: from 2 to 10 clusters. Latvia's territorial division by economic development into 7 clusters was the most appropriate option, as the number of Latvia's districts was more equable with such a distribution into clusters.

In addition to the clustering results, the clusters were

ranged for all the statistically significant indicators to determine the overall development level of each cluster in relation to the other clusters (see Table 3).

The ranging showed that the most positive situation regarding economic development was in Cluster 1 that included only the capital city of Riga; the values of all the statistically significant indicators were placed in the first position.

Cluster 2 included the districts of Riga and Daugavpils. The values of all the mentioned indicators were placed in the second position, except the indicators: revenues of the basic budget per 1 resident and gross domestic product budget per 1 resident. The values of these indicators are reduced by the large number of residents in the districts included in Cluster 2.

After comparing the average values of Clusters 2 and 1, one can conclude that there is a significant difference pointing that the economic development level in the capital city is much higher than in the districts included in Cluster 2.

Cluster 3 includes 2 districts – Jelgava and Liepaja. The indicator “number of businessmen per 1000 residents” was placed in the second position, the indicator “GDP per 1 resident” had the fourth position, and the indicator “net wage in the public sector” took the fifth position; all the values of the other indicators were placed in the third position.

Cluster 4 also includes 2 districts – Rezekne and Ventspils. The indicators “revenues of the basic budget per 1 resident” and “GDP per 1 resident” were placed in the second position. The values of the other indicators had the fourth position.

The average value of the indicator “number of residents” in Cluster 4 is smaller than that in Clusters 2 and 3, therefore the value of the indicator “revenues of the basic budget per 1 resident” is higher, although the indicators “total revenues of the basic and special budget”, “revenues of the basic budget”, as well as “GDP” are almost twice as high.

Cluster 5 includes the districts of Cēsis and Tukums. The highest indicator of this cluster is “number of businessmen per 1000 residents” which was placed in the third position in the ranging, but if the average values of this indicator are compared among Clusters 2, 3, 4, 5, and even 6, one can see that there are no significant differences among the values. A similar conclusion can be made for the indicator “net annual wage in the public sector” which was ranked in a low sixth position. However, after comparing the average values among Clusters 3, 4, and 5, one has to conclude that there are no large differences among them. The indicator “GDP per 1 resident” is also ranked in the low sixth position. The values of the other indicators are ranked in the fifth position.

Cluster 6 includes 9 districts of Latvia: Aizkraukle, Bauska, Jekabpils, Kuldīga, Madona, Ogre, Saldus, Talsi, and Valmiera. The average values of the indicators were ranked mostly in the sixth position for this cluster, meaning that the economic development level in this cluster is lower than in the previous five ones.

Table 3. Average values and ranks of clusters in the cluster analysis of economic development in Latvia

Indicator	Cluster 1		Cluster 2		Cluster 3		Cluster 4		Cluster 5		Cluster 6		Cluster 7	
	Average value	Rank	Average value	Rank	Average value	Rank	Average value	Rank	Average value	Rank	Average value	Rank	Average value	Rank
Number of residents	713016	1	185863	2	115260	3	65803	4	55215	5	47026	6	31196	7
Population density, people per 1km <sup>2</sup>	2353.2	1	62.8	2	48.4	3	24.55	4	20.5	5	19.87	6	14.47	7
Number of employees, thsnd.	400.1	1	58.8	2	36.75	3	21.45	4	15.05	5	12.46	6	7.39	7
Net annual wage in the public sector, LVL	5737	1	4110	2	4036	5	4037	4	4024	6	4085	3	3820	7
Number of businessmen per 1000 residents	56	1	24	2	24	2	21	4	22	3	20	5	15	6
Total revenues of the basic and special budget, mln. LVL	606.80	1	72.65	2	60.55	3	36.65	4	21.35	5	13.79	6	9.04	7
Revenues of the basic budget, mln. LVL	554.77	1	63.36	2	55.41	3	32.78	4	19.35	5	11.93	6	7.81	7
Revenues of the basic budget per 1 resident, LVL	778	1	358	4	485	3	513	2	351	5	261	6	254	7
GDP, thsnd. LVL	6722327	1	624151	2	378723	3	237340	4	136374	5	122971	6	64249	7
GDP per 1 resident, LVL	9272	1	3299	3	3213	4	3702	2	2435	6	2573	5	1980	7
Nonfinancial investments, mln.LVL	2034.90	1	338.15	2	142.35	3	121.75	4	69.15	5	57.33	6	26.19	7
Total rank	-	11	-	25	-	35	-	40	-	55	-	61	-	76
Districts included in clusters	Riga city		Daugavpils Riga		Jelgava Liepāja		Rezekne Ventspils		Cesis Tukums		Aizkraukle Bauska Jekabpils Kuldīga Madona Ogre Saldus Talsu Valmiera		Aluksne Balvi Dobele Gulbene Kraslava Limbazi Ludza Preiļi Valka	

Source: developed by the authors using CSB data

Cluster 7 also includes 9 districts: Alūksne, Balvi, Dobele, Gulbene, Krāslava, Limbaži, Ludza, Preiļi, and Valka. The values of the all selected indicators characterising their economic development level are ranked only in the lowest positions, meaning that this cluster's districts feature the lowest economic development level in the country.

### Discussion

The authors compared the results of cluster analysis with the average state social security benefits paid in 2008 and 2009, as the amount of benefits is affected by the gross wage of a socially insured person during the previous period.

After comparing the results of cluster analysis with the average unemployment benefit, one can conclude in general that the amount of this benefit is larger in the clusters of higher economic development level than in those of lower economic development level.

Table 2 shows that the largest amounts of unemployment benefits in 2008 and 2009 were in Riga district and the country's capital city. According to the results of cluster analysis, Riga belongs to Cluster 1, while Riga district is in Cluster 2. There were significant differences between Clusters 1 and 2 regarding economic development, while no large differences were observed for the average amounts of unemployment benefits.

In addition to Riga district, Cluster 2 includes also Daugavpils district, but the average amount of unemployment benefits in this district is small compared to Riga city and Riga district.

The average amount of unemployment benefits in Jelgava district, which is included in Cluster 3, was LVL 184, while in Liepaja district it was LVL 159 in 2009.

The average amount of unemployment benefits in Ventspils district that is included in Cluster 4 was LVL 187 in 2009, which is slightly more than in the districts included in Cluster 3. Yet in 2008, the average amount of unemployment benefits in Ventspils district was LVL 162, which is slightly less than in Jelgava district, but more than in Liepaja district.

In addition to Ventspils district, Cluster 4 includes also Rezekne district; in both districts, the average amounts of unemployment benefits are low compared with the average amounts of unemployment benefits paid in the districts of the first four Clusters.

In Clusters 5, 6, and 7 where the economic development level is lower compared to the above-mentioned Clusters, the average amounts of unemployment benefits are volatile. The largest amount is in Ogre district (Cluster 6) and the smallest – in Krāslava district (Cluster 7). The difference is LVL 88 in 2008 and LVL 71 in 2009. By analysing the average amounts of unemployment benefits, one more correlation was identified - the amounts of unemployment benefits are larger in the districts located close to the country's capital: the districts of Ogre, Bauska, Valmiera, Aizkraukle (all of them are included in Cluster 6), Tukums (Cluster 5), and Dobele and Limbaži (Cluster 7).

The National Strategy Report on Social Protection and Social Inclusion 2008-2010 states that "...the low rate of registered unemployment in the regions of Riga and Pierīga promoted regional mobility, respectively, part of businessmen attracted employees also from more distant Latvia's planning regions". This mobility was mostly ensured by the districts

closely located to Riga city and Riga district. Wages in Riga city and Riga district were higher than in the country in both 2008 and 2009, and since the amount of unemployment benefits is affected by the size of wage, it was higher in the districts closely located to the country's capital. The distance of economically less developed districts – Daugavpils (Cluster 2), Liepaja (Cluster 3), and Rezekne (Cluster 4) – to the country's capital city is large, therefore, it does not promote the mobility of residents from these districts. Wages in these districts are lower compared to the districts closely located to Riga city and are ones of the lowest in the country.

It means that there is interaction – synergy – among the amount of unemployment benefits, the distance of a district to the country's capital city, as well as the economic development level of a district.

After comparing the results of cluster analysis with the average maternity, paternity, and parental benefits, one can conclude that the largest amounts of maternity, paternity, and parental benefits are in the country's capital city (Riga) and Riga district. There are no significant differences between the average amounts of benefits paid in these two areas, but large differences are observed if compared to the other Latvia's districts. Besides, larger benefits are received by residents living in the neighbouring districts or those closely located to Riga city and Riga district – Ogre, Jelgava, Tukums, Cesis, Bauska, Aizkraukle, Valmiera, Limbaži, and Dobele. Of the above-mentioned nine districts, four (Ogre, Bauska, Aizkraukle, and Valmiera) belong to Cluster 6 and two districts (Limbaži and Dobele) are included in Cluster 7, i.e. in the Clusters of the lowest economic development level.

The results can be explained by the fact that one of the highest indicators in Cluster 6 is "net annual wage in the public sector, LVL", which is ranked in the high third position. The National Strategy Report on Social Protection and Social Inclusion 2008-2010 also states that "...in the field of social insurance, an increase in expenditures was impacted by the significant rise of wages in the national economy, as a result of which the amount of benefits increased, pensions were annually indexed, and birth indicators improved in the country, which in their turn were affected by an increase in the number of maternity benefits".

After analysing the statistically insignificant indicator "net annual wage in the private sector, LVL", the authors concluded that this indicator would not affect the results of cluster analysis and it would be ranked in the fifth position with an average value of LVL 3512.56 for Cluster 6.

In the districts closely located to Riga city – Riga, Jelgava, and Cesis – the average wages in the public and private sectors do not significantly differ from the average values of respective indicator in Cluster 6.

In the more economically developed districts located in the border zone of Latvia – Daugavpils, Liepaja, Ventspils and Rezekne – the average amounts of maternity, paternity, and parental benefits are smaller if compared to the districts of Riga, Jelgava, Cesis, and Tukums. Among the border area districts, the largest benefits were paid in Ventspils district, while the smallest – in Daugavpils district.

If the indicator "number of newborns per 1000 residents" is analysed, a similar trend can be observed – the birth indicator is higher in the districts closely located to the capital city, but it is lower in more distant districts (Demography 2009 (2009).

Therefore, there is interaction – synergy – among the amounts of maternity, paternity, and parental benefits, the distance of a district to the country's capital city, as well as the economic development level of a district.

After comparing the results of cluster analysis with the average sickness benefits, the authors came to an analogous conclusion as in case of maternity, paternity, and parental benefits. It means that the largest sickness benefits are received in Riga city and Riga district as well as in their neighbouring districts or those closely located to the country's capital – the districts of Tukums, Cesis, Jelgava, Ogre, Dobele, Bauska, Valmiera, Limbazi, and Aizkraukle. It is determined by the mobility of residents in these districts and, therefore, higher wages. There are no significant differences between the average amounts of sickness benefits in Riga and Riga district, but large differences are observed if compared to the other Latvia's districts.

In economically more developed districts that are located in Latvia's border territories – Daugavpils, Liepaja, and Rezekne – the average amounts of sickness benefits are smaller if compared to the districts of Riga, Jelgava, Cesis, and Tukums, which is determined by low wages in these districts. Among the border area districts, the largest amounts of benefits are paid in Ventspils district. The average amount of benefits in this district is the third highest in the country.

The authors explain the result gained in the present research – existence of interactions among the average amounts of sickness, maternity, paternity, and parental benefits – by the provisions that are stipulated in the country's legislation: part of beneficiaries of sickness benefits (according to SSIA data – approximately 20%) are parents of children. The dispersion diagram, too, for the indicators “average amount of parental benefits” and “average amount of sickness benefits” indicates a medium strong correlation.

Thus, there is a medium strong correlation between the average amount of sickness benefits and the average amounts of maternity, paternity, and parental benefits. There is also a correlation between the average amount of sickness benefits and the distance of a district to the country's capital city and its economic development.

## Conclusions

1. The average amount of state social security benefits gradually increased in the regions of Latvia in the period 2005-2009. The increase in the amount of benefits is related to an increase in wages, an increase in and the legalisation of employment, as well as amendments to legal acts of the Republic of Latvia.
2. A monocentric economic development trend is specific to Latvia, as a result of which there are significant differences between Latvia's capital city of Riga and the other districts of Latvia.
3. In many border area districts of Latvia, economic development is unbalanced, as a result of which socio-economic differences increase and a difference in the average amounts of state social security benefits paid emerges as well.
4. There is interaction – synergy – among the amount of unemployment benefits, the distance of a district to the country's capital city, as well as the economic development level of a district.

5. There is interaction – synergy – among the amounts of maternity, paternity, and parental benefits, the distance of a district to the country's capital city, as well as the economic development level of a district.
6. There is interaction – synergy – among the amount sickness benefits, the distance of a district to the country's capital city and its economic development.

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