POTENTIAL OF SILVER ECONOMY IN THE EUROPEAN UNION (SELECTED VIEWS)

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Abstract

This paper deals with the assumptions of realization of silver economy in the EU, regarding expected effects related to aging in Europe. Intention is to present differences in size of potential demand formation of population in old and new EU countries. We also examine differences in consumption on EU level as well as in consumption of households in a given age groups. Special attention is paid to Slovakia and main consumption constraints including income inequality in particular regions and among them. The supplemented aspects of technological changes and determinants of consumption with both economical and non-economical character are included. For potential demand analysis we used EU-SILC data and individual data from Social Insurance Agency in Slovakia. In crisis period, problems with economic growth and high level of unemployment rate together with stagnation of wages represent barriers for formation of potential demand. These factors could significantly entail lower levels of average pensions, which could be accompanied with changing consumer preferences, purchasing power, aggregate demand, employment and sectors of production. At the end of the paper we conclude that in the new EU member states there is only little space for real saturation of consumption by goods and services for older people in terms of the concept of silver economy. On the other hand, Germany, Austria, France, Mediterranean, Nordic and Benelux countries represent a significant consumer opportunity in terms of the potential demand of older people aged 50 years and over.

Keywords: Silver economy, incomes, consumption, crisis

Introduction

Present situation in EU countries is marked by persisting debt crisis with significant problems of public budgets, stagnation of wages, high unemployment rate of young people and trend of aging population. From the

future perspective finding answers to questions on the impact of technologies (with related reduced need of workforce) and the deepening problems of income polarization is becoming very significant. Both effects are substantial in relation with demographic development. Therefore the search for new factors of growth gains an importance and it is also based on the effects of so-called "Silver Economy".

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The "Silver Economy" can be defined as the economic opportunities arising from the public and consumer expenditure related to ageing population and the specific needs of the population over 50 and it comprises a large part of the general consumer economy, but with considerable differences in spending priorities and patterns (European Commission, 2015). The review of literature about ageing population showed two opposite directions. The first (e.g. Bloom, DE and Canning, D., 2008, Sharpe, A. 2011) draws attention to the negative aspects associated with public finances. The second takes a positive look at our ageing population, which create social and economic opportunities and challenges (eg. Prettner, K., 2009). It is expected that the new generation of older people (aged 50 and over) in Western Europe countries could be heathier, more educated and financially independent. This generation should have various interests and should devote higher share of their budget to leisure activities. It is expected that older adults should be more interested in innovative products and services which would help them to improve the quality of life and maintain their independence. Change in demographic profile of the EU is indicated by growing median age, which in the period from 2000 to 2013 increased by 3.9 years, reaching a value of 41.9 years. This means that half of the population of EU28 is younger and half is older than 42 years. The relative increase in the older age groups was caused by lowing fertility rates and increasing longevity. Demographic changes are also influenced by benefits from economic, social and medical advances and they differ across Europe. In the countries of Eastern and Central Europe there is faster process of aging population, while in other countries (with some exceptions) process of aging is already significantly advanced (Lukáčová, M., Pilinská, V., Vaňo, B.,2005). B.,2005).

Assumption of realization of silver economy concept more broadly is that convergence processes started in countries that joined EU. Although new EU countries took major steps towards economic integration in recent decades, due to the diverse economic level, the differences in wage and pension levels in old and new EU member states can be still observed. The amount of savings, propensity to save as well as saving rate also differ across countries at a given point in time. The territorial enlargement of the EU meant acceptance of countries, which were undergoing transformation process aiming to create a competitive free market. This was accompanied

by decreasing of economic importance of some sectors (e.g. agricultural), by increasing inter and intra-regional income disparities and by growing risk of poverty. Planned convergence of countries was achieved in some parameters at macro level. Considerably it was influenced by subsidiaries enterprises and parent companies, which were established and operated in new member states during the privatization and deregulation processes of transformation. In the new EU countries financial sector development allowed households to meet with loans the demand that they were not able to meet with their wages, which means that income and consumption situation was ameliorated mainly by increasing of households' indebtedness.

With the financial crisis that peaked in 2008 the conditions for real application of silver economy concept started to fundamentally change. Despite continuing trends in population aging in old and new EU member states, which means growing numbers of older people, the assumption of significant growth of disposable income of this age group was not fulfilled, mainly in new EU member states.. The crisis in fact slowed down and stopped economic convergence processes. As crisis is gradually deepening, differences rise between old and new member countries, but also inside these countries. These are visible mainly through high unemployment rate and long-term unemployment, which relate to problems of structural character in most European economies. These have deep regional differences also inside economy. In old EU member countries wages stagnate on much higher level than in new EU countries. So there exists a real threat of future retirement pension's creation on lower level than its current level. Neither in old EU countries with high unemployment rate (except Austria, Germany and Great Britain)⁴², it is not possible to expect a non-problematic creation of retirement pensions in the future. The process of creating savings in the age group over 50 slows down and existing savings depletes quite quickly. Crisis conditions thus create different level of older people potential demand in new and old EU member countries. This means that countries differ in reaction in the field of consumption of older people. Differentiation is not only in income formation of ageing population but also in size and performance of particular economies, as well as in flexibility of national policies supporting export of goods and services for seniors.

Methodology and Data

Aim of this paper is to characterize possibilities of realization of silver economy concept in EU conditions. Reason is the existence of need for finding the growth factors in concerned Europe's economies. This is forced by continuing crisis, high indebtedness of all subjects, narrowing space for

⁴² The unemployment rate stood below the 5% level in 2014 (Eurostat).

traditional export, problems in area of competiveness of European production and by started trend of population aging. Framework of investigation of given issue represents analyzing the potential demand of older people in EU regions (special attention is devoted to Slovakia) and the structure of older people households' consumptions in EU. We also included presentation of potential forming of silver economy in terms of technological changes and determinants of future consumption of economic and non-economic character. In this paper we assume that the silver economy consists of consumers in post-reproductive age, thus consumers over 50 years (older people).

In the context of executed analyzes, for better identification of differences in potential demand, also in consumption behavior of older people, we consider these age groups: young-old (50 – 64 years), old-old (65 – 79 years) and the oldest-old (80+ years).

Achieving goal is secured through analysis of differences in the potential demand of older people in old and new EU countries in particular age groups. We also identified EU regions with the highest potential demand of population aged over 50 years using data from EU statistics on income and living condition (EU SILC). Special attention is devoted to income analysis of older people in Slovakia, in which data on individual basis from Social Insurance Agency in Slovakia are used. This database includes data about 3.7 million persons since 2005 in this structure: incomes earned from work, retirement pensions, family allowances, social and unemployment benefits. Due to exposing not only the overall income situation, but also to show existing income inequalities between regions in Slovakia we also included the development in income stratification. Characterized potential of consumption is confronted with the structure of consumption of older people in EU by particular age groups.

For analyzing consumer behavior we used Eurostat database, while more detailed data on the structure of expenditure were available on request for EU22⁴³ countries for year 2005. For examination of how consumer behavior differ among EU countries we used cluster analysis, which is a multivariate technique used to group households based on similarities in their budget allocation patterns through maximizing within-group similarities and between-group differences. The outcome of this cluster analysis is several clusters of older people households, with each cluster displaying a distinct in expenditure pattern. The data characterized pre-crisis period with specific features like stable influences on the consumer demand in long-term perspective and relative price stability. Despite this limitation, these results together with current development of potential demand allow to better

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⁴³ Except for Czech Republic, Italy, Malta, Poland, Portugal and Croatia.

estimate changers in structure of future consumption of older people following considered price liberalization for example in energetics etc. We also analyzed the effect of age on consumer behavior according expenditures for several goods and services coming from household's survey from Statistical Office of the Slovak Republic for years 2004-2011. We are aware of the fact, that for analyzing life-cycle consumptions profiles are more appropriate panel data, where the same people are traced over time, but these data are not available for our country. In the analysis of Slovak consumers we included only those households, in which all members of households fulfill age requirement. fulfill age requirement.

- Following hypotheses were testing using an appropriate data:
 The concept of silver economy as we know it won't have any realization problems in EU.
- 2. Differences in demographic development between old and new EU countries and problems in formatting of potential demand of older people in particular countries will represent a barrier in realization of silver economy concept in particular regions of Europe.

 3. Continuing and deepening crisis will influence unemployment rate (especially long-term unemployment), which means that the gap in potential demand of older people between old and new EU countries will deepen.

Differences in ageing, income and consumption of older people in old and new $EU\ member\ states$ Demographic trends

Demographic trends

According to data from Eurostat in the last 20 years the senior segment of the population (65+ years) in EU is continuously rising by average annual rate of 1.5 %. For the last ten years in EU28 the number of seniors has increased by around 12 million, reaching level of 92 million persons, of which more than half (57 %) live in Germany (17 mil.), Italy (12,6 mil.), France (11,5 mil.) and Great Britain (11 mil.). However, dynamics of the aging process is in each EU member country different. Gradually it will occur that the countries with the youngest population will belong to countries with the oldest populations. Slovakia belongs to the countries with the youngest population in EU. By the year 2050 there will be a dominance of post-productive population over the children component (about 223 people aged 65+ will fall on 100 people younger than 15; the share of those aged over 80 years will rise from current 3 % to 8 %). Aging process in Slovakia will belong to the most intensive ones and this country will become one of the oldest counties in EU (Jurčová, D., Vaňo, B., 2011). Similar aging process like in Slovakia will occur in countries like Poland, Latvia, Romania, Lithuania and Hungary. However in general (with a few exceptions), currently countries which are considered as part of Northern and

Western Europe have values of aging population indicators above the EU average. In these countries process of population aging should slow down. On the other hand, in Central and Eastern European countries with the lowest values of aging population indicators, we can expect one of the biggest demographic changes (Páleník, V., 2012).

Potential demand in EU

Table 1 shows difference in size of potential demand by selected age groups in old and new EU member countries. According to the results of data analysis, in the period covering mid-term perspective, due to the number of older people as well as due to higher level of average income, old EU member countries are more promising for silver economy realization.

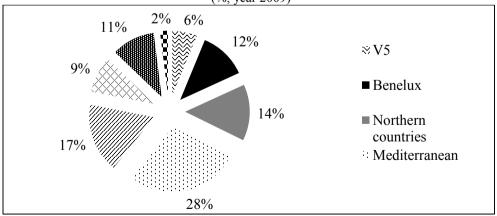
Table 1: Potential demand of older people in old and new EU member countries, as % of total EU potential demand in particular age groups, year 2009

	50+ y.	50 – 64 y.	65 – 79 y.	80+ y.		
Old member countries	88,17 %	87,53 %	89,24 %	89,14 %		
New member						
countries	8,10 %	8,49 %	7,45 %	7,42 %		

Source: data processed from EU SILC 2009, based on average income

From the territorial point of view, regions (created by using multifactor analysis, Pauhofová, I., Páleník, M., 2013) with the highest potential demand are: those of Mediterranean Sea (mainly Italy), Germany and Austria but also region of France. Northern countries and countries of Benelux have also relatively good potential for realization of silver economy concept. Because of low income level, this feature cannot be applied for new EU member countries (figure 1).

Figure 1: Regions with the highest potential demand of population aged 50 years and over (%, year 2009)



Source: data processed from EU SILC 2009, based on average income; Eurostat

Income of older people in Slovakia

Comparison of income level development of population in active age with those aged over 50 shows, that the perspective of young old people (that are still more often active in the labor market) is significantly worse than the situation which old-old people had before they began receiving pensions. Slovakia lag behind old EU member countries in the degree of population ageing, but it is expecting to continue getting old over the next few decades more rapidly. It seems to be probable that higher income level of current active population in Slovakia will not be able to substitute decline in income of the next generation of old-old and the oldest-old people. These are the problems of generational polarization of income resulting in reducing consumption of specific goods and services. Results of our previous research (Pauhofová, Martinák, 2014) showed only small overall increase in consumption, which was more caused by rising households debt burden than by income growth. The formation of potential demand in Slovakia for the 2005-2013 period can be seen in table 2.

Table 2: Development of average net income of population of Slovakia for each age group.

(Furo constant prices 2013, 2005 – 2013)

	2005	2006	2007	2008	2009	2010	2011	2012	2013
All	418	430	458	473	486	501	504	510	514
Active	491	502	539	551	552	566	569	573	577
Young old	439	454	476	494	524	543	552	559	560
Old-old	316	329	347	358	396	416	421	436	447
Oldest-old	302	315	335	342	372	384	379	384	394

Source: data processed from Social Insurance Agency in Slovakia

Significant disparities in regional income distribution create conditions for the differentiation of structure and size of consumption of older people in particular regions (table 3).

Table 3: Stratification of older people net income by region (%, year 2012)

	50-64 years				65-79 years				80+			
		300-	500-			300-	500-			300-	500-	
	< 300	500	1000	>1000	< 300	500	1000	>1000	< 300	500	1000	>1000
BA	11	32	38	19	9	59	25	6	10	74	15	0,45
TT	19	41	32	7	17	70	12	1	19	78	3	0,04
TN	18	44	33	6	14	71	14	1	14	82	4	0,05
NR	23	43	28	6	21	69	10	1	25	72	3	0,05
ZA	20	44	30	6	15	72	12	1	14	82	4	0,06
BB	22	42	30	6	15	72	12	1	16	80	4	0,05
PO	24	45	26	5	17	73	9	1	17	80	3	0,02
KE	22	39	31	8	16	67	16	1	18	76	6	0,07

Source: data processed from Social Insurance Agency in Slovakia

Relatively low net income in the 50 -to-64 age group and problematic development in the labor market, multiplied by effects of the crisis do not create condition for sufficient creation of savings in several regions of Slovakia, which could be used in the future to ensure a higher consumption in retirement. The most significant problems are in PO – Prešov region.

Characteristics of similarities and differences in households consumption structure of older people in the old and new EU member states

Substantial income and wealth inequalities exist among EU countries, which lead to differentiated consumer behavior. In the new EU member countries lower income levels of older people are reflected in higher proportion of spending on food, non-alcoholic beverages and housing (including energy costs). Its share of total expenditures of households headed by a young old age person was about 50%. In the old EU member states it was lower by about 13.1 percentage points. This shows that after including other expenses, such as spending on clothing and footwear, furnishings, household equipment, transport, communication, miscellaneous goods and services, young-old households in new EU member countries can spend only a small proportion of their income for leisure activities. The consumption expenditures on recreation, culture and hotels and restaurants of households whose head was aged 50 to 64 years tended to be much higher in old than in new EU countries, which means that while in old EU countries were on the level 15,8% of total household budget, in new EU countries were by 6,5 percentage points lower. This proportion significantly diminished with increasing age of older people, especially after finishing their active working life. Expenditures on health as a percentage of total households budget of older people are not significantly higher in the old than in new EU countries (in old EU countries 3,2% of young-old households expenses were allocated for health, as compared to 4,4% for the old-old households and 7,2% for the oldest-old households; in new EU member countries these percentages were 4.4 %, 7.2 % and 9 %, respectively by age group). It may be seen that older adults tend to consume more frequent and more expensive types of health care services than younger cohorts, especially in the last years of their life.

The diversity of consumption patterns in particular countries is affected by the various factors (economic, cultural, geographical, historical, etc.). Traditions can play an important role in terms of the national strategy "let's-support-local-business" (for example in France, Italy and Austria). Climatic conditions resulting from the geographical location of the country fundamentally influence differentiation of consumer behavior of older people in the northern and southern parts of Europe. This is reflected, for example,

in the lower proportion of spending on energy in southern European countries compared with the Nordic countries (on average by 4 percentage points for young old and old-old people and by 6 percentage points for the eldest-old). The Nordic countries⁴⁴ have higher price levels for food and non-alcoholic beverages compared with southern countries. Lower income in the southern countries as well as different lifestyle compared to Nordic countries cause the higher proportion of expenditure on food in the southern European countries for young-old, old-old and the oldest-old households, on average by 4 p. p., 8 p. p. and 10 and p. p, respectively by age group. Households of older age people in southern countries have also higher share of restaurants and hotels expenses compared with those in the Nordic countries. On the contrary, due to milder maritime climate, they spend lower proportion of their household budget on recreation and culture (by about 6 percentage points). The high degree of solidarity in the Nordic countries leads to lower share of household expenditures on health compared to southern European countries. All these factors influenced the existence of similarities or differences of older people households' consumption patterns across EU countries. By using cluster analysis for households whose head was aged 50 to 64 years we found three clusters of countries that share reasonable similarities in terms of their consumption structure:

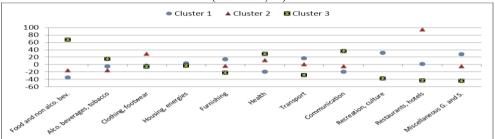
- Cluster 1: old member countries of EU (AT, BE, DE, DK, FI, FR, IE, 1 LU, NL, SE, UK) and Slovenia,
- Cluster 2: southern countries of EU (CY, ES, EL), 2
- 3.

Cluster 3: new member countries (BG, EE, HU, LT, LV, RO, SK). Figure 2 shows how particular clusters differ compared to the EU22 average within the presented 11 product and services categories. From silver economy point of view, cluster 1 represents the most promising group of countries in this age group. One characteristic of this cluster is that households in these countries have significantly lower proportion of expenditure on food and non-alcoholic beverages and a significantly higher proportion of spending on household furnishings, transportation, recreation, culture and miscellaneous goods and services than average.

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⁴⁴ The highest price level of food and non-alcoholic beverages among EU countries was observed in northern countries.

Figure 2: Differences in consumption of young-old households within three clusters (COICOP. %)



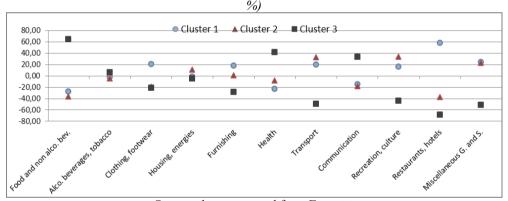
Source: data processed from Eurostat

Second cluster analysis suggests that main differences in consumption of old-old households are within these three clusters (figure 3):

Cluster 1 – southern countries EU (CY, ES, EL), Benelux (BE, NL, LU), Austria, Germany, Ireland, Slovenia and Great Britain,

Cluster 2 – northern countries EU (DK, FI, SE) and France, Cluster – new member states EU.

Figure 3: Differences in consumption of old-old households within three clusters (COICOP,



Source: data processed from Eurostat

By similar cluster analysis for the oldest-old households we found cluster 1 consisting of old EU member countries and Slovenia, cluster 2 comprising southern countries including Slovakia and cluster 3 consisting of new EU member countries (figure 4).

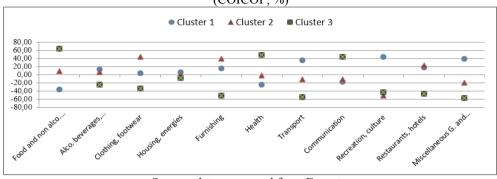


Figure 4: Differences in consumption of oldest-old households within three clusters (COICOP, %)

Source: data processed from Eurostat

Comparison of changes in consumer behavior of young and older people – a case study of Slovakia

From the potential demand point of view, Slovakia belongs according to the results of multifactor analysis to the Visegrad region (Pauhofová, I., Páleník, M., 2013). About 17 % out of total EU people aged 50 years and above live in this region (in Slovakia it is about 1.6 %). This percentage is expected to grow in coming decades, which makes this region more promising. However, lower effective demand caused by unsatisfactory economic situation of older people can be one of the biggest constraint for new business opportunities. Our analysis of average incomes showed that this region represents about 6.3 % of total EU potential demand, while the share of Slovakia was only 0.52 %.

In Slovakia, due to relatively lower incomes, older people tend to be more prices sensitive and spend more percentage of their total budget on food, housing (including energy) and health than younger ones. They also allocate less percentage of their budget on clothing and footwear, transport, recreation and culture, to restaurant and hotel services. Consumption expenditures of households on goods and services in particular age groups is shown in figure 5.

2011)

80+ 29 2 41 9 0 5 2 12

65-79 27 3 37 8 3 8 15

50-64 25 4 31 5 5 9 3 19

25-49 18 6 29 3 7 9 7 21

□Food and non alco, beverages □Clothing and footwear □Housing, energies

Figure 5: Structure of expenditures by age in Slovakia (% of total expenditures, COICOP,

Source: data processed from Household budget survey of Statistical Office of the Slovak Republic

Due to identifying opportunities for the private sector we present household expenditures classified by purpose (COICOP) and divided into two groups consisting of functional expenditures (expenditure on food and non-alcoholic beverages, housing including water, electricity, gas and other fuels, transport and health) and expenses related to lifestyle (spending on furnishing including household equipment maintenance, clothing and footwear, recreation and culture, restaurant and hotels).⁴⁵

Figure 6 shows that households headed by person aged 50 of older dedicate a substantial proportion of their budget to the functional expenses. In 2011, these proportions of functional expenses were 65 %, 74 % and 79.3 % respectively for households headed by young-old, old-old and the oldest-old person. Only a relatively small percentage of total expenses was spent on goods and services related to the lifestyle. The process of population aging should significantly accelerate in Slovakia after 2015. By 2050 (EUROPOP 2013) Slovakia should be included among the countries with the oldest population (according to the median age). Therefore it can be expected that future trends in consumption will be significantly affected by aging population. This could subsequently lead to changes in sectoral production, as well as in employment.

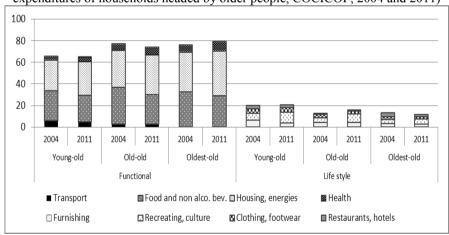


Figure 6: Functional expenses and expenses related to lifestyle in Slovakia (% of total expenditures of households headed by older people, COCICOP, 2004 and 2011)

Source: data processed from Household budget survey of Statistical Office of the Slovak Republic

The future of silver economy

In the long term, the potential of silver economy is influenced by the increase in average life expectancy, which was mainly caused by advances in medical care. The global average life span extended by nearly 20 years over

⁴⁵ Dividing expenditures into two groups was inspired by work Dujin – Lehuédé – Mathé – Siounandan (2010) and adjusted to Slovak conditions.

the past 200 years. Views on further development vary. According to Colin Mathers (WHO, 2013) it can be expected that the increase in life expectancy due to reductions in morbidity reached by better medical treatment will gradually slow down. Richard Willets (Partnership, an insurance company in the UK) has a similar opinion when he states that life expectancy will slowly increase but at a much lower rate than before. Holly in a small percentage of EU countries (e.g. Sweden, Finland) people have a good health status and live longer due to benefits of the traditional healthy lifestyle (WHO, 2013).

Number of older people in Europe continues to grow rapidly and it is necessary to take into account that ageing population with all of its effects will produce fundamental changes in future societies with consequences on population needs and consumption but also on modification of inter and intra generational relationships. With this situation are associated changes in access to the labor market in relation to occupational structure and options for moving into other professional fields, resp. to creation the workplaces which were tailored to the needs of older people. This will significantly affect the service sector, including intergenerational communication in general and it will have also an impact on the individual's social status. These processes will be significantly determined by the development of intergenerational solidarity in terms of using financial resources.

In relation to the needs and consumption the targeted

and consumption needs the targeted relation the In relation to the needs and consumption the targeted individualization will reflect in proposals and implementation of advanced technological applications in each age group of older people, especially for those aged over 80 years. This includes the use of results from the fields of biotechnology, nanotechnology, genetic engineering that can directly affect life expectancy. The extent to which it will cover older people will depend on the particular price settings in relation to the development of consumer demand of relevant part of the population. It is expected that healthy life expectancy will increase and that the number of the people aged over 100 will grow significantly in developed countries. Retirement ages will extend not only because of the productivity of older people, but mainly due to make the welfare system more sustainable. the welfare system more sustainable.

The first significant transformation is possible to gradually register in application of new technologies to the goods and for services that are oriented to the older generation with limited movement skills. These are mainly products and services related to modifications of housing, transport vehicles and the whole area of health care. Consideration is given to the trend among the younger generation, who has more freedom, choices and has an increasing proportion of women who have delayed having children or

⁴⁶ Progress was expected mainly in treatment of Alzheimer, Parkinson and metabolic diseases.

decided to be one-child, childlessness or a single parent and it is difficult for them to leave work and take care of their parents. Traditional family is changing and senior families will look different. It is expected that the predominant care of the elderly will be provided in the home community environment. Between old and new EU countries there are huge differences in the care range for older people provided by family members. In the new ones there is a much higher percentage of the elder family care provision (this percentage is in CZ and SR about 80 %). Old-age care creates a big part of the silver economy and it is closely connected with questions of financial well-being and constraints⁴⁷, as well as the issue of intergenerational solidarity. From an economic point of view it seems that home care for seniors, which is currently carried out mostly by women is less expensive. Given the demographic trends, it is anticipated that there will be 55 people aged over 80 for every 100 women in productive age by 2025. It is also expected that a large part of future seniors will use technological and robotic devices⁴⁸ and for communication will use more social media also because they will have already some experiences in these fields.

The aging population of Europe is a challenge reflected also in determining the research priorities of each country. It is obvious that countries which have already focused in the past on sectors of interest from the ageing population perspective will have a comparative advantage. For example the United Kingdom increases orientation towards biotechnology, pharmaceutical industry and medical technology, currently employing about 170 000 people in 5 000 companies investing to these areas. According to government statements, England is to become a global leader in biotechnology over the next 10 years, with the expectation of improving health care, the inflows of investment, creating new jobs and business opportunities. For countries like the Czech Republic and Slovakia, which have tradition and good conditions for e.g. in making clinical studies would be challenging to orient research efforts in this direction.

Future consumption of older people in the EU is directly shaped by energy policy, which can influence energy prices and therefore can have a negative influence on structure of households' expenditures of older people.

⁴⁷ For example because of the significant increases in long term care costs in the beginning of 1995 the compulsory long-term care insurance was established in Germany, which means that every inhabitant in this country has to be insured against the risk of long-term care (in Czech and Slovak Republic this kind of insurance was not yet introduced). The amount of received benefits depends on the levels of care and services including home and inpatient care.

⁴⁸ For exapmle robot Enon from Nara Institute of Science and Technology in Japan can comminicate with older people.

⁴⁹ For supporting of transformation process of research results to practical use, they introduced lower rate of corporation tax to profits earned from patented inventions.

Furthermore it will also depend on changes in prices for health care goods and services, food commodities and transport services as well as on salaries and conditions in elderly care sector. The level of retirement pensions, which directly influence the demand of seniors, can be significantly affected by pension system reforms including changes like e.g. increasing retirement age, linking retirement to life expectancy, setting different age for retirement for hard-pressed workers, increasing expenditures for retirement benefits etc.

Conclusion

Mismanagement of the aging population was set as the fifth most significant risk for the next 10 years out of the top 50 global risks presented at the World Economic Forum 2013 in Davos. One of the key risks for the formation of silver economy can be considered a deepening income polarization. This situation in corresponding with the ongoing debt crisis in the EU, wage stagnation and vague approach toward the pension system reforms, do not create an adequate space for formation of consumer demand of seniors. These problems are the same for old and new EU countries, but these countries differ in the size of pensions (net incomes) and in magnitude and speed of population aging (new EU member countries have lower level of income and most of these countries still lag behind old EU member countries in the degree of population ageing, but in next few decades it can of income and most of these countries still lag behind old EU member countries in the degree of population ageing, but in next few decades it can be expected a rapid increase in the proportion of older people). Pro-growth factors with effects of silver economy have therefore the higher opportunity to express themselves in the old EU countries, especially in the larger economies. Faster aging with higher pensions and growing number of older people in terms of saturation of needs create a strong pressure and but also a challenge for business and research sector, job creation and private investment especially in domestic conditions. It seems that small open economies such as Slovakia have in the ongoing crisis only a little chance to stop the "getting poorer process". Opportunities for exporting goods and services from Slovakia to countries with strong potential demand of older people are scare also because of overall problems of exporting within the EU. New official statements in Davos in 2015 shifted the economic problems associated with the growth of income inequality and with financing of aging population behind those of geopolitical nature. Therefore due to the influence of several negative factors, the possibilities of realization of the silver economy concept in many of the EU countries weaken.

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