

Working Paper 162

**"Changes in the Standard of Living, Connected with Aging and Retirement:
Comparative Perspective (USA, Germany, Russia)"**

(Final edition)

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Abstract

Present paper focuses on the changes in the standard of living, connected with aging and retirement, and impact of different models of pension provision. The research is based on the microdata, prepared and maintained by Luxemburg Income Study project. Microdata from Germany, 1984 (German Panel Study), United State 1986 (Current March Population Survey) and Russia, 1992 (Russian Longitudinal Monitoring- Survey) is analyzed in comparative perspective.

The analysis has shown that the changes in the standard of living, connected with aging and retirement, are the least in Germany. Benefits, received from obligatory state pension insurance in combination with earnings of the working elderly provide enough income for elderly people, which result in low poverty rates in senior age groups. The four-pillar USA model, which includes obligatory insurance, private pension plans, earnings and savings, provide medium level of income for elderly people. Russian pension model, which is based strongly on state pension benefits, in 1992 failed to support the adequate standard of living of senior citizens. This fact strongly determined by the rapid reforms, which took place in Russia in 1992. The additional non-LIS data witnesses that 1992 was the worst year for Russian elderly and that there was some improvement in the well being of senior Russians later. Several ideas concerning pension politics are revised on the basis of results achieved.

Introduction

The development of the welfare state in the twentieth century in industrial countries provided protection for senior members of society from income loss, connected with retirement and inability to receive market income. Until the twentieth century the retirement for the major part of people meant inevitable poverty. But the development of obligatory state pension insurance, private pension plans, and savings produced what was called a "golden age" of elderly. State pension insurance system, which existed in USSR (and Russia) until 1992 and was financed from the state budget, also provided minimum adequate level of income for elderly.

But market reforms that are underway in Russia now forced rapid changes in the functioning of pension system. Since 1992 the financing of the pension benefits is made not from state budget, but from established Pension Fund of Russian Federation. It's appearance in 1992 made Russian pension system more like western models, but also caused many inevitable difficulties in accumulating enough finances for paying adequate pension benefits for Russian elderly. So it seems to be interesting to study deeply the effect of recent changes in the financing of the pension benefits in Russia.

The data of Russian Longitudinal Monitoring Study 1992 wave, stored in the datasets of Luxemburg income study, gives us a possibility to analyze directly the consequences of pension reform in Russian federation. But the usefulness of our research will grow rapidly if our analysis has comparative perspective. Applying the same analysis to data, collected in USA and Germany, will allow us to compare features of pension models and evaluate their comparative effectiveness in protecting income of senior citizens.

The goal of my research is to find out whether old age is connected with poverty and if it is, explore factors, which influence this connection and determine poverty among elderly households. In other words, does poverty rate increase in the groups of elderly households, and what specific income factors influence this increase.

Three datasets were used to analyze the income of elderly people: Current March Population survey (USA, 1986), German Panel Study (1984), Russian Longitudinal Monitoring Study (1992). These datasets, like all datasets, stored in LIS, have the same variable structure that allows us to use the comparative analysis. Data were weighted using standard LIS weight variable.

The units of observation of my data analysis were households. To determine poverty levels and inequality indices in different groups of households I used equalized disposable income of household. Standard LIS equivalence scale was used for all datasets.

When we are exploring connection between old age and retirement, it's necessary to determine, what do we mean under 'old age' and 'poverty'. Does 'old age' of household mean that its head is over 60 or over 70? No 'single perfect answer' could be given, taking into account institutional and cultural differences among countries studied. So it forces us to use multiple definition of elderly households. In my analysis I distinguished four overlapping groups of elderly households: households, which head is over 55, over 60, over 65 and over 70 years. These groups, of course, are not mutually exclusive. But consequent analysis of each group allows us to explore the effect of old age on the poverty rate among elderly groups, defined different ways. Also we are able to determine, does the connection become stronger when we deal with more narrow and elder groups of households.

For prediction of the poverty rates the relative measures of poverty were used. I estimated median-based poverty lines (40%, 50% and 60%) of median equalized disposable income. These poverty rates are to be calculated for each group of elderly households.

Under the factors, which determine the poverty among aged households, I mean the coverage and relative size of given sources of income. The factors are the percent of people receiving given type of income, and the median amount of this income in comparison with overall median equalized disposable income.

Models of pensions and income inequality:

Before deep data analysis it will be interesting to make a short theoretical review of the systems, providing income for elderly people, which existed in the country we are studying. Joachim Palmer from Swedish Institute undertook a profound investigation of different pension models and their income on inequality for Social Research, Stockholm. (LIS Working Papers, N37). Palmer is analyzing II developed industrial countries with the aim to compare features of different pension schemes, develop an appropriate classification of them and compare their impact on income inequality and poverty rates among elderly people. Palmer's work should be highly appreciated not only for data he gathered, but also for his historical and philosophical analysis of pension insurance.

Palmer based his philosophical constructions on the idea of the welfare state as a strategy of equality. Author sees every developed industrial country as a unique social experiment, aided on providing social welfare and equality in income distribution with specific ways and methods of this provision. Analyzing variation in welfare state models Palmer found 3 principles behind the provision of benefits: need, citizenship rights and work merit. These principles rarely could be find existing solely, usually they exist together, but the degree of influence of these principles varies from state to state.

In accordance with these three principles Palmer distinguish four models of pension systems. The first one is work-merit model. "Here the intention is for adequate pensions for those who are working for wages". The second is the citizenship model. In this model the amount of benefits is less connected with work merit and more uniformly distributed. This type of pension models aimed on providing adequate minimum for everyone.

The institutional model combines advantages of both work-merit and citizenship pensions. The amount of benefits is connected with work merits and minimum level is provided for all. Palmer says, that this model provides both basic and income security. The pension models that provide neither income security nor basic security, Palmer refers as residual models.

Palmer characterized German pension insurance system as work-merit model, because it provides income security, but doesn't provide adequate minimum level for everyone. USA pension system in accordance with Palmer's view is residual, providing neither income security nor adequate minimum. Following Palmer's definition we can treat Russian pension model as super-residual, which fail to provide even limited basic security and amount of benefits paid is not connected with work merit.

Palmer's hypothesis is that income inequality is the least in the institutional model, a bit more inequality is in the citizenship model, middle level of inequality is in the work-merit model and maximum inequality exists in the residual model. Palmer checked that hypothesis using relative poverty rate measure, Gini and Atkinson inequality indices. The data analysis supported his hypothesis. Our data analysis confirmed Palmers conclusions about Germany and USA and gave us a possibility to treat Russian pension model as residual.

Steps of analysis

On the first step of my analysis the question will be raised about elderly households themselves: what is the share of the elderly households among households of Germany, United States and Russia. Then the poverty and inequality indices will be calculated for all households of country studied. So we will be able to evaluate comparatively overall levels poverty and inequality. On the third step we will determine poverty levels for groups of elderly households and figure out, does the old age mean poverty or not. On the fourth step we will compare structure of income of elderly households in Germany, USA and Russia and on the fifth step the structure of the income of the most deprived elderly households will be compared. This will allow us to uncover and compare income factors, determining poverty among old-aged.

For prediction of the poverty rates the relative measures of poverty were used. We estimated median-based poverty lines (40%, 50% and 60%) of median equalized disposable income. These poverty rates are to be calculated for each group of elderly households.

Under the factors that determine the poverty among aged households, we mean the coverage and relative size of given sources of income. The factors are the percent of people receiving given type of income and the median amount of this income in comparison with overall median equalized disposable income.

Relative shares of senior households

At first step of our analysis we should find out the share of old-aged households among all households of countries studied. In accordance with the general logic of our analysis, we are interested in the share of households with heads over 55, over 60, over 65 and over 70. The results of data analysis are in the table below.

<i>Shares of the households with elderly head</i>			
Head is	Share (in %)		
	Germany	USA	Russia
over 55	42.8	33.7	40.5
over 60	33.8	26.7	31.0
over 65	26.3	19.9	20.6
over 70	20.7	13.4	11.3

The data presented in the table, shows that elderly households make up a big share among households in every country. For example, one third of German households is headed by persons over 60. In United States and Russia this share is not so significant but even in these countries households with head over 60 make up 27% and 31 % of all households.

The small share of eldest group of households in Russia (with head over 70) could be explained by the fact, that life expectancy beyond age 70 is lower in Russia than in Germany or the United States. The table that is presented below illustrates this. Note that persons over 70 make up only 7,3% of Russian population, while the same group makes up 9,4%, of Americans and 14,1 To of Germans.

<i>Shares of the old-aged groups in the population</i>			
	Shares (in %)		
	Germany	USA	Russia
over 55	32	26,1	28,3
over 60	24,7	20	20,2
over 65	18,3	14,5	13,3
over 70	14,1	9,4	7,3

Inequality of income distribution and poverty rates in population

To answer the question about connection between poverty and old age we should compare the poverty and inequality indices in the whole population with the same indices in the groups of old-aged households.

Indices that are used to measure poverty and income inequality fall into two types. Absolute indices are based on the estimated price of consumer basket, adequate minimum etc. The example of such induce is the share of population with income under physiological minimum. These indices should be taken into account while planning socio-economic policy, but it's difficult to use them for the purposes of comparative analysis.

For the comparative analysis relative indices are more appropriate. They are not connected with country-specific estimated price of living. These indices are based on the parameters of distribution of income. Using relative indices, we do not consider information about differences of the price of living and incomes of population in different countries, but we are able to compare the patterns of income distribution.

Focusing on comparing poverty and inequality indices in USA, Germany and Russia the following question should be answered: what is the ratio of income of the upper 10% of the income distribution to the income of the lowest 10%. But our conclusions will be more reliable, when we use multiple indices. That is why we also calculated the ratio of the ninth docile to the first docile, Gini coefficient of inequality and poverty rates. Poverty line was determined as 40%, 50%, and 60% of median equalized disposable income. The results of calculations are presented in the paper below.

<i>Poverty and inequality indices (calculated for all households)</i>			
	<i>Germany</i>	<i>USA</i>	<i>Russia</i>
<i>Decile shares 10/1 Ratio</i>	<i>5.7</i>	<i>12.3</i>	<i>17.7</i>
<i>Decile 90/10 Ratio</i>	<i>3.2</i>	<i>6.1</i>	<i>6.6</i>
<i>Gini Coefficient</i>	<i>.27</i>	<i>.36</i>	<i>.46</i>
<i>40% Poverty Rate</i>	<i>2.8</i>	<i>12.8</i>	<i>10.7</i>
<i>50% Poverty Rate</i>	<i>7.3</i>	<i>18.4</i>	<i>18</i>
<i>60% Poverty Rate</i>	<i>14.1</i>	<i>24.8</i>	<i>25.9</i>

All indices witness that incomes of German households distributed more uniformly than incomes of households of USA and Russia. Four of six indices show more income inequality in Russia than in USA. But poverty rate for 40% and 50% poverty lines is greater in USA. For example, the total income of ten richest percents of households is bigger than the total income often poorest percents in 5.7 times in Germany, by a forth of 6.1 in USA and 6.6 Russia.

Poverty rates among senior households

With the information about levels of poverty and inequality of income distribution of the countries studied (previous section) we can begin evaluation of the connection between poverty and old age. There exist two major methods for it.

The first method is to select only poor households for analysis and to calculate share of the elderly households among them. If this share will be greater than among all households, we can say that standard of living depends on age and elderly household has more chances to be poor, than non-elderly.

Another method is to calculate poverty rates for groups of senior households. If these rates will be greater than rates, calculated among all households, it will witness about certain link between old age and poverty. The following table presents poverty rates calculated for all households and for subgroups of households (with head under 54, over 55, over 60, over 65, over 70) in three countries.

<i>Poverty Lines, (breakdown by the Household Head's Age)</i>									
Age Group		GE84			US86			RL92	
	40%	50%	60%	40%	50%	60%	40%	50%	60%
Overall	2.8	7.3	14.1	12.8	18.4	24.8	10.7	18	25.9
Under 54	3.1	7.2	14.7	13.5	17.8	23.5	8.2	12.7	17
Over 55	2.4	7.6	13.3	11.6	19.7	27.4	14.3	26.1	39.4
Over 60	2.5	7.9	14.2	11.7	20.5	28.9	15	28.6	43.4
Over 65	2.6	8.7	15.1	12.8	22.9	32.3	16.1	30.7	45.9
Over 70	2.8	9.5	16.2	14	25.6	36.4	16.9	32.9	47.9
	<i>*Observed level</i>								
Age Group		GE84			US86			RL92	
	40%	50%	60%	40%	50%	60%	40%	50%	60%
Overall	1	1	1	1	1	1	1	1	1
Under 54	11.1	0.99	1.04	1.05	0.97	0.95	0.77	0.71	0.66
Over 55	0.86	1.04	0.94	0.91	1.07	1.1	1.34	1.45	1.52
Over 60	0.89	1.08	1.01	0.91	1.11	1.17	1.4	1.59	1.68
Over 65	0.93	1.19	1.07	1	1.24	1.3	1.5	1.71	1.77
Over 70	1	1.3	1.15	1.09	1.39	1.47	1.58	1.83	1.85
	<i>** Ratio of Group Level to Overall Level</i>								

The table consists of two parts. In the upper part of the table the absolute values of the indices are presented. In the lower part we could see the ratio of the absolute values, calculated for the subgroups to the overall level. This will help us to measure in how many times poverty rate in the certain group of senior household increases the same rate among all households.

Data presented in the table shows clearly, that the poverty rate among senior households is the highest in Russia (up to 48%), a bit lower in USA and the lowest poverty rate among senior households is in Germany (even in the group over 70 and 60% poverty line poverty rate is only 16%).

The second part of the table shows us the strength of the relationship between poverty and old age. As we could see, the strongest relationship exists in Russia. In every group of the senior households poverty rate is greater than the overall rate. For example, in the groups of household with head over 70, the poverty rate is greater than the overall rate in 1.8 times. In USA we can find the same tendency, but the relationship is significantly weaker' poverty is connected with old age only in the group of oldest households (with heads over 65 and 70 years). In Germany poverty, rate is not connected with old age of the head of household. For example, when we talk about 40% poverty line, poverty rate among senior households is even lower than population rate.

Structure of income of aged households.

Now, when we know that poverty in Germany isn't linked with old age, in USA such link exists, but it is weak and in Russia the link is strong, we have to find out the cruises of it. Why equalized income of the senior households in Germany is not lower, than equalized income of the other age groups, in USA is lower, but not significantly, and in Russia is lower significantly?

The major sources of income of senior households are social insurance pensions, occupational pensions (professional and private), earnings, cash property income and means tested benefits. All other sources of income are not significant and grouped together into category "other sources of income". The causes of the low disposable income of senior households could be both the absences of the certain source of income and low amount of this income. So we have to find out, what share of senior households receive a certain type of income and evaluate the relative amount of this income, using an appropriate norming parameter, for example, median disposable income, calculated for all households of a given country. In the first part of the table, presented on the following page we could see the percent of the households, receiving different types of income broken down by age groups. In the second part is the ratio of median equalized amount of this income among those who receive it to median equalized disposable income calculated for whole population.

Income sources (breakdown by the Household Head's Age)

Percent over Zero

Age group	Germany 1984						USA 1986						Russia 1992					
	Earn	Prop.	Occ.	S.I.	Means	Other	Earn	Prop.	Occ.	S.I.	Means	Other	Earn	Prop.	Occ.	S.I.	Means	Other
Overall	69,7	76	-	71,6	10,1	6,1	78,9	64,7	13,9	35,42	11,85	7,3	76,6	0,1	0	78,4	12,98	7,8
Under 54	94	76	-	62,2	11,1	7,8	93,7	61,6	3,5	17,01	11,41	9,1	93,9	0,2	0	68,5	6,9	8,0
Over 55	27,8	75,8	-	84	8,8	3,9	42,9	70,1	34,4	71,58	12,7	3,7	50,5	0	0	93,4	22,1	7,4
Over 60	23,3	75,1	-	92,5	8,4	2,6	40,3	71,2	38,5	83,63	12,9	3,1	41,2	0	0	98,4	23,83	7,1
Over 65	13,7	74,5	-	97,8	8,1	2,0	29,4	71	28,5	93,37	13,3	2,9	35,1	0	0	98,7	25,42	6,4
Over 70	11,7	74,5	-	98,7	7,9	1,6	21,2	70,2	37,9	95,91	14,63	2,5	27,7	0	0	98,4	24,42	6,2

Ratio of median value to population median DPI

Age group	Germany 1984						USA 1986						Russia 1992					
	Earn	Prop.	Occ.	S.I.	Means	Other	Earn	Prop.	Occ.	S.I.	Means	Other	Earn	Prop.	Occ.	S.I.	Means	Other
Overall	136,2	1,1	-	19,9	9,7	11,6	120	2,3	29,2	31,86	8,3	5,8	98	20,1	0	24	7,3	50,26
Under 54	135,8	0,7	-	3,9	10,8	11,6	122,7	1,2	24,7	7,6	10,7	5,8	110	20,1	0	9,8	5,297	69,54
Over 55	136,8	1,1	-	73,1	75,3	10,2	105,6	10,9	30,8	42,54	7,4	6,2	65,2	0	0	44,4	8,4	27,81
Over 60	104,7	1,1	-	77,4	64,5	10,2	83,4	12,5	29,7	44,12	6,3	6,2	50,1	0	0	47,7	9,7	26,08
Over 65	77,1	1,1	-	81	64,5	10,2	58,7	13,9	26,7	46,37	6,1	6,7	41,1	0	0	48,2	9,7	19,47
Over 70	67,1	1,1	-	78	59,1	12,9	50,2	14,5	23,4	47,37	5,6	8,3	36,1	0	0	48,8	9,3	19,82

* Data on occupational pensions for Germany is unavailable

- *Earn. Income from earnings
- * Prop. Cash property income
- * Occ. Occupational pensions (private and professional)
- *S.I. Social Insurance pensions
- * Means Means-tested benefits
- *Other Other sources of income

The analysis of this table will be rather complicated. I suppose that the best method will be to study income structure of the every country, and make some comparisons on the final stage. And the common steps of the analysis will be the following: from the first part of the table we took the coverage of income, from the second part it's relative amount and using this parameters evaluate the significance of this type of income in the overall income of senior groups of households. Conclusions made for the wide groups of households (for example, for households with head over 55) are to be tested for narrow groups (over 65, over 70 etc.)

In Germany the major source of income of senior households is benefits, paid by the basic schemes of state obligatory insurance (social insurance pensions). In the group of households with head over 60 this benefits are received by 90% of households, in the group over 75 - 99%. The amount of these benefits is rather significant: the median value of these benefits for all age groups is higher then 77% of median disposable income (MDI).

The earnings among aged are not spread widely in Germany. Only 28% of senior households receive this type of income, and in the group over 70 this share goes down to 12%. But the amount of this income among those who receive it is rather significant. In the group over 55 and over 60 the amount of this income is even greater, than median disposable income.

Cash property income is received by 75% of all aged German households. But the amount of this income is very small - only about 1% of median disposable. Means-tested benefits are received by 8,8% of German households with head over 55. And this income is rather significant for those, who have it. It makes about 75% of median disposable income. 11% of old-aged households receive income of other types, but the amount is only 10% of MDI.

So, the major sources of income of senior households in Germany are widespread and high (77% of median disposable) basic pension benefits. About 20 % of households also receive earnings income which is not less than median disposable. The income level of the most deprived households is protected by high means-tested.

In USA the situation differs strongly from German model. In spite of two-factor German system, here we deal with four-factor model of income of the senior households. Pensions received from basic schemes, are less spread in USA than in Germany. For example, in the groups of households over 55 this type of income is received by 65% of households (versus 77% in Germany). In the group over 65 - by 93% of households (in Germany - 97%). And the amount of this income is significantly less in USA, than in Germany. The amount of this income among those, who receive it, is only 42-47% of median disposable.

Cash property income is received by 70% of senior households. And the amount of this type of income is rather significant - near 1 Q% of median disposable income.

Earnings income in USA is spread more than in Germany, but the amount is a bit less. For example, in the group over 55 earnings are received by 50% of households. And even in the eldest croup - over 70 Fears - 20% of households have this income. In the group over 55 the amount of this income is greater, than median disposable, not in the eldest group it goes down to 50% of median disposable.

The occupational pensions are also significant in USA. This type of income indicated 34% of aged households. And the amount of this income is about 30% of median disposable income. So we can conclude, that the major sources of income of aged households in USA are

basic scheme pension benefits and earnings. Also significant part of overall income is formed by supplementary pensions and cash income.

The proportion of households having means-tested benefits is a bit higher in USA than in Germany. The coverage of this income is about 12% among widest senior group. But the comparative amount of this income in USA is approximately ten times less, than in Germany. So we can conclude that this type of income is not significant for the overall income of old aged households. Other sources of income are not very spread in United States. We can see that only 4% of senior households receive this type of income. And its amount is only 6,2% of MDI.

In Russia social insurance benefits cover almost all senior households. For example, in the group over 60 basic pensions are received by 98% of households (in Germany and USA the coverage is 75% and 71% correspondingly). But the amount of these benefits is very small (close to the USA level). In the group over 55 the amount of this income is only 44% of median disposable. In the narrowest group this indice is raising to 49%.

In the group of households with head over 55 51% of households receive earnings income. In the eldest group the indice goes down to 36%. It's significantly bigger than in Germany and close to the USA level. But the amount of the income among those receiving it is lower than in United States and significantly lower than in Germany. So, the earnings income in the group over 55 in Russia makes up only 65% of median disposable income (to compare 105% and 137% in USA and Germany correspondingly. In other age groups the same tendency remains.

Cash property income in Russia in 1992 was very narrow 'elite' type of income. It was indicated only by 0,1 To of households in all age groups. Income from supplementary pension insurance didn't existed in 1992 in Russia. Means-tested benefits are received by 22% of Russian households with head over 55. But the amount of this income is very small - 8% of median disposable income. Other sources of income have 7,4% of aged Russian household. But its relative amount (28% of MDI) is very small and will hardly help people not to fall down in poverty.

To summarize our analysis, we can conclude that in Germany and Russia in the period studied existed two-pillar model of income of senior citizens. The major sources of income in these countries are benefits, received through basic schemes of pension insurance. The coverage of these benefits is wider in Russia than in Germany, but the amount of them in Russia is critically low. The supplemental source of income in this model is income from earnings. The coverage is also wider in Russia, and amount higher in Germany. In USA we deal with four-pillar model. The major, but not so significant part of overall income, is formed by obligatory pension insurance benefits. The coverage is not very large, and relative amount is close to Russian level. The coverage and amount of the earnings income are on the medium level. But, in distinction from Russia and Germany, cash income and occupational pension benefits form the large part of income of aged people. Optimal degree of basic security is provided by two-pillar German model, medium level by four-pillar model of United States and the lowest degree of income security could be seen in Russia.

Changes in structure of income, determining poverty in old ages

Alter investigation of the models of income structure of senior households in Germany, USA and Russia, and evaluating the comparative degree of income protection provided by these models, we should address the question about the causes of the poverty among old-age households. In other words, what are the factors determining the fact of being under poverty level in these countries.

It's evident that these factors are to be divided into two categories. The first type of factors determining poverty, is the absence of certain type of income. The second type is insufficient amount of incomes of different types. For the purposes of determining the degree in which presence and amount of certain types of income influence poverty status of households we have calculated new table with the same structure, as the table we've just analyzed.

In this table we also calculated the coverage and relative amount of different types of income. But in the calculations only households with income under poverty level are covered. It's not surprising, that data in this table differs from the data, calculated for all senior households. In the most cases, both coverage and amount of income received in the group of poor households was lower, than among all old-aged households.

This table is attached, and those who are interested could look through it. But our present analysis will be based on derivative table. This table reflects changes in the coverage and amount of income received in the group of poor old-aged households. The question which derivative table answers is on how many percent points coverage and amount of income calculated only for poor households are less, than the same indices, calculated for all households. This derivative table is presented on the next page.

Difference in the income sources (breakdown by the Household Head's Age)
(indices for households under 50% poverty line minus indices for all households)

Age Group	Germany 1984						USA 1986						Russia 1992					
	Earn	Prop.	Occ.	S.I.	Means	Other	Earn	Prop.	Occ.	S.I.	Means	Other	Earn	Prop.	Occ.	S.I.	Means	Other
Overall	-29,3	-22,3	-	-0,33	24,1	0,3	-24,9	-36,9	-9,6	4,3	32,26	-0,1	-36,4	0,1	0	5,6	-2,6	-5,4
Under 54	-35,5	-23,2	-	-4,63	33,1	2,2	-22,1	-37,9	-2,2	1,5	34,4	0,6	-25,5	0,1	0	0,6	-0,1	-4,8
Over 55	-10,3	-20,9	-	-4,5	12,9	-1,9	-20,8	-35	-24,7	5,7	28,4	-0,9	-33,4	0	0	1,7	-8,9	-5,5
Over 60	-12,2	-16,4	-	-2,1	8,4	-0,5	-25,3	-35,8	-28,2	3,4	26,28	-1,3	-27,1	0	0	-0,8	-10,1	-5,5
Over 65	-7,2	-13,9	-	-2,8	7,8	0,2	-19,4	-35,3	-29,6	-1,9	25,07	-1,2	-21,1	0	0	-1,1	-10,6	-5,1
Over 70	-5,5	-15,8	-	-3,4	7,1	0,9	-13,2	-33,8	-26,4	-4,58	23,63	-0,6	-16,9	0	0	-1,5	-8,9	-4,9

Ratio of median value to population median DPI

Age group	Germany 1984						USA 1986						Russia 1992					
	Earn	Prop.	Occ.	S.I.	Means	Other	Earn	Prop.	Occ.	S.I.	Means	Other	Earn	Prop.	Occ.	S.I.	Means	Other
Overall	-103,9	-0,2	-	2,7	11,8	-1,94	-92,2	-1,6	-20,2	-6,51	1,3	0	-74	-18,5	0	7,7	-2,8	-38,7
Under 54	-100,3	0	-	4,0	13,4	-1,51	-93,3	-0,9	-14,6	-0,36	2,9	0	-81,7	-18,5	0	0,6	1,5	-57,9
Over 55	-114,2	0	-	-39,8	-54,8	-0,54	-87,3	-9,6	-22,4	-10,8	0,2	-2,5	-57,2	0	0	-7,2	-3,9	-20,3
Over 60	-82,1	0	-	-39,8	-44,1	-0,54	-75,1	-11,2	-21,4	-11,8	0,7	0,7	-46,4	0	0	-10,2	-5,2	-19,8
Over 65	-54,5	0	-	-42,3	-44,1	-0,54	-52,3	-12,5	-19,2	-13,2	1,3	0,3	-37,4	0	0	-10,6	-5,2	-13,1
Over 70	-47,4	0	-	-39,2	-38,7	-3,23	-45,4	-13,2	-16,7	-13,7	2,5	2,5	-33,6	0	0	-11,1	-7,0	-7,18

* Data on occupational pensions for Germany is unavailable

- * Earn. Income from earnings
- * Prop. Cash property income
- * Occ. Occupational pensions (private and professional)
- * S.I. social Insurance pensions
- * Means Means-tested benefits
- * Other Other sources of income

In the analysis of this table we will follow the scheme, which we used for analysis of the previous table. Now on the first step we are interested in the causes of poverty in every country separately, and on the second step we will do comparative analysis.

In Germany the earnings income among poor households is spread less, than among all households. The coverage of this type of income is 10 points less, than the value, calculated for all households. The amount of this type of income also decreases. For example, in the group of households with head over 55, the amount goes down on 14 points.

The absence of social insurance pensions is not the strong factor of poverty among old aged households in Germany. The coverage of pension income decreases only on few points. But the size of pension income in the group of poor households decreases on 40 points.

The coverage of means-tested benefits income is higher in the group of poor senior households than in the group of all senior households. But the amount of this income in the group of households under poverty level is 55% lower than the same indice for all aged households. So the insufficient means-tested benefits are another factor, which causes poverty among senior German households.

In USA the situation is close to Germany. The coverage of income goes down insignificantly, but the amount decreases on 10 points. Taking into account low amount of basic pension income in whole group of senior households in USA, it should be said that even a slight decrease in the amount of pension benefits would lead many households to poverty.

The coverage of earnings income decreases in USA more, than in Germany. For example, among American poor senior households the coverage goes down on 25 points (in Germany only 10 points). The amount of earnings income goes down seriously (in the group over 55 on 87 points).

The largest coverage decrease is observed for cash income (35 points down in the group over 55). The amount is 10 points less, than among all senior households. The other important factor is decrease in amount and coverage of supplementary pension schemes.

The means-tested benefits make up significant part of budget of deprived senior American households. The coverage and size of this income is higher among deprived households than among all aged households. So we can see, that means-tested benefits in USA are focused on the most deprived and provide more income equality than in German model.

In Russia the decrease in coverage of basic pension benefits is small, like in Germany and USA. But it's worth mentioning that the decrease in the amount of pension benefits is also very slight (only 10 points down in the group over 60). So the situation is just like in USA -insignificant decrease in the amount of pension received leads to poverty. It's even more dangerous for Russia due the fact that low amount of pension benefits in Russia is not compensated by supplementary pension schemes and cash income.

The coverage of earnings income in Russia goes down rather significantly. In the group over 60 the coverage decreases on 28 points, the amount goes down on 46 points.

Summarizing all above-mentioned we have to say that in Germany the cause of the poverty among aged people is the strong decrease in the amount of social insurance pensions, and also significant decrease in the amount and coverage of earnings income. In USA the responsibility for poverty among aged is distributed between low amount of pension benefits, low earnings and decrease of cash income and supplementary pension benefits. In Russia, where basic pension form the largest (in comparison with Germany and USA) part of senior households' income even slight decrease of these benefits lead household to poverty. Another factor is low coverage and amount of earning income.

A few notes to clear out situation in Russia

The result of our analysis seemed to be very pessimistic for Russia. Low incomes of senior households and strong income inequality lead to high poverty rates in old ages. It's completely true for the situation of 1992. But the fact is that 1992 was not typical for Russia. Two major reforms took place in 1992, which influenced strongly well being of Russian elderly. On the first of January the state released prices for the most of consumer goods. And on the first of January the task of provision of the pension benefits was laid on the recently established Pension Fund of Russian Federation. These necessary and inevitable market reforms had temporary negative impact on the incomes of elderly.

The interesting data is presented in the official monthly bulletin of State Committee of Statistics of Russian Federation. In the "Socio-economic situation in Russian Federation in January - May of 1992" among major tendencies the following were mentioned:

- ! decrease of production
- ! mutual non-payments
- ! inflation
- ! changes in the structure of personal consumption

The following are several quotations from this publication. "In January - May national income, produced in Russian Federation, went down on 17% in comparison with the same period of the previous year"... "In January - April average wages of employees in Russian Federation made up 2298 rubles, in the April 3024 rubles, in comparison with the same period of the previous year it grows in January - April 7 times, in April 8 times" ... "Retail prices in May in comparison with April raised on 11 %, prices for services - on 15 %, wholesale prices -on 23%. In January - May in comparison with the same period of the previous year the prices went up in 9, 5 and 13 times." (Pages 7-20)

It's interesting to look through dynamic of wages and pensions, presented in the Survey of Russian Economic for 1994. (Economic Survey of Russia. Main Tendencies. Moscow. 1994) The table from this survey is presented below.

	Wages and pension in rubbles			average pension	aver.pension/ aver.wage
	average wages	indice of real average wage (1985=100)	minimum pension		
1985	201	100	50	75	0.37
1986	208	101	50	7	0.37
1987	216	104	50	80	0.37
1988	235	113	50	83	0.35
1989	259	117	50	87	0.34
1990	297	128	70	102	0.34
1991	516	114	130	266	0.52
1992	6011	77	714	1613	0.27
1993	58346	81	5962	20356	0.35
1992					
March	2726	70	542	638	0.23
June	5067	81	900	1383	0.27
September	7379	87	1320	1805	0.24
July	16071	98	2250	3672	0.23

As we could see from the table, in 1992, 1993 the Russia faced rapid inflation, which had led to decrease of real wages and real pension. Also in 1992 the ratio of average pension to average wage was the least (average pension made up only 27% of average wage). All these factors lead to the high poverty rate among old aged Russian households. But the situation is changing and we could see the growth of pension/wage ratio up to 35% (the level of 1985) already in 1993.

Conclusion

Now we need to make a brief survey, summarizing our findings, made in the process of data analysis in different parts of the research work. It will help us to evaluate some ideas concerning the measures for protection the well being of senior citizens.

While analyzing the overall level of income inequality in Germany, Russia and USA we found out that the income distribution in Germany is more uniform than in Russia and USA, and poverty rates among German households are the lowest. United States and Russia have high level of income inequality and, accordingly, high poverty rates.

The analysis of poverty rate among senior households revealed similar situation. Least rate of old-age poverty appeared in Germany and Russia and USA showed the high rates of poverty among senior households. Later analysis has shown that the poverty rate doesn't increase in old age households in Germany, increases a bit in the eldest groups of American households and grows rapidly in all senior groups of Russian households.

When analyzing income structure of senior households we found out that in Russia and Germany exists two-pillar system of income of senior citizens. This system is strongly based on the social insurance pension benefits. The additional source of income is earning of working elderly. The German model provides high level of pension benefits, which results in the low poverty in the old groups of households. The amount of pension benefits in Russia is insufficient and causes poverty in old ages. The American four-pillar system in addition to basic pensions and earnings income also includes cash income and pension benefits, received from supplemental schemes. In combination they provide medium level of income for senior citizens (lower than in Germany, but higher than in Russia).

In accordance with Palmer classification, we could evaluate German model as work merit, American model as residual, but close to citizenship model. In Russia we could see clear residual model, providing neither income nor basic security.

The current demographic trends, resulting in aging of population, make the task of providing adequate income level for senior citizens more difficult. Taking this fact into account, the group of scholars from Liege University argues for more uniform distribution of basic pension benefits and concentrating efforts on the most deprived, despite of the fact, that this will make link between work merit and pension benefit weaker. (Retirement And Growing Old: Which Model Of Protection? Bernard Delhause, Sergio Perelman And Pienre Pesticau/ LIS Working Paper# 107) Their ideas are especially important in Russia now. Even a quick glance at economical status of Russian aged people uncovers the necessarily of concentrating efforts on provision of adequate minimum for Russian elderly. So the development of the Russian system of pension provision should be directed towards citizenship model.

Another necessary measure for Russia is increasing of the pension age, which is now significantly lower than in developed industrial western countries. Periodical indexing of pension benefits, connected with high inflation rate in Russia, should also be directed on uniformization of distribution of pension benefits. The problem of providing adequate minimum for elderly is especially critical because low income of poorest pensioners lead to frustration and put them in strong opposition to the process of democratic reforming of economic system of Russian Federation.

Income sources (breakdown by the Household Head's Age)
(for households under 50% poverty line)

Percent over Zero

Age Group	Germany 1984						USA 1986						Russia 1992					
	Earn	Prop.	Occ.	S.I.	Means	Other	Earn	Prop.	Occ.	S.I.	Means	Other	Earn	Prop.	Occ.	S.I.	Means	Other
Overall	40,4	53,7	-	71,2	34,3	6,5	54	27,8	4,3	39,7	44,11	7,2	40,2	0,2	0	84	10,4	2,4
Under 54	58,5	52,8	-	57,6	44,2	10,0	71,6	23,7	1,3	18,5	45,81	9,7	68,4	0,3	0	69,1	6,8	3,2
Over 55	17,5	54,9	-	88,5	21,7	2,0	22,1	35,1	9,7	77,3	41,1	2,8	17,1	0	0	95,1	13,24	1,9
Over 60	11,1	58,7	-	90,5	16,8	2,1	15	35,4	10,3	87,1	39,17	1,9	14,1	0	0	97,5	13,74	1,5
Over 65	6,5	60,6	-	95,1	15,9	2,1	10	35,7	10	91,5	38,37	1,7	14	0	0	97,6	14,85	1,3
Over 70	6,2	58,7	-	95,3	15,0	2,5	8	36,4	11,5	91,3	38,25	1,9	10,8	0	0	96,9	15,56	1,3

Ratio of median value to population median DPI

Age Group	Germany 1984						USA 1986						Russia 1992					
	Earn	Prop.	Occ.	S.I.	Means	Other	Earn	Prop.	Occ.	S.I.	Means	Other	Earn	Prop.	Occ.	S.I.	Means	Other
Overall	32,3	0,9	-	22,6	21,5	9,7	27,8	0,7	9	25,4	10,6	5,8	24	1,6	0	31,8	4,5	11,6
Under 54	35,5	0,7	-	7,9	24,2	10,1	29,4	0,3	10,1	7,2	13,7	5,8	28,3	1,6	0	10,4	6,8	11,6
Over 55	22,6	1,1	-	33,3	20,4	9,7	18,3	1,3	8,4	31,7	7,6	3,7	8	0	0	37,2	4,5	7,5
Over 60	22,6	1,1	-	37,6	20,4	9,7	8,3	1,3	8,3	32,4	7,0	6,9	3,7	0	0	37,5	4,5	6,3
Over 65	22,6	1,1	-	38,7	20,4	9,7	6,4	1,4	7,5	33,2	7,3	6,9	3,7	0	0	37,5	4,5	6,3
Over 70	19,7	1,1	-	38,7	20,4	9,7	4,7	1,3	6,7	33,7	8,1	12,5	2,5	0	0	37,7	2,3	12,6

* Data on occupational pensions for Germany is Unavailable

- * Earn. Income from earnings
- * Prop. Cash property income
- * Occ. Occupational pensions (private and professional)
- * S.I. Social Insurance pensions
- * Means Means-tested benefits
- * Other Other sources of income

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