THE GROSS AND NET RATES OF REVENUES REPLACEMENT WITHIN THE RETIRING PENSIONS

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ABSTRACT

This paper analyzes the level of two essential indicators within the current systems of retiring pensions. The gross rate of revenues replacement in retiring pensions is described in the first part, where its values are illustrated for three classes of participants' revenues at the retiring pension plan. The second part of the paper emphasizes the main issues related to the fiscal regime of the retiring pensions and of the retirees. The net rates of revenues replacement within the retiring pensions are described at the end of the paper.

Keywords: Retiring pension, gross rate of revenues replacement, net rate of revenues replacement, tax relief, and social contributions.

INTRODUCTION

The gross rate of the pension revenues replacement is usually defined as the report between the gross retiring pension and the last wage taken before the retirement. Such report shows how the revenues offered at the retirement by the pension systems will replace the revenues earned before the retiring.

Most of the countries have protected of poorness the employees at old age, with low revenues, by providing higher rates of replacement, of about 72% on the assembly of the countries within OECD, as comparing to people of average revenues, situated around 57%. Though, there are seven countries that offer replacement rates, equal to those of low and average revenues: *Germany*, *Austria*, *Greece*, *Hungary*, *Italy*, *Poland*, *Slovakia and Spain.*

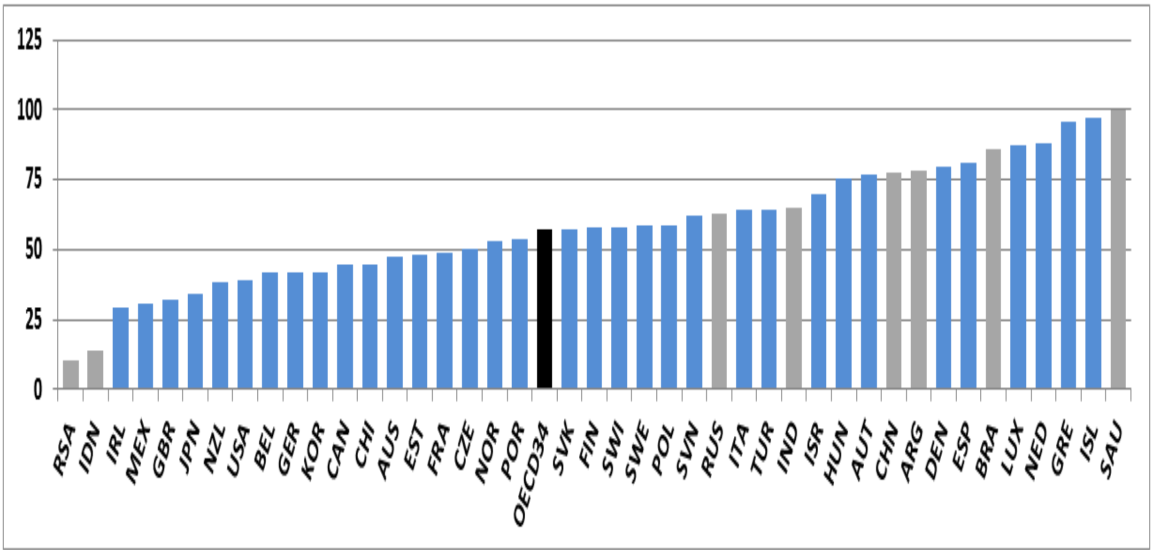

Figure 1: Gross rates of revenues replacement within retiring pensions for the employees with average revenues. [Source: www.oecd.org**]**

Figure 1 illustrates the edge of the classification, where three countries offer to those with low revenues retiring pensions higher as comparing to the revenues earned before retirement: *Island*

(145%), *Denmark* (121%) and *Israel* (100%). At the other pole, *Germania* and *Japan* offer replacement rates of 42%, and respectively 48%. Other countries, as *Canada* or *New Zeeland* pay relatively low pensions to those of average revenues, but are situated at the middle of the scale, as regards the replacement rates for those with modest revenues.

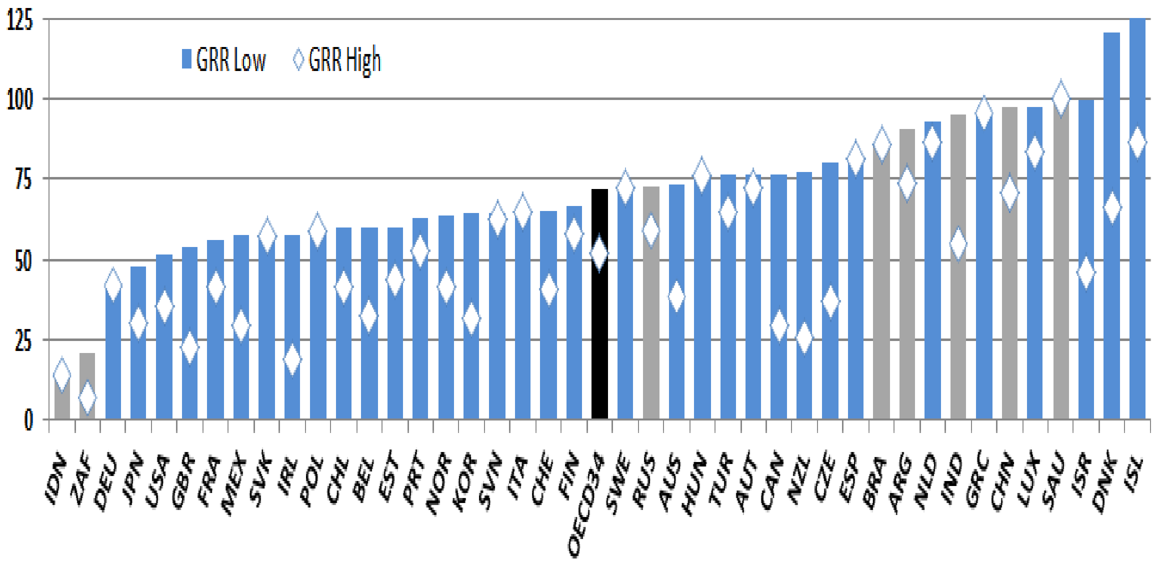

Figure 2: Gross rates of revenues replacement within retiring pensions for the employees with low and high revenues. [Source: www.oecd.org**]**

In average, *in countries within OECD*, the gross rate of revenues replacement for *those with high revenues* is under 52%, under the rate level of those with average revenues (57%). In the situation of those with high revenues, there are significant variations from one country to other, exceeding 80% in *Greece, Island, Luxemburg, Holland and Spain.* Instead, *Ireland, New Zeeland* and *Great Britain* have offered rates of replacement lower than 26%.

Regarding the people *with average revenues*, the gross rate for the 34 countries within OECD is of 57.3%, where the highest deviations from this could be seen in *Island, Greece, Holland* and *Luxemburg* with high rates, about 90% or even above, and in *Ireland, Mexico and Great Britain*, having low rates, of about 30%.

The gross rate of revenues replacement is different at women as comparing to men (due to the differences noticed at the retiring age) in only five countries, *Chile, Israel, Italy, Poland* and *Switzerland*, with values lower in the first three of them, differences that might reach to a third of the rate to men. The replacement rate in the situation of women is lower in Australia and Mexico, but this is due especially to the increased rates of the annuities, rather than differences noticed at the retiring age.

As regards the countries outside OECD, there is a large interval of the gross rates values of replacement, with South Africa and Indonesia, having low rates for the employees of average revenues (under 15%), while at the opposite pole we find Saudi Arabia with rates of 100%.

One might notice that the average of the gross rates of replacement for those of average and high revenues of EU countries is significantly higher than that of the OECD states. It is interesting to analyze the gross rates of revenues replacement within the retiring pensions drawn on *types of pension diagrams*: the public and private ones. The gross replacement rate at the OECD level for the employees of average revenues within the public diagrams of retiring pensions is of 42%, as comparing to 57%, if one includes the employees with compulsory private diagrams. If the volunteer private diagrams members are included here, this average gross rate will reach 64% for an employee that earns average revenues.

There is a first group of 12 states, where the compulsory public diagrams of pensions are predominant. Here we find: Austria, Finland, France, Greece, Italy, Japan, South Korea, Luxemburg, Portugal, Slovenia, Spain and Turkey. For such group of countries of OECD, where the calculation has been made *for only employees of the public systems of retiring pensions*, we reach to a gross average rate of 64% for each participant of average revenue.

If we consider the fourteen countries of OECD where *the members of the public and private compulsory diagrams* of average revenue have been included, the gross average rate of replacement is of 62%. The following are included here: Australia, Chile, Denmark, Estonia, Hungary, Island, Israel, Mexico, Holland, Poland, Slovakia, Sweden and Switzerland. The data illustrate the substitution between different types of diagrams. In *Australia, Denmark, Island and Israel,* the public diagrams of pensions with extremely selective objectives, the very low rates of replacement of the people with average and high revenues are improved by means of the compulsory private diagrams. In Chile, Hungary, Mexico, Poland and Slovakia, the substitution of the public reserves with the compulsory private pensions have been directly done, by the reform means.

Analyzing the replacement rates within *the compulsory private diagrams,* one might distinguish a group of 14 states that have compulsory private diagrams (Australia, Chile, Estonia, Hungary, Israel, Mexico, Norway, Poland, Slovakia and Switzerland) or quasi-compulsory (*Denmark, Holland and Sweden*). Among these, *Island, Holland and Switzerland* have private pension systems of DB type (on defined benefits), the rest being of DC type (defined contributions). In seven of these states, the gross rates of replacement for the employees of average income are situated between 22% and 32%. But, they are higher in *Denmark, Island, Israel* and *Holland*, and lower in *Norway.*

In seven states of OECD, the replacement rates are the same for the members of low and high revenues. Though, some countries have private diagrams built in order to cover the revenues situated under the limit of the public diagrams. This is the reason for which the replacement rates for the private plans increase simultaneously with the increase of the participants revenues, as in Chile, Holland and Norway. In the same way one can explain the high replacement rates for those with high revenues met in Sweden.

The model of Switzerland is a complex one, where employees of low revenues have modest rates of replacement as comparing to the public pension diagrams, but the field of revenues covered by the occupational diagrams is relatively limitary.

As regards the *optional private diagrams,* nine states of OECD where such systems have a large spread could be met, covering between 40% and 65% of the labor force. These states are represented by: Belgium, Canada, Germany, Ireland, New Zeeland, Norway, UK and USA. Only employees that participate on the private diagram during the entire activity period are taken into consideration.

Generally, the optional private diagrams are of DC type, ensuring a constant rate of replacement. Belgium is an exception of such rule, due to the limits imposed from fiscal reasons over the retiring pension revenues. In Germany such limit exists, but it is established to 150% of the revenues size. In Norway, the replacement rates increase simultaneously with the revenues of participants, since the private diagrams are built in order to equilibrate by redistribution the benefits of the public system.

The Fiscal Regime as Regards the Retiring Pensions and the Retirees

The fiscal system plays an important part in the field of retiring pensions, since the retirees do not usually pay the social contributions. The taxes on the personal revenues are progressive, and the pensions, usually having a lower level than the wage revenues before retirement, the tax on revenues of pensions is lower than that on revenues on wages. Moreover, many fiscal systems treat preferentially both the revenues on pensions, as well as retirees, offering supplementary facilities and helping.

The treatment of retiring pensions and of retirees as concerns the fiscal point of view and the social contributions paid for the revenues out of pensions of the member states of OECD differ quite much from one country to another.

Eighteen states of OECD (from the total of 34) offer to retirees indemnities and supplementary help, outside the tax relief: South Korea, Australia, Canada, Chile, Czech, Estonia, Ireland, Israel, Italy, Japan, Luxembourg, Mexico, Holland, Norway, Portugal, Slovenia, Great Britain and USA. In Canada and Great Britain, at these supplementary facilities, the retirees of high revenues have been gradually excluded.

A significant number of countries offer tax relief for the retiring pension revenues. For the pensions of the public systems, facilities are given to payment of taxes on the revenues of people of 12 countries of OECD: Australia, Belgium, Canada, Czech, Finland, Germany, South Korea, Norway, Slovakia, Spain, Turkey and USA. In USA for instance, between 15% and 50% of the revenues of pensions of the public systems are not under taxation, depending upon the total revenues of the retirees. Other four states offer facilities for the revenues of the private pensions: Australia, Canada, Germany and Italy. In Australia, benefits coming from contributions for pensions or investments that have been already under taxation are exempt from taxation since the 60s.

In total, 24 countries of OECD offer tax relief to retirees and revenues of retiring pensions. In the other 10 countries, the fiscal treatment applied to retirees will be the same with that of the workers.

Next with Australia and New Zeeland, which do not perceive *social contributions* from the active people, there are also other 17 countries of OECD that cannot foresee the payment for such contributions, for the retiring pension revenues: Canada, Chile, Czech, Denmark, Estonia, Hungary, Island, Italy, South Korea, Mexico, New Zeeland, Portugal, Slovakia, Spain, Sweden, Turkey, Great Britain and USA. In the other 15 countries, social contributions for the health insurances are paid, or sometimes contributions of solidarity are used in order to finance various benefits.

Figure 3 emphasizes a percentage comparison of taxes on revenues paid by retirees in countries of OECD and in other important economies of the world.

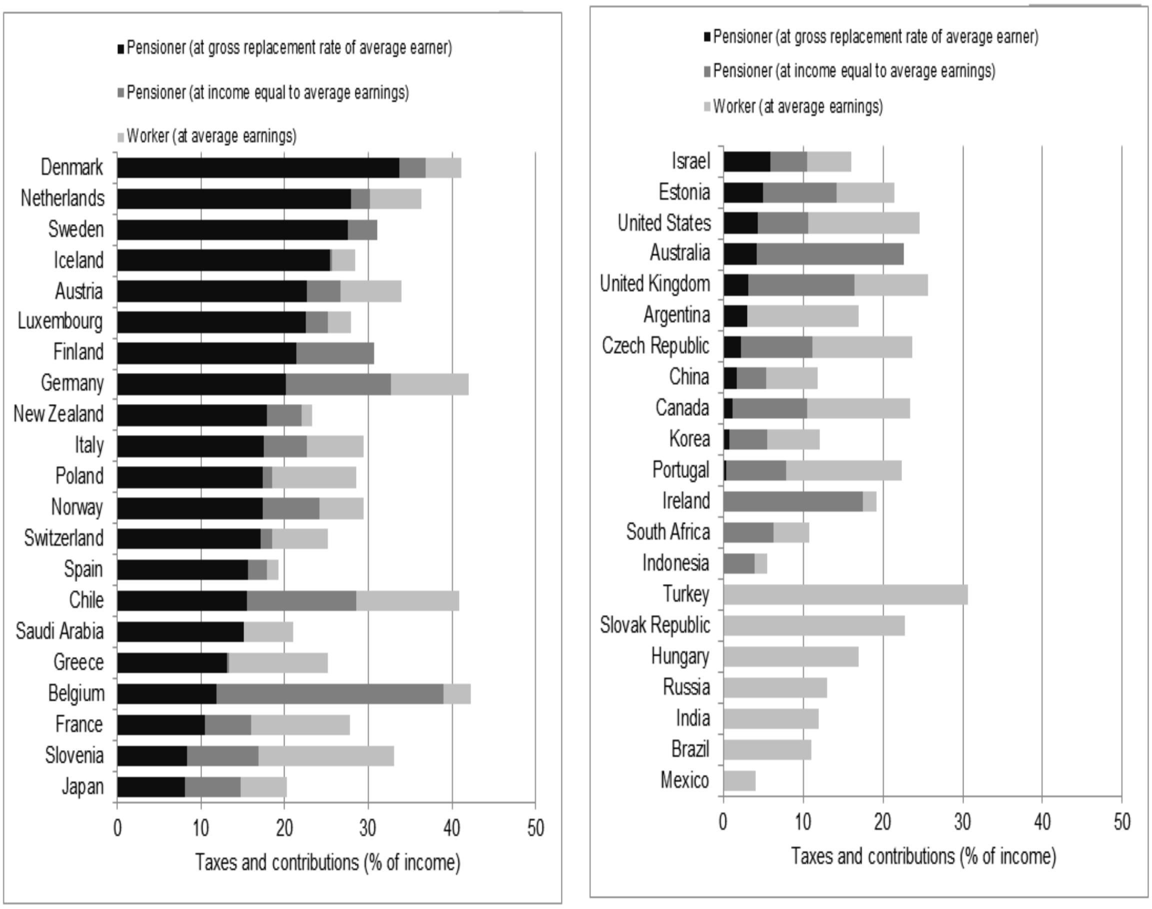

Figure 3: Taxes and social contributions paid by the retirees and employees. [Source: www.oecd.org**]**

In five countries of OECD and in other five important countries of the world, the retirees do not pay any taxes after the retiring. In some situations, as Slovakia or Turkey, the retiring pensions are not under taxation, while in others as Ireland, the revenues on retiring pensions are lower than the basic revenues, starting with those at which taxes are applied.

On the assembly of OECD, the retirees with a gross rate of average revenues replacement pay in average about 11.8% from the pensions to taxes and social contributions. The taxes paid by workers with average revenues accumulate about 26.4% from the revenues, on the OECD assembly and 12.8% of the other analyzed states. The total taxes are also emphasized, which a retiree with revenues equal to that of a worker with average revenue, which will be of about 18.2% in OECD countries, with 8.3% lower than an employee with the same revenues pays.

The Net Rate of Revenues Replacement within the Retiring Pensions

The net rate of revenues replacement within the retiring pension is defined in accordance to the taxes on individual revenues and of social contributions paid by retirees and employees.

As seen in the previous mentioned concepts, the retirees do not usually pay the social contributions, and have a preferential fiscal treatment. These facilities, next with the fiscal system progressiveness, coupled with the gross rates of replacement are usually lower than 100%, having as consequence the net replacement rates for revenues higher than the gross ones.

As concerns the average revenues, the net replacement rate has an average of 69% in OECD countries, being with 12% higher than the average of the gross rates. This difference is due to the higher taxes paid by individuals when they are in activity, as comparing to those paid after retirement. From Figure 4 one might notice that, as in the situation of the gross replacement rates, the net ones have a higher variation in world, from under 40% in Mexico, Ireland and Japan, at over 100% in Greece (for people with average revenues).

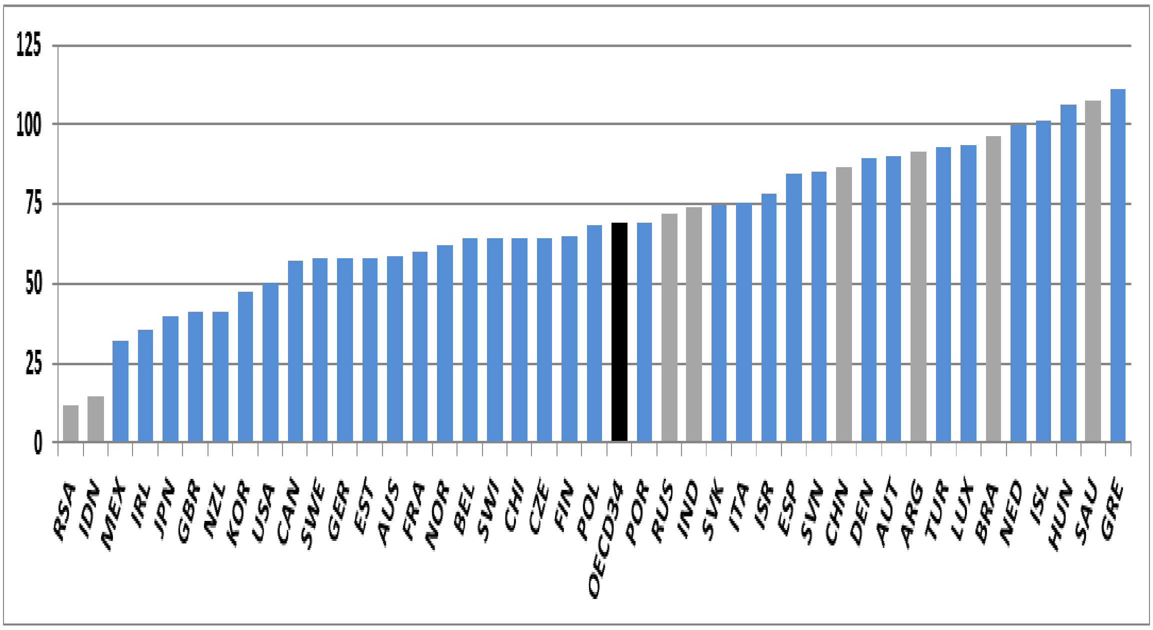

Figure 4: Net rates of revenues replacement within the retiring pension for the employees of average revenues (%). [Source: www.oecd.org**]**

Regarding the people with low revenues, the net average rate of replacement at the OECD level is of 82%, while for those of high revenues is 63%. As in the situation of gross rates of replacement, the differences of these rates depending upon the size of revenues have shown the progressive character of the retiring pension systems, reflected by the existence of the minimal benefits or of the limits specific to the retiring pension revenues.

For the participants with average revenues, the template of net replacement rates within various states is different of that specific to the gross rates. For instance, the retiring pension systems of Belgium and Germany have net rates higher than the gross ones. This is firstly due to the favorable treatment for retiring pensions, under the aspect of social contributions, and then, to the gross replacement rates, which are lower than the average of OECD, as well as to the emphasized progressiveness of the fiscal system in these states, people paying taxes lower than the period after retirement. This thing happens in Germany despite the fact that this very generous fiscal treatment, of which the retiring pensions revenues benefit, has started to be gradually retired.

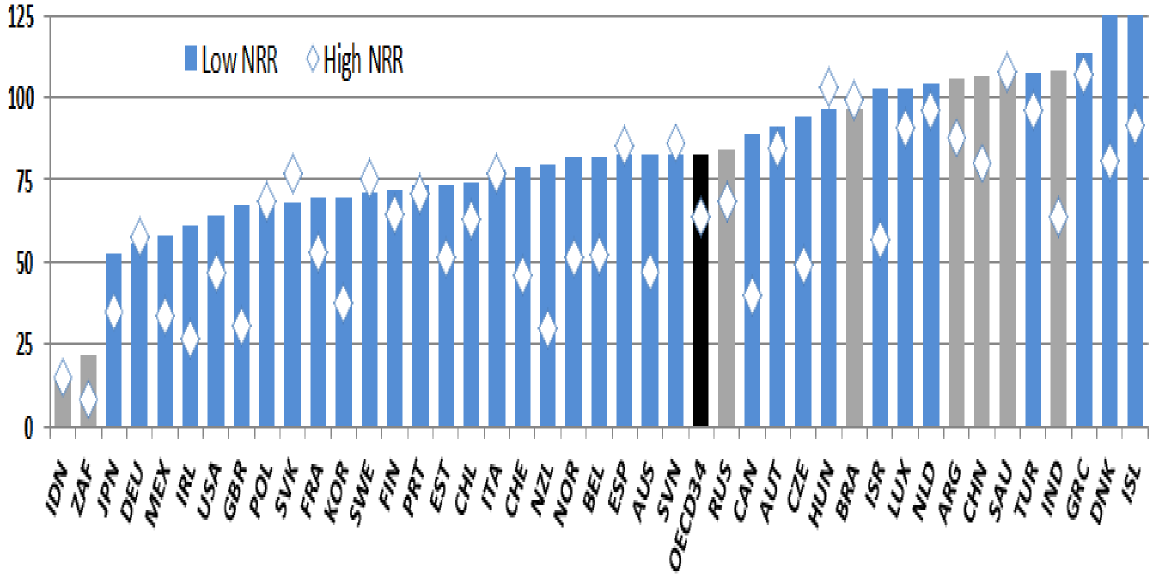

Figure 5: The net rates of revenues replacement within the retiring pension for the employees of low and respectively, high revenues (%). [Source: www.oecd.org**]**

By contrast with the other countries, New Zeeland and Sweden have proven to have net replacement rates lower than the gross ones, since they tax almost in the same way the revenues of retiring pension and of the wage incomes (even if Sweden has reintroduced since 2009 the tax relief for the retirees).

For people with low revenues, the effect of taxes and contributions over the net replacement rates is lower than in the situation of those with high revenues, since many times, their retiring pensions are lower than the standard level of the fiscal facilities (indemnities or help). In this way, sometimes they do not completely benefit of the supplementary facilities as regards the taxes on individual revenues. The difference between the average net rate and the gross one is of 10% of the level of OECD, for those of low revenues. The exceptions are here represented by Belgium and Slovenia, which have net replacement rates much higher than the gross ones.

The highest net rate of replacement within people of high revenues is met in Greece, and the lowest, as expected, in New Zeeland and Ireland. In the last two states, the participants with high revenues will receive retiring pensions lower than one third of the net revenues before retirement.

As in the situation of the gross replacement rates, the average of the net rates on EU level is of 74%, being significantly higher than that of OECD.

Within the countries outside OECD, small differences of the net rates of replacement among the three categories of revenues can be seen. Though, there are high differences between different states, the net rates varying for those of average revenue, from 12% in South Africa to 108% in Saudi Arabia.

We will forwards analyze these rates of replacement, described in detail in two high types of retiring pension systems, meaning: the public and private ones. The average of the net rates of replacement at the level of OECD for the employees with average revenues is of only 50% for the public diagrams, as comparing to 68%, if the private retiring pensions are included, and with 77%, if one takes into consideration the optional private retiring pensions.

Concerning the twelve countries of OECD, where the net rates of replacement have been calculated, only for the public diagrams (Austria, Finland, France, Greece, Italy, Japan, South Korean, Luxembourg, Portugal, Slovenia, Spain and Turkey), the average rate is of 76% for an employee with average revenue, while for the fourteen countries member of the OECD, at which the data from public and compulsory private diagrams were taken into account (Australia, Chile, Denmark, Estonia, Hungary, Island, Israel, Mexico, Holland, Poland, Slovakia, Sweden and Switzerland), the results consisted in an average rate of 72%. For all the 34 states of OECD, an average rate of replacement of 75% is achieved, for those of average revenues. Per assembly, the net rates of replacement are with 10-12% higher than the gross ones.

At the states outsides OECD, one can remark a high fluctuation of the net rates of replacement, both from one country to another, and simultaneously with the variation of the revenues. Russia shows an exception, meaning that the net rates of replacement are identical to all classes of revenues.

Analyzing the replacement data within the compulsory private diagrams, one might distinguish a first group of 14 states that have compulsory private diagrams (Australia, Chile, Estonia, Hungary, Israel, Mexico, Norway, Poland, Slovakia and Switzerland), or quasi-compulsory (at the last ones, Denmark, Holland and Sweden are included). Among these, *Island, Holland and Switzerland* have private retiring pension systems of DB type, the rest being of DC type. In six of these states, the net rates of replacement are for the employees with average revenue, being situated between 23% and 41%: it is about Estonia, Mexico, Poland, Slovakia, Sweden and Switzerland. Though, they are much higher as comparing the average in Denmark, Island, Israel, Chile and Holland, and lower in Norway.

Some countries have private diagrams built in order to cover the revenues situated under the limit of the public diagrams. This is the reason for which the rates of replacement for the private plans increase simultaneously with the growth of the participants revenues in Chile, Holland, Island, Mexico, Slovakia and Norway. In the same way one can explain the replacement rates, which are high for those of high revenues that are met in Sweden.

As in the situation of the replacement gross rates, the model of Switzerland is a complex one, where employees of low revenues have modest rates of replacement, at the private plans as comparing to the public diagrams of pensions, but the area of the revenues covered by the occupational diagrams is relatively limited.

As regards the optional private diagrams, nine states of OECD where these systems have a large spread, covering between 40% and 65% of the labor force can be mentioned: Belgium, Czech, Germany, Ireland, New Zeeland, Norway, United Kingdom and USA. The employees that participate at the private diagram on the entire activity period have been taken into consideration.

Generally, the private optional diagrams are of DC type, ensuring a constant rate of replacement, though due to the differences from the fiscal mechanism, the net rates of replacement differ among the revenues scale, usually increasing simultaneously with the increase of the incomes. Belgium is an exception of this rule, due to the limits imposed from fiscal reasons, over the revenues of retiring pensions. In Germany, such limit exists, but it is established at 150% from the revenues size.

CONCLUSION

Most of the countries have protected of poorness the employees at old age, with low revenues, by providing higher rates of replacement, of about 72% on the assembly of the countries within OECD, as comparing to people of average revenues, situated around 57%; the gross rate of replacement for those of high revenues is of about 52% at the level of OECD. Usually, the retirees do not pay social contributions and have a preferential fiscal treatment. These facilities, besides the progressiveness of the fiscal system, next with the gross rates of replacement are usually lower than 100%, and have as result the net rates of replacement for revenues higher than the gross ones.

As regards the people of average revenues, the net replacement rate has an average of 69% in countries of OECD, being with 12% higher than the average of the gross rates. This difference is due to the taxes higher that are paid by individuals, when they are active, as comparing to those paid after retirement.

For people of low revenues, the net average rate of replacement at the level of the OECD is of 82%, while for those of high revenues, this has a value of 63%. As in the situation of gross replacement rates, the differences of these rates depending upon the size of the revenues have shown the progressive character of the retiring pension systems, reflected within the existence of the minimal benefits or in the limits of the retiring pension revenues.

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