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Term Paper

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# **Drudge and Early Retirement**

A comparison of early retirement schemes

**GRA 5921: The Political Economy of Redistribution**

Deadline  
09.05.2008  
Submission  
09.05.2008

BI Oslo

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# Drudge and Early Retirement

## A comparison of early retirement schemes

### *ABSTRACT*

*Earlier literature convincingly argues that early retirement is more likely when work is physically demanding and health deteriorating. In this paper, we aim to check whether we find such a relationship in the Norwegian AFP system. Because this scheme lacks the requirement of a medical check prior to eligibility, we believe the AFP is less precise at targeting the toilers than ordinary disability pensions. This hypothesis is confirmed by data and earlier research - and the claim that the AFP benefits those with hard work are refuted.*

### **Introduction**

It is well known and often argued that the Norwegian early retirement scheme AFP<sup>1</sup> benefits the toilers. Well known - but never shown. True, it has been proved that early retirement in general is most often utilized by those in hard, physical work. Everything else equal, health damaging occupations provide incentives to early exit. By doing so, early retirement could be optimal, even in the presence of a looming “wave” of elderly. If those without the ability to work are taken out of the work force, overall productivity increase, and health costs are reduced.

However, alternative schemes encompass a trait that the AFP lacks, a medical check prior to acceptance. In this paper, we investigate whether the AFP scheme, like other early retirement schemes, provide for those most in need, or whether the lack of a medical check gives incentives for everyone, regardless of their work characteristics, to retire earlier.

We answer this question by looking at earlier literature, and combine these findings with a quick data analysis. We find that the argument that the AFP benefits the toilers seems to be false. This could indicate that the AFP scheme might be too generous if the goal of the government is to limit the number of

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<sup>1</sup> *Avtalefestet pensjon*, negotiated pension. A more precise description will be provided later.

retirees. It is also too generous if healthy workers take benefits away from disabled colleagues.

### **Earlier Literature**

This paper will argue against a political rather than an academic argument, but makes extensive use of academic contributions to the field. Shortly, we will take a look at the most important findings related to early retirement in general.

However, we first present the most important argument in favour of the AFP scheme.

In response to the (then) ongoing process of reforming the Norwegian pensions system, the Norwegian worker's union, LO, in its May 2005 congress demanded that the AFP scheme would be retained in its entirety. This was *an absolute precondition* for the union to accept the outcome of the negotiations.

The reason, as stated, was that the scheme "provided an opportunity for a dignified end to long and tiresome working careers for many" (LO in Marsdal 2008). When the future of the AFP scheme were debated again in the winter of 2008, the same argument were constantly repeated by everyone in favour of keeping the AFP at the current level.

Thus, the AFP scheme is thought to benefit those most in need - providing people without the health to continue working with an opportunity to leave without having to choose between money and health.

In the presence of an unsustainable path of a rising number of elderly provided for by decreasing numbers of workers (Conde-Ruiz and Galasso 2004, Cremer and Pestieau 2000), it is important that the average worker remain in the work force longer (NOU 1998:19).

Quite to the contrary, there is an increasing tendency to retire early (Dahl et al 2000). While average life span and overall health improves, people take out some of their rising buying power in the form of more leisure time.

The decision to retire is influenced by at least three forces: (i) the fit between employee capacities and employer requirements, called push factors, (ii) income considerations, i.e. the income from pensions compared with income from work, called pull factors, and (iii) other costs and benefits from pensions compared to work, called jump factors (Blekesaune and Solem 2005). A lower fit between capacity and requirements reduces the incentive and ability to work, while generous pensions make retirement more attractive, and high disutility from work (as it is boring or has negative effects on one's health) and high benefits from more leisure reduce the willingness to work.

It is clear that both the push factors (Solem 1998) and the pull factors (Gruber 2000, Hernæs et al. 2000) have strong leverage on the incentives to retire. In this paper, we focus on the third effect, and in particular the effects of hard work.

One would expect that hard work is related to early exit because of two factors: (1) hard work gets harder when one's health is deteriorating, and (2) the health is deteriorating because of the hard work (Blekesaune and Solem 2005). As expected, most literature on the topic confirms this intuition.

Quinn (1978) find job strains to affect early retirement in the expected direction: harder work leads workers to exit early. This is confirmed by Hayward and Grady (1986). However, neither of these authors control for individual characteristics. Hayward (1986) and Hayward et al (1989) does, and finds that even when controlling for education and income, physical strains are strongly correlated with early retirement.

While these articles consider early retirement in general, Kolberg (1991), Holte et al. (2000) and Mykletun (2000) looks at disability retirement in Norway and find the same pattern.

Hence, it is quite well established that hard, physically demanding work increase the propensity to retire early.

If this is in fact the case, it could be argued that early retirement schemes are enhancing economic efficiency. Workers with poor and deteriorating health are almost certainly less productive than healthier workers. If the least productive workers are removed from the work force, overall productivity increase, making the cost of early retirement lower than it could seem (Sala-i-Martin 1996, Lindert 2003).

In other words, if the supporters of the AFP are right when they argue that the scheme provides an opportunity for those in need, and only those, it is probable that the AFP scheme is beneficial not only from a moral stance, but also from an economic one.

That is why our research question is interesting. Providing benefits to the toilers is both defensible and recommended. However, to the extent that others, those without health-damaging work, can make use of the AFP, the scheme could in fact threaten the goal of politicians as well as overall well-being. Every krone spent on AFP to those not in need is a krone less to the needy. It could even amount to more than one krone - if those left in the work force have to contribute “unnecessary”.

Hence, we aim to check whether or not the AFP in fact hit those most in need precisely. In a later section, we provide a simple data analysis and earlier findings related to AFP. However, we have already mentioned AFP a number of times, but not yet explained it in detail. The next chapter provides a definition of AFP and explain the differences with disability pension.

### **AFP and Disability Retirement**

The Norwegian social security system includes an old-age pension for all residents over 67 years<sup>2</sup>. In order to give an opportunity to retire before 67, AFP

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<sup>2</sup> There was a change in this with the pensions reform of 2007, and when this reform kicks in, there is no longer a mandatory retirement age in Norway. However, the line drawn at age 67 holds for the period covered in this paper.

was introduced as a result of negotiations between LO (the worker's union) and NHO (the confederation of businesses) in 1988/89 (Hernæs et al. 2000).

The scheme compensates previous income at more than 100% for low incomes, about 65% for a medium income and about 50% for a high income. The government finance 40% of the benefits to those aged 64-66, and they also provide "free" earnings point for the regular pension from 67 onwards. The rest is paid by employers (Bratberg et al. 2004).

AFP is available to all public sector workers and about half of private sector workers<sup>3</sup> above 62 years, the only requirement being that the employer is covered by the negotiated agreement between LO and NHO.

Hence, AFP has no health requirements. For this paper, this is the most important difference between the AFP scheme and disability pensions. To qualify for disability, one has to demonstrate that one has a reduced ability to work of at least 50%. In other words, receiving a disability pension require a physical examination, a sort of a means testing, prior to eligibility.

In addition, the AFP has the advantage that the regular pension that one receives from age 67 is calculated as if one continued working until the regular retirement age (Bratberg et al. 2004). We choose to abstract from this point in our exposition.

Apart from these two points, the schemes are quite similar, and both are considered fairly generous. Accordingly, they are both utilized about as much by those aged 60-66 (NOU 1998:19).

Both disability and AFP is thought to help those in hard work, the toilers. There is no clear definition of what a toiler is. The optimal measure would be to characterise the work conditions after how physically demanding and health deteriorating the employment is. This is difficult, so we have to use a proxy.

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<sup>3</sup> Totalling about 60% of the labour force. Private firms need to be part of the central tariff agreements to be included in the scheme.

One definition, used by the LO, is that those with 40 years of employment are toilers. We believe this definition is imprecise, as those with the most demanding employment might be unable to remain in work for so long. Therefore, we propose another definition: hard work is characterised by high sickness leave and disability rates. Hence, a toiler is a worker with a high propensity to be sick or disabled because of his work characteristics. The intuition is simple: the harder work, the more does the work affect the health condition of the worker negatively, and the more absent she will be.

### **Research Question and Hypothesis**

As we saw earlier, there is an established truth in the research that hard, physically demanding work induces early retirement. This fact is shown both at individual and employment level: harder work leads to early exit.

Our aim is to investigate whether or not this proposition holds also for the AFP system. As we know, a major difference between disability and AFP is that the AFP does not require a medical check prior to eligibility. It is therefore interesting to check if this trait influences the link between hard work and early retirement in any way.

The hypothesis of this paper is that the lack of a medical check makes AFP too easily attainable, and therefore leads also those in lighter occupations to retire early. Workers without deteriorating health are not able to utilize disability pensions, but might use the opportunity to retire early when the AFP scheme is available.

If this is the case, we should find that the link between hard work and early retirement is stronger with the disability pension than with the AFP, indicating that the AFP does not hit the toilers precisely enough.

## **Data and Earlier Findings**

We propose to test this hypothesis by combining a simple data analysis with earlier findings about disability and pensions.

Above, we defined hard work as employment with health damaging effects. Hence, the extent of hard work in a sector should show up in the rates of sickness leave and disability. The more sickness leave, the harder the work, and the more people should retire early. Likewise: the more disability in the sector, the more health damaging is the work, and the more early exit is observed.

Optimally, we would use data at individual level, to check the health characteristics and exit decision of each individual. As such data are unattainable, we use data on the sector level. The variable “Sickness” is the percentage of the workers in a sector absent with sickness leave at a given time. “Disability” is the percentage receiving disability benefits, with data for each sector.

We compare these rates with, first, the percentage of those above 62 that leave with disability benefits. Then, we compare this finding with the percentage of those above the age of 62 in each sector retiring with AFP in the same year.

The data is fetched from nav.no and regjeringen.no (see data references in the end), and should have sufficient validity and reliability for our needs. They cover only a few years, from 2005-2007. Hence, we have a too limited data set to make strong conclusions. However, this should be considered as a first, simple test of our argument. By comparing our findings with earlier work, we hope to be able to say something interesting about the link between hard work and AFP.

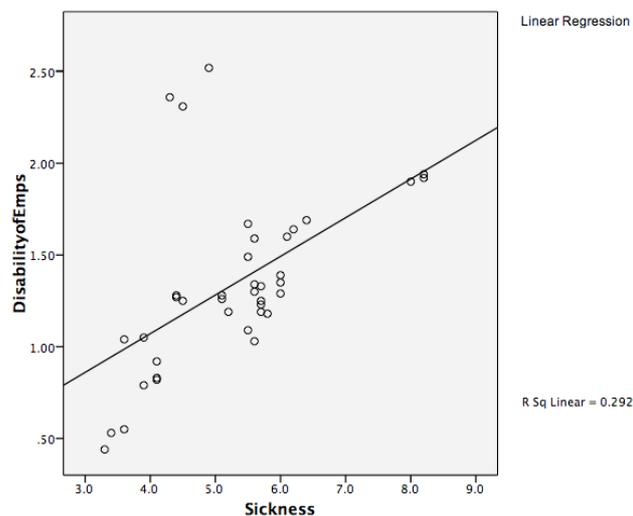
## **Analysis**

The argument in favour of AFP is, as we have shown, that it gives the toilers an opportunity to retire before the age of 67. However, we believe that the lack of a medical check weakens the link between hard work and early exit.

If the AFP works as the labour movement argue, we should see a clear, positive correlation between the extent of sickness and disability and the proportion with AFP. The harder work is, the more people are sick at any given time, and the more are leaving the work force early.

On the other side, if our argument holds true, we believe the relationship between hard work and exit to be positive as well, but that this relationship is stronger for disability than for AFP.

Let us therefore start the analysis by checking the link between disability and pensions. By utilizing a simple regression analysis<sup>4</sup>, we get a strong, positive relationship (0,789) between sickness leave and disability, confirming that toilers are much more likely to retire early with disability than those in lighter work. The coefficient is significant at the 0,01 level even when controlling for income, a factor we know are important for the retirement decision (Gruber 2000, Hernæs et al. 2000, Blekesaune and Solem 2005). The relationship is shown in the figure, where the ratio of sickness leave is plotted on the horizontal axis and the extent of disability is on the vertical axis.



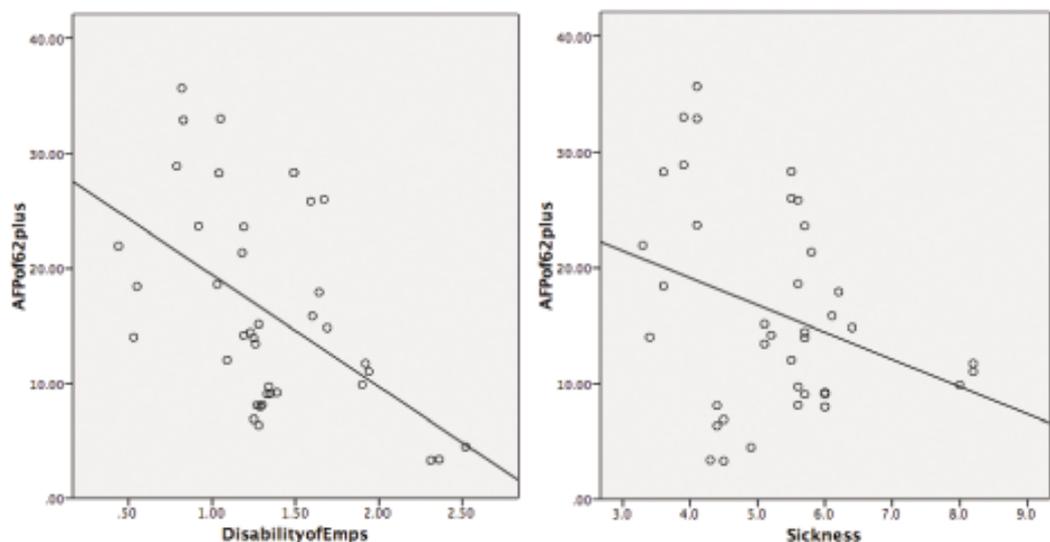
This finding is expected. After all, receiving disability pensions require a medical check. To pass such a test, health must be reduced either by work or life in general. The finding is also consistent with the earlier work we presented earlier,

<sup>4</sup> We do not present any details of the methods and data here due to the time and space constraints. However, these could be found at polecon.no. The details are not conducive to the overall findings.

confirming that hard, physically demanding work induce early retirement (Quinn 1978, Hayward 1986, Kolberg 1991, Mykletun 2000 and Holte et al 2000).

Let us now compare this finding with AFP. Here, we believe the relationship to be positive but weaker than for disability pensions. As the AFP does not require a medical check, there is no one-to-one link between health and retirement, and therefore also a weaker link between hard work and retirement.

We find negative correlations both between sickness leave and AFP (-0,322), and between AFP and the extent of disability (-0,521) when controlling for income. These relationships are shown in the figure below. We see clear, negative relationships between disability/ sickness leave and the extent of AFP in the sector.



Both findings are significant at the 0,05 level. We find that a rise in the percentage of inability recipients by 1 (about the same as going from the finance to health services<sup>5</sup>) lowers the percentage of AFP recipients with almost 13 percent points.

To illustrate, the highest sickness leave is found in the health and care sector, where only 11% left with AFP. Oil and gas exploitation and power and water supply had the least sickness, but an AFP retirement of 18 and 35 percent,

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<sup>5</sup> A move we would associate with a large increase in drudge

respectively. In the financial sector, where there is almost no absence due to sickness or disability, a full 33% utilized AFP.

Our findings with regard to AFP is to some degree consistent with the findings of Blekesaune and Solem (2005), who through a large survey of Norwegian employees find that the AFP retirement decision of men is not dependent on the physical hardship of the occupation, but that women's decision is.

Further, it is also in line with the findings of Røed and Haugen (2003), who show that AFP did not substitute for disability pensions, and that two out of three would have remained employed without access to AFP. Bratberg et al. (2004) achieve a similar result: by a conservative judgement, at least half of the AFP retirees would have remained in the labour force if it weren't for AFP. These are indications that AFP recipients does not have weaker health than other workers.

The results are also in line with an investigation in Aftenposten (Aftenposten 2008), finding that two thirds of the AFP recipients consider their health to be at the level of or better than the average.

We have also tried to find examples of research suggesting that the AFP in fact cater to the demands of the toilers, but have been unable to find any.

Our simple analysis strongly indicate that the link between hard work and early retirement is stronger for disability retirement than for AFP retirement, indicating that the AFP scheme does not hit the toilers precisely enough.

In fact, harder work is related to less AFP retirement. This indicates that the original disability pension in the Norwegian social security system targets toilers much better than AFP.

Hence, our hypothesis that the lack of a medical check in the AFP scheme induce other than the hardest workers to exit early seems to hold true. Conversely, the

argument of the pro-AFP movement, that the AFP benefits the toilers, is to a large degree false.

However, we have several important reservations about our findings. First, as mentioned above, the data cover only a short time period. Second, a better analysis would include an investigation of this link at a lower, preferably individual, level.

There could also be other factors than the lack of a medical check that create the pattern between hard work and retirement. To mention a few examples, it could, first, be that differences in coverage influence the findings. The AFP is available only to those employed in industries covered by the LO and NHO agreement, while disability in principle is available to all employees. There could be differences between these modes of organisation affecting our findings.

Second, the differences in benefit structure between AFP and disability could lead toilers to exit with AFP or disability for other reasons than health, or at least influence their decision as to which scheme to utilize.

However, within the confines of this paper, there seems to be a weaker link between hard work and AFP retirement than between hard work and disability pensions. This could indicate that the scheme is too expensive, and could harm economic growth, as it take others than those least productive out of the work force (Herbertsson and Orszag 2001). The sharp decline in employment arising from the introduction of the AFP (Hernæs et al. 2000, Røed and Haugen 2003) could indicate that the scheme has too weak targeting. It is also argued that this effect will only become stronger, as an increasing number of workers will find it socially acceptable to retire early (Hernæs et al. 2000, Lindbeck 2003).

More importantly, the redistributive aspects of the AFP could be adverse, in that workers with poor health have to pay for those healthier to retire. Hence, from a purely redistributive view of the case, our investigation implies that the AFP benefits should be better targeted. If hitting the toilers is the overall goal,

improved and extended disability pensions to those with bad health might be a better solution than AFP. Alternatively, a medical check could be included in the AFP system, copying some of the benefits of the disability scheme.

Therefore, our preliminary research indicates that, by including some sort of medical means testing, financial contributions could be smaller at the same time as toilers are hit more precisely.

### **Conclusion**

In this paper, we have looked at redistribution from a somewhat unconventional angle. We have not seen redistribution as transfers from rich to poor, but rather as redistribution from healthy to sick.

The starting point was the claim by the labour unions, that the AFP gives those with hard, physically demanding work an opportunity to retire early. With earlier findings in mind, indicating that those in hard work tend to retire earlier than others, this seems reasonable. If the AFP functions like most other alternative early retirement schemes, those with hard work would have a higher propensity to retire early.

However, we argued that the AFP scheme differed from other schemes in one important way: it does not include a medical check prior to eligibility. This could make the option of AFP easier attainable for those without hard work.

Therefore, our hypothesis was that the link between hard work and early exit would be weaker in the AFP system than for other alternatives for early retirement. In other words: the AFP is less precisely targeted at the toilers than disability pensions.

We found that, not only are the link weaker, it is non-existent in the AFP system. Harder work is correlated with fewer people taking AFP retirement.

While the relationship between hard work and early retirement is well covered in earlier literature, no-one, to our knowledge, has compared the AFP scheme to other alternatives. Therefore, we believe our investigation to be an important first step, and a motivation for new and improved investigation. Our finding is clearly interesting and contrary to much of the political deliberation, and should have high importance to the ongoing and recurring debate.

Before concluding this research, however, one should put more effort into attaining better and more data than we were able to within the limits of this paper. Controlling for factors such as gender, unemployment, work characteristics etc. will also be important in a more thorough investigation.

As usual, new questions have arisen from this analysis. For example, the champions of AFP argue that the scheme gives an “dignified” exit option, as compared to a less dignified exit requiring a medical check. Therefore, it would be interesting to investigate to what degree people feel that a medical check prior to retirement is undignified - and whether this feeling is strong enough to allow costs to soar.

Further, to what extent do other factors than the medical check play in? Are there important differences in the benefit structure between AFP and disability, making toilers prefer the latter to such an extent?

Finally, the AFP scheme was amended in April of 2008. Therefore, one should check whether the changes benefited the toilers, and if we could expect the relationship between hard work and AFP retirement to strengthen in the future.

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