Indicators in the Process of the «Open Method of Coordination»: Taking Stock and Looking Ahead[1]

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1. Introduction

During recent years, the open method of coordination quickly developed into a widely-accepted policy instrument in the European Union. The single fact that it has sparked a debate about the performance of social protection policies and their outcomes can already be regarded as a great success. One major element of the open method of coordination is the definition of a set of indicators that are used to evaluate the outcomes of national policies.

My task will be to take stock of the set of indicators and to sketch perspectives for future developments. As the current state of affairs concerning the choice of indicators has already been discussed extensively, I will put the main emphasis of my presentation on discussing how the list of indicators could possibly be refined and extended. Let me already warn you that I will come up with more questions than answers, so there will be ample room for discussion afterwards.

Let me first remind you the principles for the construction of indicators as put forward by Atkinson et al. in their book on the social inclusion indicators.[2]

Every indicator should...

1. "identify the essence of the problem and have a clear and accepted normative interpretation";
2. "be robust and statistically validated";
3. "be responsive to effective policy interventions but not subject to manipulation";
4. "be measurable in a sufficiently comparable way across member states, and comparable as far as practicable with the standards applied internationally by the UN and the OECD";
5. "be timely and susceptible to revision"; and

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[1] I am grateful for most valuable comments from Michael Cichon.

[2] Cf. A. B. Atkinson, B. Cantillon, E. Marlier, and B. Nolan (2002): *Social Indicators: The EU and Social Inclusion*, Oxford: Oxford University Press, pp. 20-25.

6. "the measurement of an indicator should not impose too large a burden on member states, on enterprises or on the Union's citizens".

The portfolio of indicators should...

1. "be balanced cross different dimensions";
2. be constructed in a way that "the indicators should be mutually consistent, and the weight of single indicators in the portfolio should be proportionate"; and
3. "should be as transparent and accessible as possible to the citizens of the European Union"

On the basis of these principles, a set of indicators has been discussed, and the working groups have made remarkable progress since we last met at the first conference. This is particularly commendable in view of the fact that the definition of indicators is a very tricky and difficult exercise. The seemingly easy and straightforward principles may suggest otherwise, but many pitfalls emerge when going into detail.

2. Taking Stock

A set of indicators has already been discussed in the Social Protection Committee and the Indicators Subgroup. That set of indicators consists of the following subsets, with some examples of indicators listed for illustrative purposes:

1. Context information
   - demographic information such as population by age group, life expectancy at birth and demographic old-age dependence ratio
   - household information such as housing arrangements
   - social and pension expenditure as a proportion of GDP
   - regulatory framework for pensions
2. Adequacy
   - poverty rates among older people
   - relative income of older people compared to younger age groups
3. Financial sustainability
   - employment rates of older workers
   - effective retirement age
   - effective old age dependency ratio
4. Modernisation: Responding to changing needs

Recognizing that the discussions on the definitions of indicators are work in progress, I will not comment any further on these indicators. Instead, let me go one or two steps ahead and discuss possible future developments of the system of indicators.

3. Looking Ahead

Building a system of indicators is like building a house: there is always need to refine existing elements and to add new ones responding to new needs and possibilities.

Having been asked to think about possible ways to further develop the system of indicators, I picked out five questions that I would like to address:

1. The evaluation of future adequacy: theoretical replacement ratios and micro-simulation models
2. Including dynamic indicators
3. The inclusion of assets
4. The inclusion of non-cash income and access to services
5. Non-monetary measures of well-being

It is clear that this exercise cannot be done without a considerable amount of speculation and guesswork, and is in many ways preliminary. The following discussion of these questions may nevertheless help to lay out some possible routes and to point to some potential drawbacks.

3.1. Evaluating future adequacy: theoretical replacement rates and micro-simulation approaches

A critical issue for the definition of indicators in the method of open coordination is the evaluation of future adequacy. Establishing sophisticated forecasting models for pension expenditure and other financial indicators is already a difficult exercise, but it is even more difficult for adequacy indicators. The future living standards of the population are determined by a variety of factors, so any forecasting model needs to operate with a number of assumptions.

The Indicators Sub-Group has already discussed the use of theoretical replacement ratios for an assessment of current and future situations.[3] Replacement ratios aim at reflecting the relative level of pension income as a proportion of previous employment income. The base case chosen by the Indicators Subgroup addresses the case of a single person retiring at age 65 after an employment history of 40 years without interruption, whose earnings always matched average earnings for the whole economy and who is covered by the most general (private sector) pension scheme.

The calculation of replacement ratios for this model pensioner is a good starting point that can be conducted both for the current situation and, recurring to a number of assumptions, as a forecasting model that takes into account policy changes and economic developments in the future. Because it is straightforward, this base case lends itself relatively easily to projections. These should be accompanied by sensitivity analyses, aiming at evaluating the effects of different assumptions on projected replacement rates.

However, it is clear that this base case can illuminate current and future replacement ratios only for a small minority of pensioners that match the assumed profile while the model is completely blind towards effects of pension policies on the income situation of people with different employment profiles. The Indicators Sub-Group has acknowledged these constraints and has pondered about adding additional cases that take the diversity of employment histories better into account. For example, the most

[3] Cf. Indicators Sub-Group (2002): Second Progress Report of the Indicators Sub-Group of the SPC to Social Protection Committee, Brussels: ISG.

basic approach would be to add two further cases with higher and lower wage levels, such as two-thirds of average earnings and one-third above average earnings.[4] Further, another case could be added with a shorter employment history, possibly 30 years – this would better reflect the employment patterns of women in many countries, as well as people with unstable employment histories. It would also be desirable to add a pensioner living in a couple or a pensioner with children, but this would probably lead too far and would exacerbate the problem of how to define the model pensioner by the problem of how to define his or her spouse and children. It is clear that the addition of more cases further complicates the definition of model pensioners and entails some problems that were successfully circumvented by choosing a "simple" base case. However, one single base case gives a very narrow account of the effects of a pension scheme, and may even be misleading. The addition of three model pensioner cases – low-wage, high-wage and short employment history – could be a first attempt to find a feasible compromise between detail and practicability.

Adding additional cases to the theoretical replacement ratios approach can enhance the representation of the population, but it will never be able to reflect the full complexity of individual life-courses and their effects on retirement income. In the long run, it would therefore be helpful to complement this approach by a comprehensive micro-simulation model in order to assess the effects of future policy changes and variations in the socio-economic contexts. The experiences gathered with the EUROMOD project provide valuable guidance on the construction of such a model.[5]

It is also helpful to carefully assess the experiences made with similar studies that forecast retirement incomes. For example, the simulation undertaken in the context of the study "Old Age Provision in Germany 1996 (AVID 1996)" offers valuable insights.[6] This simulation forecasted the retirement incomes – covering incomes from public and occupational pensions – for a sample of some 14,000 individuals aged 40-59. The study is based on individual social insurance records up to 1996 complemented by a survey and uses a sophisticated simulation model for the remaining years until legal retirement age, that simulates their future life course in the coming 5-25 years. This includes not only employment records, including spells of unemployment and inactivity, but also events such as the birth of children, divorces or marriages. On the basis of the 1996 study, future incomes of pensioners can be forecasted until 2021. A new wave of the AVID (AVID 2002) study is currently being conducted and will eventually allow to forecast pensioner incomes until the year 2026.[7]

This examples shows that micro-simulation approaches can be a rich source of information not only for the assessment of prospective replacement ratios, but also for

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[4] A similar approach has been chosen by the OECD, cf. most recently OECD (2002): Benefits and Wages: OECD Indicators, Paris: OECD.

[5] Cf. H. Sutherland (2001): EUROMOD: An Integrated European Benefit-tax Model: Final Report, Cambridge: Cambridge University.

[6] Cf. K. Kortmann and C. Schatz (1999): Altersvorsorge in Deutschland 1996 - (AVID '96): Zusammenfassung wichtiger Ergebnisse der Untersuchung "Strukturen und Trends der Altersvorsorge von 40-60jährigen Rentenversicherten und ihrer Ehepartner", *Deutsche Rentenversicherung* (10-11), pp. 573-597.

[7] Cf. M. Roth, M. Stegmann, and U. Bieber (2002): Die Aktualisierung der Studie Altersvorsorge in Deutschland - Inhaltliche und methodische Neuerungen der AVID 2002, *Deutsche Rentenversicherung* (11), pp. 612-641.

answering a variety of other questions, such as the estimation of future poverty rates[8] and the composition of retirement income in the future. Most importantly, these models can be used to assess the effects of policy changes in different socio-demographic and socio-economic scenarios.

However, the experiences drawn from the results of the AVID study illustrate three points. First, it is an extremely valuable exercise that generates rich insights on the interplay of different income sources and the role of each in the income packages of pensioner households. It conveys important information about future living standards that can be taken into account in policy-making. Second, the multitude of factors that shape retirement incomes and that require – sometimes heroic – assumptions for the estimation of future developments underline the complexity of such an enterprise. This is particularly true in respect to the simulation of retirement incomes which cannot be based on a snapshot situation at a particular point in time, but requires a longitudinal approach that can fully take account of pension entitlements acquired during working life. Third, it has to be acknowledged that the complexity of the simulation puts limits on the period of time that can be covered; there is a trade-off between the complexity of the model and its robustness. Even a sophisticated simulation such as the AVID study limited itself to forecasting a maximum of 5 to 25 years, aware that any further extension of the forecasting period would further increase the sensitivity of results.

These three points demonstrate that the application of adequacy indicators to future developments is a fruitful exercise, but only if it is conducted seriously with an eye for the complexity of the matter, with input of sufficient resources, and with due respect to its limitations. If such indicators are to be constructed, this should not be done half-heartedly. In any case, micro-simulation models should not be used to replace theoretical replacement ratios, yet they can be a valuable addition. While the theoretical replacement rates reflect the *de jure* situation of some specified cases and are more straightforward in their definition, multi-simulation approaches aim at reflecting the *de facto* situation of a broader sample of the population, but are very sensitive towards the choice of assumptions.

3.2. Including dynamic indicators

Another opportunity for future refinement of indicators exists in making better use of panel data for monitoring the transition between working-age and retirement. Existing longitudinal datasets, such as the German Socio-Economic Panel (GSOEP) or the British Household Panel Study (BHPS) – or eventually the EU-SILC – could be exploited for constructing indicators that compare incomes before and after retirement. One possible indicator could be the calculation of replacement ratios based on a

[8] Cf. For a straightforward attempt to forecast poverty risks on the basis of existing data until 2010 under various assumptions, cf. B. Cantillon and K. Van den Bosch (2002): Back to basics: the case for an adequate minimum guaranteed income in the active welfare state, pp. 359-376 in *Social Security in the Global Village*, edited by R. Sigg and C. Behrendt, New Brunswick: Transaction. Nevertheless, in view the sensitivity of the calculation of poverty rates on the basis of actual data, especially for the older persons in countries with flat-rate pension systems, forecasts are associated with even higher sensitivity and should therefore be handled with adequate care; cf. C. Behrendt (2002b): Objectives and Instruments of "Open Coordination" - Elaboration of Indicators from a Scientific Point of View, pp. 117-122 in *Open Coordination of Old-Age Security in the European Union*, *DRV-Schriften*, Vol. 35, Frankfurt (Main): VDR.

comparison of income levels before and after retirement, either for total income or for a more narrow definition of pension income.[9]

It remains to be seen, however, whether the sample sizes in the available panel databases are large enough to allow the construction of such an indicator. It would also be necessary to find a clear and unambiguous definition of how to define "pre-retirement" and "post-retirement", taking into consideration that the transition into retirement for many people is a gradual process. It is also necessary to consider the household context, including the question of how to treat the sequence of transitions into retirement by several household members. There is a host of questions to be answered, but it may be a valuable exercise to think about the possibilities that are offered by this type of data.

3.3. Including assets in an indicator of economic well-being

Assets are one important element of economic well-being in retirement. This includes capital accumulated during working life, including personal pensions, life insurances and bequests. It also includes non-monetary assets; most importantly owner-occupied housing, but also other goods such as cars, household amenities, etc.

Income-based measures of economic well-being normally do not consider the value of the stock of assets in spite of their strong effects on economic well-being. They do however consider income flows from assets, such as interest payments or income generated from renting out a house or apartment. Having said that, these income types are often poorly reflected in household income surveys and thus do only partially appear in the databases usually employed for empirical analyses.[10]

However, there is also an argument to consider the stock of assets in measures of economic well-being. The more assets I own, the less income I need to spend on acquiring goods and services. For example, if I own my own house or apartment, I do not need to spend a large proportion of my income on rent, so my regular income allows for a higher standard of living than that of my rent-paying neighbour. Although, if I do not have to spend income on rent, I may need to spend my regular income on a mortgage. It is therefore often claimed that imputed housing costs should be considered as income when calculating income-based poverty measures. However, a number of caveats render this very difficult. In addition to many practical difficulties in collecting reliable statistics on imputed rent, how should differences in the quality of housing feed into these measures? What would be a practical and fair method of estimating imputed rent? How can account be taken of the fact that housing assets are not as easily liquidated as some other assets, so private households cannot easily adjust to changing conditions, as they would in respect to the consumption of other goods? This is particularly relevant for older people who often occupy apartments or houses that are too large for them, but who face high economic, practical and emotional obstacles in moving to a smaller property during the last years of their life.

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[9] I owe this point to Michael Cichon.

[10] For a summary of evidence on the underestimation of capital income, cf. Table 4.4 in C. Behrendt (2002a): *At the Margins of the Welfare State: Social Assistance and the Alleviation of Poverty in Germany, Sweden and the United Kingdom*, Aldershot: Ashgate, p. 68.

Although some indicators are already available to evaluate the value of assets for economic well-being[11], the data situation is far from satisfactory, especially in a cross-national context. In my view, the indicators proposed by the Indicators Sub Group strike a viable compromise on the basis of the current data situation, but as more data will hopefully become available in the future, more extensive work on this indicator may be possible.

3.4. Non-cash income and access to services

Similar difficulties exist with respect to the inclusion of non-cash income and access to services in income-based indicators. How can non-cash income be measured in a consistent way, especially in cross-national comparisons? Studies that have incorporated some non-cash benefits into the calculation of poverty rates have found that non-cash benefits considerably reduce poverty in some countries, in particular for specific groups of the population such as the elderly.[12] The effect was particularly marked in the United Kingdom.

However, including these benefits into income measures is not easy. The estimation of the value of non-cash income has to operate with a number of critical assumptions. A fundamental question is whether the value of non-cash benefits can be considered fully equivalent to cash income. Non-cash benefits usually cannot be traded against other goods. People may prefer to spend money on other goods or services had they been able to dispose of the money equivalent of non-cash benefits. In addition, some types of non-cash income are intended to cover needs that are normally not reflected in common poverty measures and equivalence scales. For example, higher needs because of sickness and the need for health care are normally not reflected in these standards.[13] If non-cash benefits are used to cover unmeasured needs, their exclusion from income measures is not problematic in principle, but problems arise when comparing several countries with different public-private mix in the provision of services or benefits in kind.

For example, imagine three countries A, B and C. In country A, people pay for the cost of health services at the point of delivery. In country B, pensioners contribute to a health insurance. In country C, people enjoy free access to health services. When comparing relative income levels in these three countries, one would have to include the value of free health services in the income of the population in country C. But what is the value of these health services, the value of the services rendered as needed (as in country A) or rather the amount of regular contributions to a health insurance (as in country B)? These examples illustrate the difficulties in estimating the value of non-cash benefits.

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[11] Cf. OECD (2001): Ageing and Income: Financial Resources and Retirement in 9 OECD Countries, Paris: OECD; B. H. Casey and A. Yamada (2002): Getting Older, Getting Poorer? A Study of the Earnings, Pensions, Assets and Living Arrangements of Older People in Nine Countries, Paris: OECD.

[12] Cf. e.g. T. M. Smeeding, P. Saunders, J. Coder, S. Jenkins, A. J. M. Hagenaars, R. Hauser, and M. Wolfson (1993): Poverty, inequality, and family living standards impacts across seven nations: the effect of noncash subsidies for health, education and housing, *Review of Income and Wealth* 39 (3), pp. 229-256.

[13] Cf. D. B. Radner (1997): Noncash income, equivalence scales, and the measurement of economic well-being, *Review of Income and Wealth* 43 (1), pp. 71-88.

3.5. Non-monetary indicators of well-being and quality of life

Recognizing that well-being during old age is not just a question of income, non-monetary indicators on poverty could be used to complement income-based poverty indicators. The following items could be included in such an index

- food/nutrition, such as minimum calorie intake, healthy diet
- housing/shelter, such as appropriate size, heating, access to clean water and sanitation.
- health
- education: illiteracy and innumeracy
- participation in social life: social contacts, social networks
- "happiness"

The indicators discussed here partly go beyond the field of pensions, but may be used as a more comprehensive indicator of the well-being of older persons, building upon similar indicators discussed in respect to social inclusion. Let me briefly summarize some insights from previous research that may be helpful for the further development of indicators within the open method of coordination.

Responding to concerns that income-based indicators of poverty sketch an incomplete or even misleading picture of the actual living standards of the population, a number of studies have used multidimensional measures of poverty in order to directly assess the living standards of the population. These studies are based on the notion that poverty is closely associated to deprivation in several dimensions of life, including food, housing, and so forth. The first pioneering study[14] assessed the deprivation status through a survey based on a list of items, ranging from household amenities to children's birthday parties. In response to critics who argued that the lack of certain items could reflect individual preferences rather than deprivation, later studies aimed at identifying items that people could not afford.[15]

These non-monetary indicators of well-being and quality of life indeed can help to sketch a more comprehensive picture of the living situation of older people in the member states of the European Union. However, together with other non-monetary indicators of well-being, they suffer some particular shortcomings.

Most importantly, the choice of necessary items is always arbitrary. Where to draw the line between items that are absolutely necessary for a decent standard of life and others which are just useful and convenient? Responding to this challenge, some studies establish an inventory of goods and amenities necessary for a decent standard of life on the basis of a survey. A sample of the population is asked to indicate on a list of items those they consider as absolutely necessary for a decent standard of living. The items mentioned by a majority of the sample were then considered part of the minimum basket of goods and amenities. In a second step of the analysis, households are

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[14] Cf. e.g. P. Townsend (1979): *Poverty in the United Kingdom: A Survey of Household Ressources and Standards of Living*, Berkeley: University of California Press.

[15] E.g. J. Mack and S. Lansley (1985): *Poor Britain*, London: Allen & Unwin; D. Gordon and C. Pantazis (ed.) (1997): *Breadline Britain in the 1990s*, Aldershot: Ashgate.

identified as poor if they lack a certain number of items from this list of absolutely necessary items.[16]

While it is generally difficult to define a basket of goods and services that is necessary for a minimum standard of life, it is even more difficult when trying to apply these standards to more than one country. Most evident are these difficulties in respect to climatic differences. It is clear that the perception of adequate housing in Greece is quite different compared to the North of Finland or Sweden. Cultural differences are even harder to grasp: what are the most essential elements of an adequate diet or what is considered an adequate participation in social life?[17] An interesting study compared attitudes towards a minimum standard of life in two countries that we would consider as being not very different from each other: Sweden and the United Kingdom. It revealed larger variations than many would have expected. For example, social interaction with others, such as going to the pub or being able to invite friends to a birthday party, are valued more highly in the United Kingdom compared to Sweden. In the latter, stronger emphasis was placed on household amenities such as a TV set.[18] Cross-national differences are further impeded by the lack of comparable data for many indicators.

These difficulties illustrate a fundamental problem for non-monetary indicators of well-being. How can deprivation be distinguished from personal preferences? When we look at income indicators, individuals are on the same welfare level if they command the same amount of financial resources, irrespective of whether they enjoy the same standard of living. If people choose to save parts of their income rather than spending them on food or housing, or if they do not use their income in an economic way, the loss in observable standard of living is not considered as deprivation but as a product of their own choice. In this sense, the indirect measurement of economic well-being through income measures is more open to different life styles than direct concepts.

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[16] One of the first studies using this method was J. Mack and S. Lansley (1985): *Poor Britain*, London: Allen & Unwin. For an analysis of the situation in West and East Germany, cf. H.-J. Andreß and G. Lipsmeier (1995): Was gehört zum notwendigen Lebensstandard und wer kann ihn sich leisten? Ein neues Konzept zur Armutsmessung, *Aus Politik und Zeitgeschichte* (B 31-32), pp. 35-49.

[17] Adam Smith has already formulated this point more than two centuries ago in a very illustrative way: "By necessaries I understand not only the commodities which are indispensably necessary for the support of life, but whatever the custom of the country renders it indecent for creditable people, even of the lowest order, to be without. A linen shirt, for example, is, strictly speaking, not a necessary of life. The Greeks and Romans lived, I suppose, very comfortably though they had no linen. But in the present times, through the greater part of Europe, a creditable day-labourer would be ashamed to appear in public without a linen shirt, the want of which would be supposed to denote that disgraceful degree of poverty which, it is presumed, nobody can well fall into without extreme bad conduct. Custom, in the same manner, has rendered leather shoes a necessary of life in England. The poorest creditable person of either sex would be ashamed to appear in public without them. In Scotland, custom has rendered them a necessary of life to the lowest order of men; but not to the same order of women, who may, without any discredit, walk about barefooted. In France they are necessaries neither to men nor to women, the lowest rank of both sexes appearing there publicly, without any discredit, sometimes in wooden shoes, and sometimes barefooted. Under necessaries, therefore, I comprehend not only those things which nature, but those things which the established rules of decency have rendered necessary to the lowest rank of people." Cf. A. Smith (1976 (1776)): ***An Inquiry into the Nature and Causes of the Wealth of Nations, The Glasgow Edition of the Works and Correspondence of Adam Smith, Vol. I***, Oxford: Clarendon.

[18] Cf. B. Halleröd (1998): Poor Swedes, poor Britons: A comparative analysis of relative deprivation, pp. 283-312 in *Empirical Poverty Research in a Comparative Perspective*, edited by H.-J. Andreß, Aldershot: Ashgate.

4. Conclusions

The experiences gathered with the Open Method of Coordination have up to now shown that indicators are a powerful means of evaluating the effects of pension systems on the well-being of the population. The proposed set of indicators provides a good starting point for reporting on the performance of pension schemes in response to current and future needs. Most of these indicators aim at outcomes rather than outputs in an effort to be neutral towards different architectures of pension schemes and national contexts. This takes account of the fact that similar results can be achieved by different institutional settings according to national preferences.[19] At best, it also creates an environment that leaves room for healthy competition among member states in pursuit of "good policies".

There is a constant need to review and to expand the set of indicators in order to take into account previously uncovered aspects and new developments. The set of indicators should also be adapted to the emergence of new methods and data. We already see that the open method of coordination has developed a new momentum for further work on social indicators.

In particular, the discussions around the open method of coordination have underlined the need for a comprehensive, reliable and internationally comparable database on social statistics, including social protection statistics, that can serve as a reliable data basis for policy making and evaluation. The ILO is currently envisaging to launch a new social security inquiry that aims at filling the gap of internationally comparable statistics on social protection. I hope that we will see some spill-over from the dynamics of this process to further improve social protection statistics worldwide.

[19] Cf. e.g. M. Rein and C. Behrendt (2003): The relationship of the public-private mix with poverty and inequality, in *Pensions: Challenges and Reform*, edited by E. Øverbye and P. A. Kemp, Aldershot: Ashgate.