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Measuring human capital**Summary of comments from the consultation on the *Guide on measuring human capital*****Note by the Secretariat***Summary*

The present note summarizes the comments by members of the Conference of European Statisticians (CES) on the *Guide on measuring human capital*. The Secretariat carried out an electronic consultation on the Guide in February-March 2016.

A total of 30 countries and 2 organizations replied to the request for comments. The comments demonstrated general support for the Guide and its main conclusions. Countries and organizations also provided detailed comments and suggestions on specific issues, which are summarized in this document.

The Conference is invited to

- express its views on the Guide;
- ask the Task Force to review in detail the comments and suggestions made, and reflect them in a revised version of the Guide;
- ask the Task Force to review the proposals made for further work and report on these to the Bureau;
- agree that the revised Guide will be submitted to the 2016 October CES Bureau meeting for final approval.

I. Introduction

1. The present note summarizes the comments by members of the Conference of European Statisticians (CES) on the *Guide on measuring human capital*, provided in the electronic consultation in January-March 2016.
2. The Task Force on Measuring Human Capital will consider the material presented in this document for revising the Guide. The Task Force includes representatives from the national statistical offices of Norway (chair), Australia, Canada, Italy, Netherlands, New Zealand, Poland, Slovenia, United Kingdom, and United States of America; from OECD, the Wittgenstein Centre for Demography and Global Human Capital, the University of Madison-Wisconsin and the Central University for Finance and Economics in Beijing, and from the United Nations Economic Commission for Europe (UNECE).
3. The Guide discusses the concept of human capital and methodological challenges related to valuing human capital. It provides a practical implementation guide for national statistical agencies compiling human capital estimates. The Guide also presents a satellite account for education and training where various expenses on education and training are spelled out, and a full-fledged satellite account where human capital is integrated in the central framework of the System of National Accounts, and challenges associated with such full integration.

II. Summary

4. In the electronic consultation, responses were received from 30 countries and 2 organizations: Albania, Armenia, Austria, Belarus, Canada, Croatia, Czech Republic, Denmark, Finland, Georgia, Germany, Hungary, Israel, Italy, Lithuania, Malta, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Russian Federation, Serbia, Slovenia, Sweden, Switzerland, United Kingdom, Ukraine, the Eurasian Economic Commission (EEC), and Eurostat.
5. Thirty-one respondents considered the Guide ready for endorsement at the CES plenary session, subject to incorporation of the comments made in the consultation. No country opposed the endorsement. Many countries expressed support for the work and commended the efforts of those involved in developing the Guide. Countries and organizations also drew attention to the challenges related to data and methodological issues, which persist both for the actual compilation of accounts for human capital and for the construction of satellite accounts for education and training. A number of these comments pertained to the strengthening of proposals for further work in this area.
6. Responses to the consultation included numerous detailed comments and suggestions for revision, which are summarized in sections III-VI.

III. General comments

7. All responding countries and organizations felt that the Guide provided useful guidance on measuring human capital.
8. Lithuania and Portugal pointed out the Guide's value for identifying issues, challenges and areas for further work on measuring human capital. Hungary and Portugal suggested that the Guide may benefit from more detailed practical instructions and from a section explaining the basic concepts of National Accounts. Portugal suggested following the procedure already in use for Environmental Satellite Accounts in Europe.

IV. Comments on main conclusions

9. There was broad support for the main conclusions as presented in section 1.4 of the Guide. In this context, the Russian Federation expressed the opinion that the issue of construction of satellite accounts requires further development, and Malta highlighted the practical difficulty of compiling long time series and the challenges this poses to international comparability.

10. Canada, Georgia, Israel, Mexico, New Zealand, and Switzerland welcomed the proposal to examine more thoroughly the development of a national satellite account for education and training. Germany pointed out the capacity constraints and Eurostat the data constraints and methodological issues in producing such accounts.

11. The conclusions of the Guide were considered to be clear and useful. Eurostat proposed that the main recommendations should be more explicitly collated and highlighted. Hungary expressed the need for more detailed methodological guidance and proposed to put greater emphasis on the importance of harmonization of data sources in the overall conclusions.

12. The Netherlands highlighted that both the net present value estimate and the cost method estimate have advantages and disadvantages due to the assumptions made in each.

13. Some countries considered that there were areas in need of additional coverage: the Russian Federation noted that there should be additional work on assessment of health as a component of human capital, and Mexico considered important to mention the role of the household sector as the main agent in the human capital production process.

V. Chapter-specific comments

14. Several countries provided more detailed technical comments on specific parts of the Guide. These are summarized by chapter in the following subsections. Some respondents also provided specific editorial feedback which will be taken into account in revising the Guide.

A. Introduction, overview and main conclusions

15. Mexico and the Russian Federation were of the opinion that there should be an explicit mention and recognition of the role of informal education that takes place through self-study in households. Israel noted that human capital adds an extra level of complication to the comparability between countries.

B. Concepts and definitions

16. Germany noted that the concepts facilitate implementation and that the issues of volume measurement and rate of return require further research. They pointed out that considerable additional effort will be necessary before it becomes possible to design comparable human capital accounts for OECD member states. Germany also expressed concern about the difficulty of compiling the very long time series of data.

17. Israel pointed out that according to the 2008 SNA, expenditures on education and staff training should not be considered as a form of investments in human capital because it is not part of the asset boundary of the SNA and should not be included in core accounts.

C. Methodological issues

18. New Zealand commended the practical value of the chapter through its focus on a narrow definition of human capital and recognised that there is scope for further discussion and research around such issues as knowledge spill over and human capital heterogeneity.

19. Germany, Israel, and the Russian Federation commented on the validity of assumptions underlying the methods described in this chapter. Germany expressed concern about assuming the same depreciation rate for all countries, since this fails to take into account differences in interest rates between developed and emerging economies. They also had doubts about volume measurement of human capital. Israel was of the view that there needs to be more clarity in the distinction between expenditure and investment in education; in the question of whether only those investments in education that are likely to affect future income (e.g. higher education) ought to be capitalized; and in the fact that the same payment may result in different achievement for different individuals. Israel also noted that the method presented does not account for differences in quality among people. The Russian Federation was of the view that there are many assumptions and that the initial value of human capital is not considered, only investments are.

20. Eurostat called for further development of the recommendation to use output-based measures for the cost-based approach. They felt that the chapter should include a discussion of output-based measures and deflators in education.

21. Mexico identified an inconsistency between a statement in this chapter referring to the results of “investing in education, be it formal or informal” (paragraph 41), and a later assertion (paragraph 128) that the Guide is restricted only to formal investment in human capital.

22. Austria proposed adding an explanation (in paragraph 162) that the life-time income approach does not rely only on the assumption that labour is paid according to its marginal productivity, but also on the assumption that educational attainment is the main driver of productivity/higher earnings. They also questioned whether three of the problems with the indicators-based approach mentioned in the chapter (paragraphs 211 to 213) are indeed specific to that approach.

23. Eurostat expressed the view that paragraphs 156 to 160 do not in fact pertain to age-price or age-efficiency.

D. Implementation and measurement issues

24. New Zealand noted the value of this chapter in summarizing the alternative methods, providing guidance on practical issues, describing practical calculation steps and detailing minimum data requirements. In relation to data requirements, Hungary reported that they would have data available for most of the sources listed in this chapter, although some would require further discussion such as the future of the Continuing Vocational Training Survey. Germany pointed out the difficulty of obtaining data on life expectancy by educational level and supported the use of substitution methods such as those described in the chapter.

25. New Zealand supported the chapter’s recognition of the possibility of different labour markets and hence different retirement ages across countries. They therefore supported the recommendation to restrict human capital measures to the ‘working age population’ (ages 15-65) for international comparisons, while at the same time allowing flexibility to choose different definitions for internal purposes.

26. Finland commented that the cost-based approach to measuring human capital by education and job-related training is both interesting and realistic. They added that it would

be possible to expand and vary this approach if necessary (for example by division into age cohorts).

27. Germany pointed out that given the necessity for a heavy investment in human resources, national-level implementation may be could only be achieved in the medium to long term. Finland noted with respect to the cost-based approach that job-related training can be difficult to measure extensively in practice.

28. Finland noted that the chapter should mention that not all training costs can necessarily be considered as human capital investments, only as potential such investments.

29. Austria noted that there should be a recommendation on how the average service lives should be transformed into depreciation rates, and on what depreciation pattern should be used.

E. Satellite account for education and training

30. There was broad backing for the recommendation that this satellite account should be developed first, prior to development of an integrated account on human capital.

31. New Zealand found the chapter to be a clear and useful summary. Mexico supported the approach, stating that, among other things, they would require additional data on training provided by employers in order to develop the necessary statistical infrastructure to go beyond the satellite account. Israel proposed the development of both a satellite account for education and training and one for human capital.

32. The Russian Federation noted that this chapter represents education and training as the only features of human capital. They stressed that the role of health in human capital should not be ignored.

33. Both Portugal and Eurostat noted that grouping of ISCED categories for educational products should be avoided to the greatest extent possible.

34. Portugal suggested enlarging the scope of the exercise to formal education covering the entire population (not only those of working age), and to all types of non-formal education and training (not only work-related). They also identified various elements that they considered should be added to the chapter: clear definitions and concepts of education products, producers and financing agents, plus detailed classifications for products, producers and financing agents; the issue of valorisation (basic prices/acquisition prices); the process of choosing and classifying activity units; and accounting rules or calculation algorithms. Finally they felt that clarification was needed as to why insurance is not considered an ancillary expenditure.

35. In Portugal's experience, this kind of exercise relies upon strong links between the National Statistical Office and those parts of central administration concerned with education. They proposed that this need should be emphasised in the Guide.

36. Germany drew attention to the possibility of important differences between the UOE finance tables and COFOG. For instance, the scope of UOE-finance tables is broader than COFOG, since COFOG focuses merely on government expenditure whereas in UOE-finance tables, expenditure from the private sector is recorded as well. Germany provided further detailed comments on the use of manuals and classifications in compiling the Satellite Account for Education and Training.

F. Human Capital Satellite Account: an example for Canada

37. Israel and Hungary called for more examples along the same lines as the Canadian example and a more detailed, step-by-step example in the form of an instruction guide. This could include numerical examples to complement the two tables detailing changes to sector

accounts (tables 2 and 3). The Russian Federation suggested adding examples of the experimental use of the refined approach for several different countries with different economic conditions.

38. Austria noted that the case study highlights the fact that the two approaches might produce very different results. Therefore, they suggest that the Guide should recommend the use of the same approach across countries to ensure comparability.

G. Human capital country studies

39. Israel suggested that further country studies on human capital should be organized and that their dissemination be coordinated by UNECE.

40. Germany noted the gap between academic research and the actual designing and testing of a human capital satellite account. They stated that while this chapter demonstrates that much research has been done, actual implementation is likely to be costly and should be viewed as a medium to long term endeavour.

41. Finland offered an additional example of a project relevant to this chapter.

VI. Proposals for further work

42. The Netherlands proposed a collaborative production by some countries of the first internationally comparable satellite accounts for education and training, based on the Guide's recommendations.

43. An experimental exercise comparing the proposed approach using three or four countries with different economic conditions and different economically active populations was proposed by the Russian Federation. They also called for further work to consider self-education and the role of health in human capital formation.

44. Poland proposed the inclusion and discussion of some basic indicators on human capital (e.g., number of people with specific knowledge, labour market mismatch).

45. Germany considered that some issues (e.g. choice of an appropriate price deflator, selection of an appropriate depreciation rate) would benefit from further research, both academic and in the arena of international organizations.

46. Given the strong reliance of both methods on the assumptions made, Austria proposed undertaking sensitivity analyses to investigate the impact of these assumptions on estimated level and growth of human capital stock. Such modelling exercises could also be used to assess the effects of variables such as quality of education, choice of subject, etc. Linked to this, Georgia proposed further consideration of country-specific factors such as the quality of the educational system and the level of economic development.

47. Georgia proposed an analysis of the distinction between efficient and non-efficient investments (i.e., those which do not add value to the capital stock of human capital). They also called for future studies to evaluate the impact of non-economic returns on measuring human capital.

VII. Points for discussion

48. The Conference is invited to:
- express its views on the Guide;
 - ask the Task Force to review in detail the comments and suggestions made, and reflect them in a revised version of the Guide;
 - ask the Task Force to review the proposals made for further work and report on these to the Bureau;
 - agree that the revised Guide will be submitted to the 2016 October CES Bureau meeting for final approval.
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