Inclusive Growth Indicators on Regional Level

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Abstract
Indicators, as a useful reduction of complexity, are almost omnipresent. They fulfill the quest for predictability and give the impression that they are a valid basis for evidence-based policies as well as for policy evaluation. This paper focuses on the Inclusive Growth dimension Education, especially the early childhood education and care in Germany, the regional needs and the role of official statistics.

Keywords: (1-5 words), inclusive growth, policy-making, education, early childhood education, regional data.

1. Preliminary remarks

The Measurement of Economic Performance and Social Progress Commission's report (CMEPSP 2009) significantly promoted the ongoing international high-level debate concerning the limits of GDP in monitoring a society's economic and social development and it also enforced discussing a more global, multidimensional and interdisciplinary approach [12]. A variety of initiatives for measuring progress in societies followed, such as the *Europe 2020 Strategy for smart, sustainable and inclusive growth* adopted in 2010 by the European Council [2] and the OECD *Better Life Initiative* introduced in 2011 [8]. With *Rethinking education: investing in skills for better socio-economic outcomes* (COM(2012) 669)) the European Commission in 2012 started an initiative especially designed to young people.

All those approaches have in common the search for comprehensive and valid quantitative indicators applicable to policy-making and detailed controlling strategies. The indicators should be usable for "setting targets and monitoring their achievement" (Annex, Regulation (EU) No 99/2013).

While widening the focus towards a broader approach is rather novel in economics, this is not the case considering other scientific areas like sociology and psychology. Therefore, this statement should be seen as an impulse to closer look at the lessons to be learned from other disciplines. In this respect, six aspects are worth to be pointed out:

1) Nowadays the use of indicators already became a kind of cultural technique. Some people even complain about an inflationary use. In the political domain evidence-based policies are demanded from both sides, the politicians as well as the general public. This is probably motivated by the expectation of more predictability and transparency, and oftentimes inherently equalizes "evidence" with "science-oriented evidence". However, this implication can be improper if other mechanisms of political decision taking are neglected [5] [6].
2) Controlling, monitoring and evaluation are different tasks. The differences have to be considered while defining indicators [4].
3) Indicators have the function to comprise complex matters within one single figure for the sake of making communication easier. This reduction of complexity goes along with an increased abstraction from the original context – at the risk of losing the link to reality. Simple indicators, for example the indicator "early childhood and care participation rate", do not run this risk, however they only have descriptive value. They are neither suitable for identifying what causes a certain development, nor they are fit for developing adequate steering strategies, let's say, to reach a higher rate.
4) A set of indicators is needed to represent complex sectors in an adequate way, like, for example, the sector of education. If these indicators are based on theoretical constructs it has to be ensured that the theoretical constructs pertaining for different indicators are commensurable [7]. Furthermore, it should be transparent to the users if indicators are based on empirical findings and/or on normative frameworks. Especially, when defining indicators for international comparisons, one-and-the-same indicator might be a normative setting for the one country and empirically-based for the other.
5) Indicators must gain acceptance in society – by the actors at the political and administrative level, the persons concerned and the general public. As has been shown

previously, if people in charge believe that certain indicators are not applicable in their area of responsibility, they will not recognize them. As a consequence, defining and selecting indicators as well as policy making tend to be concentrated in one hand instead of being administrated to different entities with clearly separated responsibilities.

6) Official statistics data are predestined to be used as a data basis for calculating inclusive growth indicators because of the independent and scientific-based data production and their availability for long time periods. Thus, besides independent research institutions, official statistics should be involved in indicator development.

2. The dimension education in the framework of well-being

2.1 General goals

With reference to the CMEPSP report, the OECD defined in its framework "Measuring Well-being and Progress" eight dimensions in the quality-of-life sector. To strengthen the perspective of households the dimensions health status, work-life-balance, education and skills, social connections, civic engagement and governance, environmental quality, personal security and subjective well-being were included. Improving education levels and skills is mentioned as one central goal.

It is well known that education helps to avoid unemployment and poverty and supports healthiness and integration in society, that complex economies need better-educated people, and that higher education decreases the need for social transfers (see also [12], p. 46). Therefore it is not astonishing that a vast amount of educational indicators are available.

On the meta-level, the recommendations of an inclusive growth approach culminate in the provision of equal opportunities for all members of a society to participate in education. The goal is to achieve the best possible development of the individuals' potentials during life-long-learning. Barriers that hinder individual development (financial, cultural etc.) should be eliminated and special needs for disadvantaged social groups should be counterbalanced. The educational system should be flexible. It should facilitate transitions from school-to-school, school-to-vocational education etc. to diminish wrong or inadequate decisions, and it also

should allow the re-entry into the educational system. Already this description makes clear that a definition of an indicators' set is far from being easy.

2.2. Looking for a suitable analysis structure

One possible way of starting is the introduction of categories. In the field of education mainly the *input (I) – process (P) – output/outcome (O) scheme* is used taking monetary as well as non-monetary aspects into account. *Input* focuses on the efforts made by the society for setting up and running the educational infrastructure including the necessary personnel. It includes also the individual input, such as participation in the programs and fees for kindergarten, schools, books, etc. The p*rocess* indicators are the most difficult. They should describe the implementation of educational programs, quality of teaching, etc. *Output* and *Outcome* indicators describe the short-term and long-term results, like the amount of examinations at university and the employment rate.

The OECD, in its report Education at a Glace (EAG), started very early to analyze different aspects related to these three categories. One is the economic benefit of education for the individual and for society. This *outcome* indicator is based on the level of earnings. It compares lower and higher educated people and the net private and public rate of financial return. Over the years the calculation of this indicator got more and more sophisticated and differentiated. Nowadays the total benefit is calculated as the weighted sum of gross earnings benefits, income tax effect, social contribution effect and transfer effects, taking into account the probability of employment and the unemployment benefits in case of unemployment ([9], p. 143). Additionally a social outcome indicator was added after the PIAAC data were available. This short description shows that indicators that try to be "close" to reality are not static for several reasons. The label is kept but the calculation is repeatedly amended. Without some major changes, the increasing knowledge about the multifaceted phenomena these indicators claim to describe can not adequately be taken into account anymore. Thus those indicators are liable to lose their explanatory power. Furthermore, the EAG shows that, the authors' didactical effort not withstanding, for people not being deeply involved in the topic

too many indicators are available. There is a high risk for losing orientation. And as a consequence these indicators are not used.

The solution chosen by the international approaches is to introduce so-called meta-indicators in order to "draw the big picture". To describe the well-being of children younger than 18 years in the dimension education, the respective concepts mainly propose indicators restricted to an adolescent-focus. This deficient situation is clearly related to the lack of data especially for pre-school children. Also the OECD stresses this lack of data and that many children surveys are not longitudinal. It also pinpoints that there are no possibilities to differentiate between children with and without an immigrant background, and the chances for disaggregation of socio-demographic information are rather limited ([9], p. 149).

2.3. Meta-indicators for early childhood education and care (ECEC)

The institutional education of children starts long before entering school. A vast amount of scientific findings show that learning in institutional settings before entering school is beneficial for results in school, provides a good start for learning to-learn-skills, supports social integration and the overall development of the children. Therefore, the goal of achieving a high *participation rate in ECEC* has a strong empirical basis and should not be seen as a normative indicator. In 2009 the European framework for *cooperation in education and training* established this *input* indicator as a benchmark for the EU member states. Till 2020 the attendance rate should reach the level of 95% of all children between the age of four years and the starting age of compulsory education. Also the OECD used this indicator in *Indicators of Immigrant Integration* ([10], p. 240) covering all children aged three to less than six years old.

The *ECEC participation rate* measures inclusiveness in the sense of complete participation of a certain age group. It records the general chance for young children to benefit from institutional education provided in ECEC. If the ECEC provides adequate offers, especially in the case of children, which have special needs, remains unclear. The programs vary markedly between and even within countries, such as the availability of places, the daily hours opened, the hours of free ECEC provision, the existence of educational programs, the requirements for

staff qualification, the amount of compulsory ECEC years before entering school. Therefore it is not surprising that effects of participation in ECEC vary also. In comparison to other educational phases ECEC *process* indicators usable for global international comparisons are unfortunately not available. While other phases have defined *outputs* – school examination grades, vocational training results, bachelor or master degrees, etc., there is nothing comparable available for ECEC.

From the inclusive growth perspective – no child should be left behind – the analysis is currently limited just to the attendance rate. On national level further indicators are in stock, for example language tests conducted before entering school. Due to this situation it is even more important to come up with tools that allow for a very detailed analysis concerning reasons for less frequent participation, especially with regard to disadvantaged population groups and regional areas.

2.4. Early childhood education and care (ECEC) in Germany

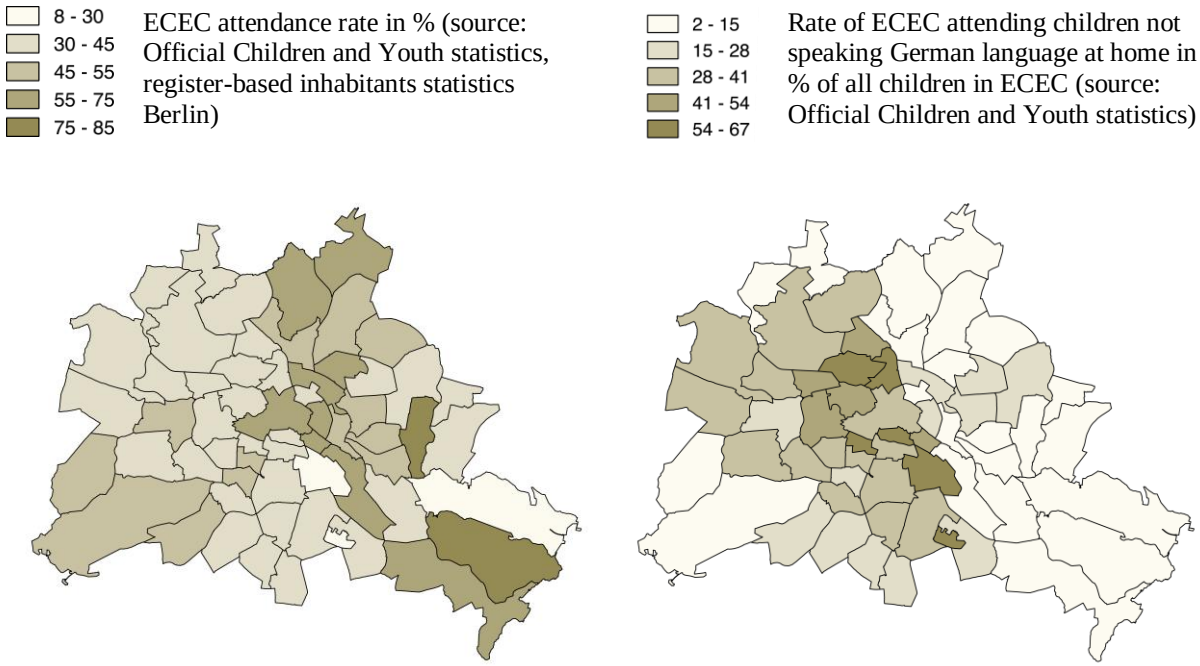
Germany, as many other countries, has already reached the EU benchmark – but what does that mean – for what purposes is this information usable?

In Germany the ECEC attendance indicator is calculated on the basis of the official national Children and Youth Statistics (C-Y-S). This statistic covers all children that participate in ECEC in Germany beginning at birth till entering school. The ECEC institutions are obliged to report to the statistical offices. For research purposes the data are available on the disaggregation level of 593 districts if no data protection issues are relevant. Since nowadays the ECEC institutions report no link to household data (mainly German micro-census) is available anymore.

In 2015 the average attendance rate is 33% for children less than 3 years old (u3-indicator) and 96% for children aged three to less than six years old (3u6-indicator). A regional breakdown for the 16 federal states shows a participation range form 19% up to 57% for u3-children and 90% to 97% for the children 3u6 ([11], p. 13). A more detailed look, for instance at the city of Berlin, reveals marked regional heterogeneity. The u3-participation rate ranges between 8 and 85% (see Fig. 1 left). To explain these huge differences, regional socio-demographic data for

households with young children are necessary. A clarification at this point is necessary especially because in Germany the participation years in ECEC are positively correlated with the competence in German language when entering school. Although no linkage to household data is possible the C-Y-Statistics provides some further information: namely, whether the mainly spoken language in the child's home is German or not. The map (see Fig. 1 right) indicates the relation between participation and language spoken at home whereas language should be understood as a proxy variable. Further analysis, due to the lack of regional data, is not possible. In consequence, several not scientific-evidence-based assumptions hamper a realistic and constructive debate.

Fig. 1: Children younger than three years old in Berlin 2015 ([11], p. 36)



Further clarification would be possible if data concerning the socio-demographic related educational risks would be available on regional level. In several countries the educational involvement is heavily depending on the socio-demographic background. Especially three risks for educational success are discussed: a) poorly educated parents (less than ISCED 3), b) parents' unemployment and c) poverty. In Germany immigrants face these risks above average. In Berlin 31% of the children younger than 6 years old with an immigration

background have poorly educated parents, 29% have jobless parents and 28% are poor. 58% face at least one of the risks, 13% all three (source: German micro-census 2014). At the national level, the data show very clearly that further differentiation between foreign-born children and offspring of foreign-born parents would make sense – but due to the lack of data is not possible.

3. Conclusions concerning the dimension education

The cultural heterogeneity of countries, educational systems and educational traditions make it difficult to define powerful international indicators in the educational sector within the framework of well-being. The ECEC participation rate should be one of them. Disaggregation must be possible down to the regional level were decisions related to ECEC are taken. Further, data for aspects that influence the indicator at the national level must be made available. Representative regional socio-demographic information is necessary to draw conclusions concerning the phenomena found and to set up adequate policies. Official statistics should provide the data, especially to ensure the national coherence and comparability.

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