Economic activity of persons with disabilities in the light of 2011 population census

Introduction

As a result of the ongoing process of population aging, disability, particularly among older people is becoming increasingly common. Meanwhile, in the period between the censuses in 2002 and 2011 a 14% decrease in the number of people with disabilities was observed.

The population of disabled persons in Poland decreased from 5,456.7 to 4,697.0 thousands (CSO 2013). A lot of discussion arouses due to limited scope of information about disability in 2011, compared to 2002 population census, both in substantive and territorial dimension (Dehnel, Klimanek, 2016). Additionally, one can find critical assessment of changes in legislation and tightening up the rules for granting pensions in respect of incapacity for work and other similar disability benefits, what resulted in a significant decrease in the population of persons with legal disability (Slany 2014 Jaros, Biały 2013).

In addition, it is pointed out that change in the number of people with disabilities is due to, among others, the voluntary nature of the census questions about disability. In 2011 census nearly 1.5 million respondents took advantage of the possibility of not answering to questions on disability. Missing data can affect age and sex structure of persons with disabilities, obtained from census data. Researchers explicitly state the existence of "statistical confusion" and emphasize the priority of attention to avoid sensitive topics, over the reliability and credibility of official statistics (Slany 201

Methods / Problem statement

The biggest surveys that collect information about people with disabilities are censuses. The last National Census of Population and Housing in Poland in 2011, was conducted by using a mixed method. That means by using administrative data sources (registers and information systems) and sample survey data obtained directly from the population. A wild scope of data in the 2011 Census (including the topics on disability) was collected in the survey conducted on a 20% sample of randomly selected households, and on a voluntary basis.

This approach limits data availability at lower levels of territorial division. Data on people with disabilities are collected also in a number of other statistical surveys (Labour Force Survey, Household Survey). But usually limited sample size and estimation methodology, limit data availability at a certain (low) level of territorial division. In the study we attempt to answer the question on the possibilities to carry out a comprehensive analysis of disability in Poland on the basis of available data sources, including first and foremost the 2011 population census. The question is whether it is possible to compare data on disability over time, taking into account two main categories: biological and legal disability.

Particular attention was paid to the economic activity of people with disabilities. We want to determine the possibility of assessing differences between regions, the results of which are necessary for the needs of the local community.
**Results / Proposed solution**

First, we verify the census data and assess compliance of demographic structures of people with disabilities. A major challenge is the use of advanced SAE methods to estimate characteristics of the surveyed population for lower levels of territorial aggregation.

The aim of the study is to provide estimates of economic activity of the disabled population for provinces and districts. To do this take into account information from various data sources: 2002 and 2011 censuses and LFS. The applied research procedure comes down to the use of indirect estimation and demographic analysis. 1. Assessment of the compliance of demographic structures and comparability of data on disability in time: Persons with disabilities by type of disability as of the 2002 Census will be subject to aging procedure analogous to that used for in demographic projection. Correction of the resulting structures will be based on the relationship between the estimates from previous censuses.


**Conclusions**

The study will provide estimates of the disabled population based on data from 2011 population census for provinces and districts. It will include economic activity and type of disability. Using information from previous censuses, Labour Force Survey and administrative sources will enable a thorough assessment of the quality of the 2011 population census. Additionally it will provide assessment on possibilities to compare data of population with disabilities between the censuses and the inter-census period.

So far, the results of the analysis are encouraging, but indicate a large discrepancy between the data, the need for many adjustments and the need to use of advanced estimation methods. Additional problems results from a large percentage of nonresponse and refusals.