## Abstract for "Regional Inequality in Benefits in Kind: The Case of the Italian National Health Service"

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There are many different items which concur, directly or indirectly, to form the income of a person, or a household. This work examines how the income distribution in Italian regions changes when the value of health care expenditure is included in disposable income.

Using the Abul Naga and Yalcin (2008) index, this paper extends previous analyses, focusing the investigation on a regional level. The aim is to obtain a matrix education- health, which improves the classical method, insurance value approach, based solely on age and gender in order to allocate the value of health care services. Applying the new method on IT-SILC 2010 data, I will show that the health in kind transfer, on the one hand reduces the total inequality, but on the other it increases the inequality between regions.

The social benefits in the Italian welfare state, are supplied in cash and in kind. The share of cash benefits is greater than benefits in kind; there are also countries, such as Denmark, Sweden and the United Kingdom, where the share of benefits in kind is greater than in cash (OECD 2011). In Italy, three of the most important public transfers in kind are: public education services, public health care services, child and elderly care. In many instances the benefits in kind are not means-tested, which may have consequences for their distributive impact, favouring the rich rather than the poor, as is sometimes affirmed in the literature.

This work takes only into account the health care services for three principal reasons. The first is that the health services have the largest proportion among the benefits in kind; secondly they present some critical factors when allocated among all beneficiaries; the third reason is linked with the principal role played by the regions in the health care services management. As in an international context, the in kind benefits are added to the cash income in order to compare different welfare systems across the countries, also in Italy, I add the benefits in kind to the cash income to compare the differences in the health care system at a regional level, at the same time verifying the role of the different management of the health care among the regions.

Most of the literature which has investigated the size and evolution of income inequalities in Italy depends on the concept of household disposable income computed as gross income minus regular taxes on wealth and social insurance contributions. A share of the personal income tax (PIT) is used to finance the expenditure on the National Health Service (NHS), so it is important to account for the services which governments provide through these taxes.

The assessment of the value of the in kind transfers raises a number of conceptual and methodological issues: the estimate of the value of public services; the method of allocation of the value estimated across the population and the use or not of the equivalence scale. In accordance with most of the literature, the production cost approach will be utilized in this work to estimate the value of health services; even if it is useful to underline that the costs incurred in producing the service could be different

from the benefit enjoyed by the user because of possible inefficiencies in their production (see Aaberge and Langørgen (2006), Bordignon, Baldini, et al. (2006)). In an international context, the value of benefits in kind is allocated according to actual consumption approach or insurance value approach (IA). (see Smeeding et al. (1993), Garinder (1995), Marical et al. (2006), Garfinkel et al. (2006), Vaalavuo, M. (2011)). The IA, allocates an equal amount of a service – considered as the premium that should be paid to be insured against the risk of illness – to everybody sharing the same characteristics (age or gender).

In order to improve the analysis I will show a new method, based on Abul Naga and Yalcin (2008) index to allocate the value of health care services. The new procedure is still based on the insurance value approach, but starting from health care consumption used in IA, I will adjust it with different weights which take into account the relationship between the health and educational level. This relationship could be considered a proxy of the different needs of health care among individuals overall. The new weights are assessed through the inequality index proposed by Abul Naga and Yalcin (2008) for the self-reported health status (SRHS). The Naga Yalcin inequality index is in the range [0 1], and it is at a minimum when everyone is in the same category and at a maximum when half of the population lies in the lowest category and half in the highest category.

The last part of the paper is dedicated to analysing the empirical evidence where, firstly, I will compare the new method with the classical method and I will show that it improves the main inequality index. Secondly, I will investigate how inequality changes among the regions and the disposable income, when the health care services are allocated to the inhabitants.