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A COMPOSITE INDICATOR ON FARM SUSTAINABILITY. THE POTENTIAL OF THE ITALIAN CENSUS OF AGRICULTURE

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From the Brundtland report, that introduced the “classic” definition of sustainable development, to the Rio Summit, that laid the foundations for its global institutionalization, the concept of sustainability has been at the center of a very vast international debate (1997 Earth Summit, 2002 WSSD, 2012 Rio+20, MDGs 2000, MDGs Report 2015). In the UN2030 Agenda for Sustainable Development, Goal 2 aims to “End hunger, achieve food security and improved nutrition and promote sustainable agriculture“ and it will come into effect on January 2016, guiding policy making for the next fifteen years.

Over the past two decades, the scientific literature has tried to describe and measure sustainable development in its various declination (Simon, 1989; Becker, 1997; Parris and Kates, 2003; Moldan et al. 2006; Rao and Rogers, 2006; Hansen, 1996; Raman, 2006), often addressing the complex interconnections that exist between the three dimensions of development: environment, economy, and society. More specifically, a number of different indicator-based methods assessing sustainability of agricultural systems have been proposed (Rosnoblet et al., 2006; Rao and Rogers, 2006 ; Bockstaller C. et al. 2009; Gómez-Limón and Sanchez-Fernandez, 2010; Reig-Martinez E. et al., 2011; Binder et al. 2012 ; Hřebíček et al. 2012).

In this paper, we describe the information collected by the agricultural census and we assess its ability to measure some of the environmental, economic and social factors useful to provide a definition of agricultural sustainability.

The census of agriculture is the principal mean of collecting agricultural statistics, providing a comprehensive source of statistical information for farms and agriculture. It contributes to agricultural planning and policy-making process in a number of areas, including food security, work, gender and environmental issues. The Census timeliness does not allow to considered it a primary source for monitoring Sustainable Development, but it has the potential to provide very valuable information, especially if integrated with other sources.

We propose, therefore, a framework for assessing farm sustainability and build composite indicators for social, economic and environmental aspects of farm sustainability, as well as a general index as combination of the three.

In the construction of the composite indexes, the first step is the translation of a possible generalized concept into a measurable information. The economic dimension considers indicators such as the presence of other gainful activities beside the agricultural one and their weight as a diversification of income sources, the presence of ICT devices, the use of e-commerce, land and labour productivity and the presence of quality certifications; the social dimension takes into account age, education and training of agricultural holders and the stability of jobs within the farm; finally the environmental dimension includes indicators on sources and efficiency of irrigation, organic farming, livestock density, soil protection practices, the use of renewable energy and the presence of energy crops.