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Are food consumers interested in energy matters? a consumer survey in Italy

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Abstract

The agri-food sector consumes more energy than it produces, and it is one of the least energy-efficient industrial systems. Indeed, energy is an important input of the agri-food system in all of its phases: directly, in the form of electricity, mechanical power and fuels, and indirectly for the manufacture of other inputs, like fertilizers and pesticides. The agrifood system uses about 30% of the world's available energy, distributed among agriculture (33%), processing (28%), logistics (9%), packaging (11%), final use (13%), and the end of life (6%) (JRC, 2015).

The intensification of energy utilization has allowed food production to increase, but it has also raised the overall energy input to energy output ratio (Sabaté and Soret, 2014). Such ratio has grown from a value around 1 of the pre-industrial society to a value equal or even greater than 100 today (Iannetta et al., 2012). Moreover, the energy employed mainly derives from fossil fuels. Energy has also been identified as one of the key causes of food price increase in the last years (FAO, 2012). With a growing world population, demand for food and, thus, for energy will increase. Therefore, an improvement in energy efficiency and a shift to renewable sources in the food sector is required for a transition towards a more sustainable food system (FAO, 2012).

In recent decades, firms have become increasingly conscious about their impact on the environment and that environmentally friendly behaviour is an opportunity on the market. Quite recently, energy-related indications are starting to appear on food labels. Providing information on the type of energy used or the amount of energy saved in the production process seems to be an emerging strategy that is progressively taking place also in the food sector.

The present work aims at investigating consumer attitudes and behavioural intentions about a set of energy-saving or emission-reduction food related actions. The theoretical framework adopted is that of the Theory of Planned Behaviour (TPB). The TPB assumes that people's intention to perform a certain behaviour depends on three main determinants: attitude towards the behaviour, subjective norms and perceived behavioural control (Ajzen, 1991). In our paper we integrated the TPB with self-related variables which have been highlighted as

important in the food economics literature to explain consumer sustainable consumption. Such variables relate to moral norms, environmental concern, and perceived consumer effectiveness.

Data was collected by means of 635 face-to-face interviews implemented in the Milan area. Interviews were based on a questionnaire arranged in a multiple-choice format with Likert rating scale, built following the TPB methodological indications (Ajzen, 2006). Data were analysed by means of structural equation modelling.

Preliminary results confirm the TPB model and also the role of the additional variables included in the analysis. The study identifies the determinants affecting consumer preferences for energy-saving or emission-reduction food related behaviours and provides useful indications for policy-makers and firms in relations to possible scenarios for sustainable food production.

Keywords : consumer attitudes, sustainable food, renewable energy