

Perceptions of energy saving in agriculture: a qualitative analysis in Greece

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Overview

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Decisions regarding larger investments, such as appliances, transport and buildings, are typically made infrequently and often have a long lifetime. In order to have a significant impact on the energy efficiency of these decisions, consumers should be encouraged to consider energy efficiency at the point of sale (Kallbekken et al 2013). Subsequent treatments aimed at altering usage are likely to have a significantly lower impact than a decision to purchase a more efficient product in the first place. In an attempt to reduce the Energy Efficiency Gap and provide customers with useful energy consumption information at the point of sale, the EU mandated in 1995 that all electrical appliances for sale carry labels to indicate their energy consumption (Energy Labelling Directive Directive 2010/30/EU). Labelling schemes are already having an impact, with the existing EU appliance labels estimated to provide energy savings of 19% by 2020 (Ecofys, 2014). However, while these labels are now used across Europe, **relatively little is known about how consumers interact with these labels and how they impact on the relative importance of energy consumption in the decision making process.**

The problem of energy efficiency gap is one of behavioral patterns not favoring rational, cost-minimizing purchases and uses of energy consuming appliances and machinery (Jaffe and Stavins 1994). In order to influence and motivate economic agents to invest in greater energy efficiency, it is necessary to understand the wide range of factors which potentially influence their decision.

The research reported here is part of a larger effort, the CONSEED project (CONSUMER Energy Efficiency Decision Making), to study how different consumer groups make energy efficiency investment decisions. Furthermore, we are exploring if explicit energy cost information provided at the point of sale (“lifetime energy costs”) leads to increased demand for energy efficiency (Heinzle 2012, Kallbekken et al. 2013). The project is applying four distinct methodologies to answer these research questions: focus groups, consumer surveys, field trials and discrete choice experiments. Focus groups are being conducted across five countries (Ireland, Spain, Greece, Norway and Slovenia), four sectors (residential, agricultural, service and industrial) and three technologies (property, transport and appliances/machinery). This paper presents focus group findings for the agricultural sector in Greece.

Methods

Qualitative methods (focus groups and in-depth interviews) have been applied to investigate perceptions on energy cost and savings. Although CONSEED emphasis is given in the demand side of energy use (consumer level purchasing decision) we extended our research to include the supply side. For this reason the farm technology suppliers were approached. Their views on the matter were investigated, their experience sought and the potential offered to dairy farmers for energy saving was recorded. To facilitate contacts with this kind of stakeholders, we surveyed the participants of an international exhibition in which more than 300 professional exhibitors represented the farm machinery supply side. ZOOTECHNIA 2017 (Thessaloniki 2-5 February 2017) is the only exhibition in Greece and the Balkans specializing in the animal production sector, a meeting point for livestock representatives. Its main goal is presenting types of productive animals, machinery and services, fostering the ideal conditions for opening new markets and concluding commercial agreements. Farm technology suppliers of the exhibition provided insights which then were used in the discussions with the consumers (dairy farmers).

Dairy producers have been recruited through dairy farm associations. Two focus groups and four in-depth interviews were conducted. The participants included adult men and one woman. The research protocol included the following broad-level research questions which were explored throughout:

1. What attributes matter in the investment decision?
2. How important is energy efficiency in this decision?
3. Does current informational policy increase the demand for more efficient technologies?

4. How can informational policy be changed to increase the demand for more efficient technologies?

Results

Energy poverty is expanding among Greek households and medium size firms. The energy component of production cost is acknowledged in Greece to be the main parameter affecting inflation. Research institutes point to the untapped potential for energy saving. Agriculture is a domain with large potential for energy saving. Energy cost for agriproducts in Greece amount to 8-10% of total cost. Preliminary results for the Greek agriculture and dairy sector show that:

Upfront costs - coupled with technological standards - have been traditionally the main parameter affecting purchase decisions. Since energy and fuel costs were heavily subsidized by the Greek state up to 2015, energy efficiency played a minor role in purchase decisions. It is only recently, due to the financial downturn that farmers started to realize the necessity of informed decisions in this respect. They estimate the potential for energy cost reductions to reach 8-10% of total production cost.

Current informational policy in this domain is poor and ineffective. Traditionally, Greek farmers rely on local agronomists for information on new products and methods. Up to now energy and fuel efficiency directions are provided only on individual request and do not represent a basic item in the farmer/agronomist interface. A small percentage though – mainly young and educated agri-entrepreneurs – use internet to get information on energy saving potential. Farmers feel that energy efficiency options exist but are not aware of how to get this information neither are assured about the reliability of potential sources. Suppliers and selling firms of machinery – who could have played the role of a serious channel of information provision - do not address the energy saving characteristics of machineries in their marketing strategies.

Participants in our research agree that in terms of energy efficiency, the introduction of energy labelling in Greek agriculture and dairy sector would substantially help overcome the informational gap and improve their frame of decision making. Today this information is missing from professional machinery advertisements. Furthermore, while there is broad consensus that the technicality of the information limits understanding, most found the colour-coded comparative groupings (similar to EU appliance labelling) intuitive. Participants suggested that the label could be improved by adding a cost dimension. When shown a prototype of an energy cost label (“annual energy saving”), there was agreement that this new information would be valued.

Conclusions

Conclusions will be drawn once our empirical work is complete (June 2017). At this stage our research indicates that the success of energy saving informational policies in Greek agriculture and dairy sector is down to the simple idea of sharing experience between people. By discussing ideas, success stories and knowledge of potential setbacks with other people trying to achieve the same objectives, experience shows that energy saving schemes are implemented far quicker and at less cost.

References

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