

# Is there a future for semi-subsistence farm households in Central and southeastern Europe? A multiobjective linear programming approach<sup>☆</sup>

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## 1. Introduction

Farmers in Central and southeastern Europe, especially semi-subsistence farm households (SFHs), must make a series of decisions to increase their income. Although SFHs are often

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unprofitable from a farm business perspective, they have persevered, and it is generally agreed that they are important in providing food and shelter for both resident families and urban-based relatives during periods of structural change, such as during a transition period (Braun & Lohlein, 2003; Heidhues & Brüntrup, 2003). There is an ongoing debate about what could prompt farm households in general and SFHs in particular to become more profitable or to exit farming (Chaplin, Gorton, & Davidova, 2007; Csaki, Forgacs, Milczarek-Andrzejewska, & Wilkin, 2008; Hazell, Poulton, Wiggins, & Dorward, 2007). A number of policy measures within the Common Agricultural Policy (CAP) address this issue, and a special transitional semi-subsistence support measure was introduced in the enlargement process of the European Union (EU) to promote development of the smallest agricultural producers into commercialised private farms (European Council (EC) Regulation No. 1698/2005, Article 20(d)(i)). Anticipating the future of SFHs requires comprehensive and reliable information on the phenomenon of SFHs and the impact of different household strategies on their viability.<sup>2</sup> This contribution attempts to address both issues.

One prominent issue in discussing semi-subsistence farming is its definition; there are various approaches to identifying this activity (Braun & Lohlein, 2003; Heidhues & Brüntrup, 2003), but no single approach is generally accepted. Summing up national definitions in the Rural Development Programmes in Poland (MARD, 2007), Romania (NRDP, 2008), and Bulgaria (RDP, 2007), a SFH is defined in this paper as an agricultural holding of 1–4 ESU<sup>3</sup> that markets part of its agricultural production. This agricultural semi-subsistence sector is important in all three countries, with about 660,000 farms in Poland (27.7% of all Polish farms), 96,000 farms in Bulgaria (19.4%), and 800,000 farms in Romania (20.3%) in 2007 (Eurostat, 2010a). In Poland, the number of private farms cultivating 1–5 ha dropped by about 10% from 1989 to 2008 (own calculation based on data from GUS, 1992, 2009). Analogous time series data are lacking for Romania and Bulgaria but the number of farms of size 1–4 ESU declined from 2003 to 2007 by about 30% (Eurostat, 2010a).

In Romania and Bulgaria, semi-subsistence farms are mainly operated by elderly people. Normally, they did not undergo vocational training with regard to farming. In Poland, the picture is significantly different due to a higher share of younger people being better trained in agriculture.<sup>4</sup> Official statistical information on household income and the significance of the agricultural output for own use is missing but empirical studies show that subsistence production contributes significantly to household income and may lift households above the poverty line (Fredriksson, Davidova, & Gorton, 2010).

This paper is organised as follows: Section 2 introduces the methodology applied to the subsequent cluster and impact analysis. Section 3 characterises the wide range of SFHs by describing different household types in the three survey countries. Section 4 focuses on the future prospects for SFHs and the impact of different strategies on their viability. The contribution ends with a summary of the main findings and conclusions in Section 5.

<sup>2</sup> A household is viable when it has at least an income that covers its expenditures.

<sup>3</sup> ESU (European Size Unit): the measure is used to determine the economic size of farms in the EU; 1 ESU equals 1,200 EUR standard gross margin (FADN, 2010).

<sup>4</sup> In 2005, 91% of Romanian and 92% of Bulgarian farms of size 1–4 ESU were operated by farmers having only practical experiences in agriculture. In Poland, the share was 53% (Eurostat, 2010b). In 2007, 67% of Romanian and 72% of Bulgarian farms of size >0 to <5 ha were operated by farmers of 55 years or older. In Poland, the respective share was 43% (Eurostat, 2010c).

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