RESEARCH ARTICLE

Farm household income inequality in Slovenia

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Abstract

Aim of study: To investigate the structure and evolution of farm household income and examine the contribution of different sources of farm household income, particularly the impact of Common Agricultural Policy reform on farm household income inequality in Slovenia.

Area of study: Slovenia, one of the European Union member states.

Material and methods: A panel data set was compiled using Slovenian Farm Accountancy Data Network data at farm level for the period 2007-2013. Total farm household income was disaggregated into two different components: 1) income components, which can contain market income and off-farm income, and 2) subsidy components, which can contain subsidies from Pillars 1 and 2. Pillar 2 support included subsidies related to agri-environmental measures, less favoured areas and other rural development measures. The income distribution and decomposition were examined using the Gini decomposition method to determine the contribution of each income source and the policy shift from market to government support on farm household income and overall inequality.

Main results: A shift in Common Agricultural Policy and related measures determined the structure and evolution of farm household incomes. Off-farm income had a lesser and rather stable impact on farm household income inequality, while the major change involved an increase in the importance of subsidies from Pillar 2 which is consistent with a policy of targeting farms in less favoured areas. Subsidies from Pillar 1 reduced, while market income increased farm household income inequality.

Research highlights: Subsidies in farm incomes increased. They could reduce farm household income inequality.

Additional keywords: farm income; off-farm income; Common Agricultural Policy; less favoured areas; Gini decomposition.

Abbreviations used: CAP (Common Agricultural Policy); EU (European Union); FADN (Farm Accountancy Data Network); LFA (Less Favoured Area).

Introduction

The traditional objective of the Common Agricultural Policy (CAP) of the European Union (EU) has been to increase agricultural income and to ensure an adequate level of farm income. Historically, different policies and measures have been used to achieve this objective. During the last two decades, the CAP of the EU has substantially shifted away from favouring market price supports to focusing on Pillar 1 and later Pillar 2 measures for increasing and/or stabilizing the incomes of farmers, with a crucial role for subsidies as a form of budgetary government support. These policy shifts and the growing pressure to reallocate EU budget funds to larger societal and global issues have increased attention on the potentially distortive and perverse effects of CAP subsidies as they account for 37% of the EU budget (European Union, 2019). According to the 'Iron Law' of the distribution of support in the EU and other Organisation for Economic Cooperation and Development countries (Moreddu, 2011), around 20% of farmers receive 80% of all subsidies. The level and

distribution of incomes from the CAP and its potential inequality has been topic of the highest political and economic importance (*e.g.* Ciaian *et al.*, 2015; EC, 2017). Earlier agricultural economics literature has developed and empirically applied the concept and the context of the decomposition of the Gini Coefficient to the structure and evolution of farm income and agricultural household income (Keeney, 2000; El Benni & Finger, 2013; Severini & Tantari, 2013, 2015). These papers focus on the impact of CAP reform on farm income and farm household income inequality. While there may be heterogeneity in results across EU member states and their regions, most studies report that subsidies have reduced income concentration and thus also farm household income inequality. For example, Keeney (2000) found that direct payment policies reduced farm income concentration in Ireland – particularly, the compensatory allowances awarded to farmers in areas faced with natural production handicaps – which are at the greatest risk of having low farm income. Allanson (2006) and Allanson *et al.* (2017) for Scotland, Allanson & Rocchi (2008) in a comparative study of Scotland and Tuscany (Italy), El Benni *et al.* (2012) and El Benni & Finger (2013) for Switzerland and Severeni & Tantari (2013, 2015) for Italy have reported that agricultural support, especially direct payments (within the EU's CAP Pillar 1) have reduced income concentration and thus reduced farm income inequality within the agricultural sector. The literature also introduced the role of off-farm income on farm and agricultural household income and the disaggregation of a variety of forms of agricultural support such as subsidies from Pillars 1 and 2 (Severini & Tantari, 2015). For Switzerland, El Benni *et al.* (2012) found that the changes in area-based payments, ecological compensation area and extensive crop production payments reduced household income inequality, while all other subsidy payments that were examined increased inequality. In a subsequent study, El Benni & Finger (2013) analysed total farm household income for three sub-samples of Swiss farm families located in the mountains, hills and plains. This research confirmed the claim that the relative importance of different kinds of direct payments changes according to farm location. Sinabell *et al.* (2013) explored the farm income distribution considering the distribution of direct payments of the CAP, including the case of direct payments in Slovenia.

This paper contributes to the analysis of the impact of CAP reform on farm household income inequality in Slovenia, which on 1st May 2004 acceded to EU. The novelty of the research is threefold. First, while similar studies have been conducted for old EU member states (Severini & Tantari, 2015) and for developed non-EU

countries such as Switzerland (El Benni & Finger, 2013), there have been no similar studies for new EU member states. Second, while different clusters of farms have been considered in earlier analyses, no study has yet focused on making a comparison between less favoured area (LFA) farms and non-LFA farms supported with evidence on the greater dependence on market income and its volatility of non-LFA farms than LFA farms. Finally, this analysis focuses on farm household income, its constituents and farm household income inequality in Slovenia between 2007 and 2013. Slovenia is an ideal location for such a case study because it is a new EU member state in which LFAs play a very important role (Baráth *et al.*, 2018) along with other Pillar 2 instruments such as agri-environmental measures (Unay-Gailhard & Bojnec, 2015, 2016; 2019). Slovenia introduced CAP-like measures before entry to the EU in 2004 (Bojnec & Latruffe, 2013). Direct payments from Pillar 1 in general, and rural development subsidies from Pillar 2, particularly LFA subsidies, are of crucial importance for sustaining predominantly fragmented family farm structures in hilly and mountainous areas (Knific & Bojnec, 2015).

Methods and data

A range of indices is used in the literature in describing the income inequality (Allison, 1978; Manero, 2017). One of the most popular is the Gini's (1921) coefficient. The decomposition of overall income inequality by subgroups or by income sources was introduced by Bourguignon (1979) and by Shorrocks (1980, 1982, 1984). The chosen method is based on a decomposition of the Gini coefficient by income source originally developed by Lerman & Yitzhaki (1985) and later extensively used in the approaches employed in earlier agricultural economics literature (Keeney, 2000; El Benni *et al.*, 2012; El Benni & Finger, 2013; Severini & Tantari, 2013, 2015), in which income is generated by *k* components, and the decomposition of the Gini (G) coefficients by income source is undertaken in the following way:

$$G = \sum_{k=1}^{K} R_k * G_k * S_k \qquad (1)$$

where R_k is the 'Gini correlation' between income component *k* and the rank of total income, G_k is the Gini coefficient for the *k*th income component, and S_k is income share of the *k*th income source.

The concentration of coefficients of the *k*th income source (C_k) is defined as:

$$C_k = R_k * G_k \qquad (2)$$

The 'proportional contribution to inequality' of the kth income source (P_k) is defined as:

$$P_k = R_k * G_k * S_k/G \qquad (3)$$

and the Gini coefficient rate of change with respect to the mean of the kth income component is defined as:

$$\frac{dG}{d\mu_k} = \frac{1}{\mu} * (C_k - G) \qquad (4)$$

The Gini coefficient as a measure of income inequality leverages a scale of 0 to 1 to derive deviation from perfect income equality. The Gini coefficient of 0 would imply perfect income equality, while the coefficient of 1 would imply complete income inequality. The Gini coefficient has a number of limitations (Chen *et al.*, 1982). One of the strongest limitations is that in the presence of negative incomes the coefficient is greater than 1 and the original Gini coefficient decomposition formulae become inappropriate (Manero, 2017). This identified limitation in the literature is considered in discussion of consequences of our analyses.

Data

The Slovenian Farm Accountancy Data Network (FADN) for the period 2007-2013 was used as a data source to evaluate the impact of CAP reform and economic recession on farm income in Slovenia. The

comparable FADN data for Slovenia were available from the year 2004, while in the analysis was included the rural development programming period 2007-2013. In addition, price indices as deflators obtained from the Statistical Office of Slovenia were used to transform current euro values into constant euro values using 2010 as the base-year. Total farm income is comprised of two potential components: 1) income components, which can contain market income and off-farm income, and; 2) subsidy components, which can contain subsidies from Pillars 1 and 2. Pillar 2 support includes subsidies related to agri-environmental measures, LFAs and other rural development measures.

Results

The empirical results are presented in two steps. First, we present the evolution of farm household income structures in constant value terms and as relative shares. Second, the farm household income inequalities for farms located in LFAs and non-LFAs with the applied Gini coefficient decompositions were compared.

The evolution of total farm income and its components

Figure 1 illustrates the evolution in total farm income for total sample of FADN farms in Slovenia (Fig. 1a). Total farm income tended to increase but underwent considerable cyclical oscillation and a rapid decline in
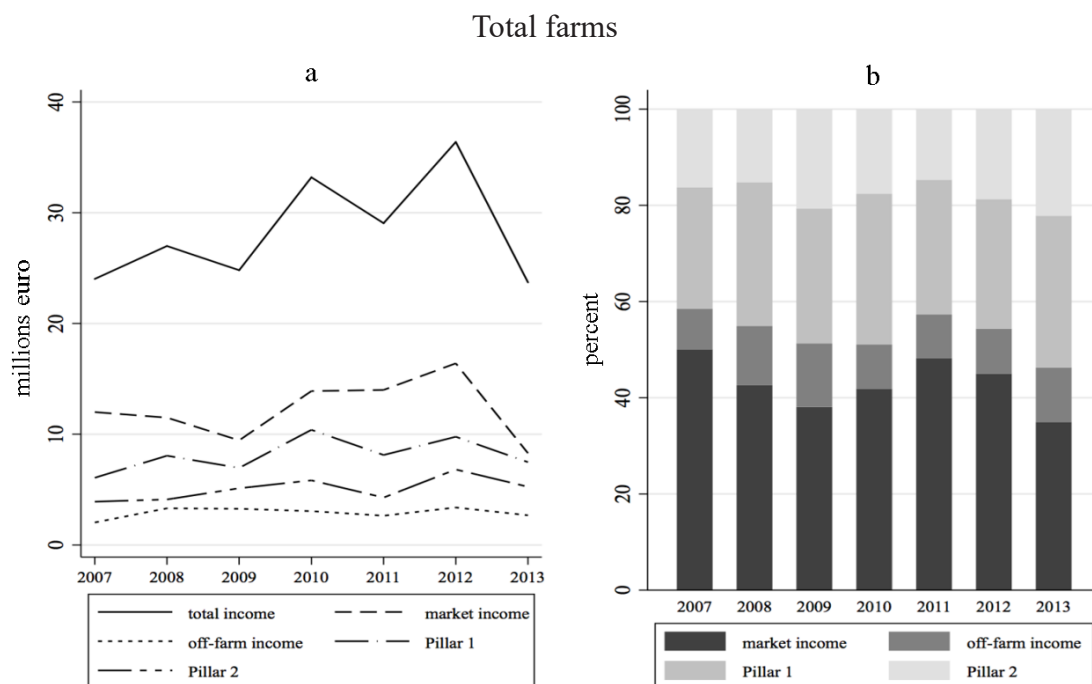

Figure 1. Income (a) and income composition (b) for total farms, 2007–2013.

2013 largely due to the considerable decline in market income. Due to this drop in market income, which is determined by farm output sales and output prices, its relative importance in total farm household income also declined (Fig. 1b). Off-farm income remained rather stable both in terms of value and in the structure of total farm income. Subsidies from Pillar 1 remained more important than subsidies from Pillar 2. The share of subsidies from Pillars 1 and 2 in total farm household incomes tends to increase over time.

Most income was received by farms in LFAs (Fig. 2a). This is consistent with the fact that most Slovenian farms are situated in LFAs (Unay-Gailhard & Bojnec, 2015, 2016; Baráth *et al.*, 2018). Interestingly, due to the significant decline in market income in 2013, subsidies from Pillar 1 for farms in LFAs were more important than market income. In addition, there was a steady increase in subsidies from Pillar 2. Off-farm income slightly increased. In terms of the structure of LFA farm incomes, market income declined considerably and in 2013 represented less than one-third of farm income and less than 50% in combination with off-farm income (Fig. 2b). On the other hand, subsidies from Pillars 1 and 2 increased. Subsidies from Pillar 2 particularly increased during the years when there was a considerable decline in market income. This implies that subsidies from Pillar 2 play a specific role in mitigating decreases in farm income in LFAs through compensating for declines in market income from farm output sales, thus ensuring

greater stability of farm income (Bojnec & Fertő, 2019).

High volatility can be seen for market income evolution for farms located in non-LFAs (Fig. 3a) which may be caused by volatility in the quantity of output sales and output prices. Subsidies from Pillar 1 have tended to decline since 2010, while subsidies from Pillar 2 have, except for the year 2013, tended to increase. Off-farm income for non-LFA farms is less important than for LFA farms. This finding holds for absolute values *and* the relative share of the farm income (Fig. 3b). The share of market income for non-LFA farms undergoes cyclical oscillation over time but is much more important for non-LFA farms than for LFA farms. On the other hand, the share of subsidies from Pillar 1, and particularly from Pillar 2, in farm income for non-LFA farms is less important than it is for LFA farms.

Farm income inequality

Total sample of FADN farms

The Gini coefficients for the whole sample according to the different farm income sources remained rather stable over time, except with market income (Fig. 4a). The Gini coefficients remained between 0 and 1, except for market income in 2013 when they overshot 1 due to negative farm income caused by losses from farm market activities (Manero, 2017). Market income and off-farm income were much more unequally distributed
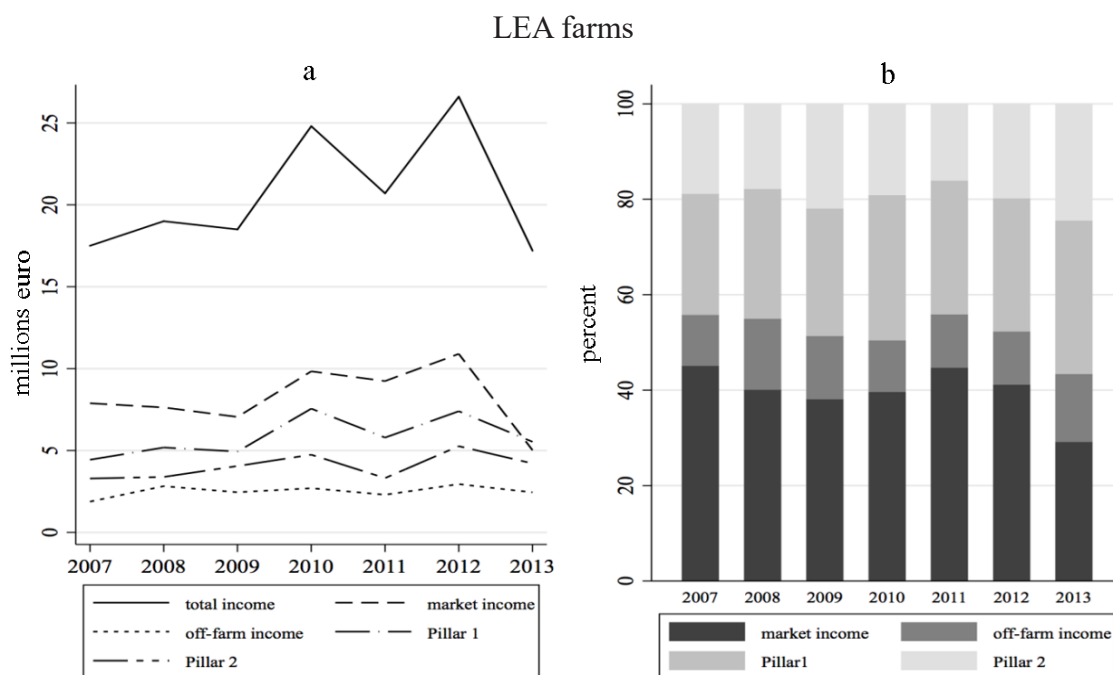

Figure 2. Income (a) and income composition (b). LFA farms, 2007–2013.

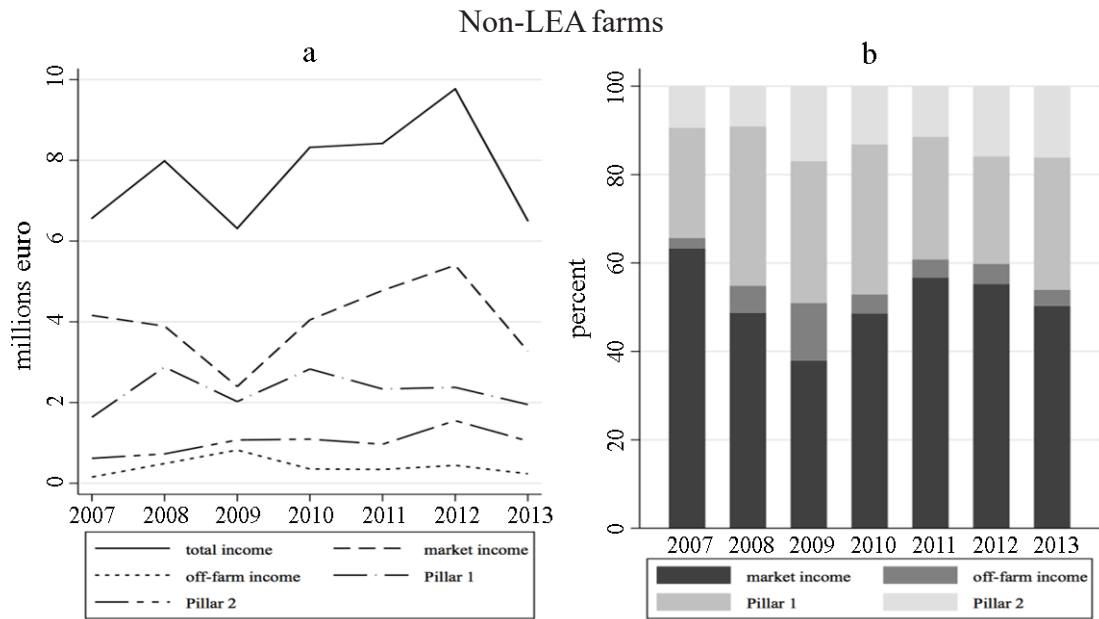## Non-LEA farms

Figure 3. Income (a) and income composition (b). Non-LFA farms, 2007–2013.
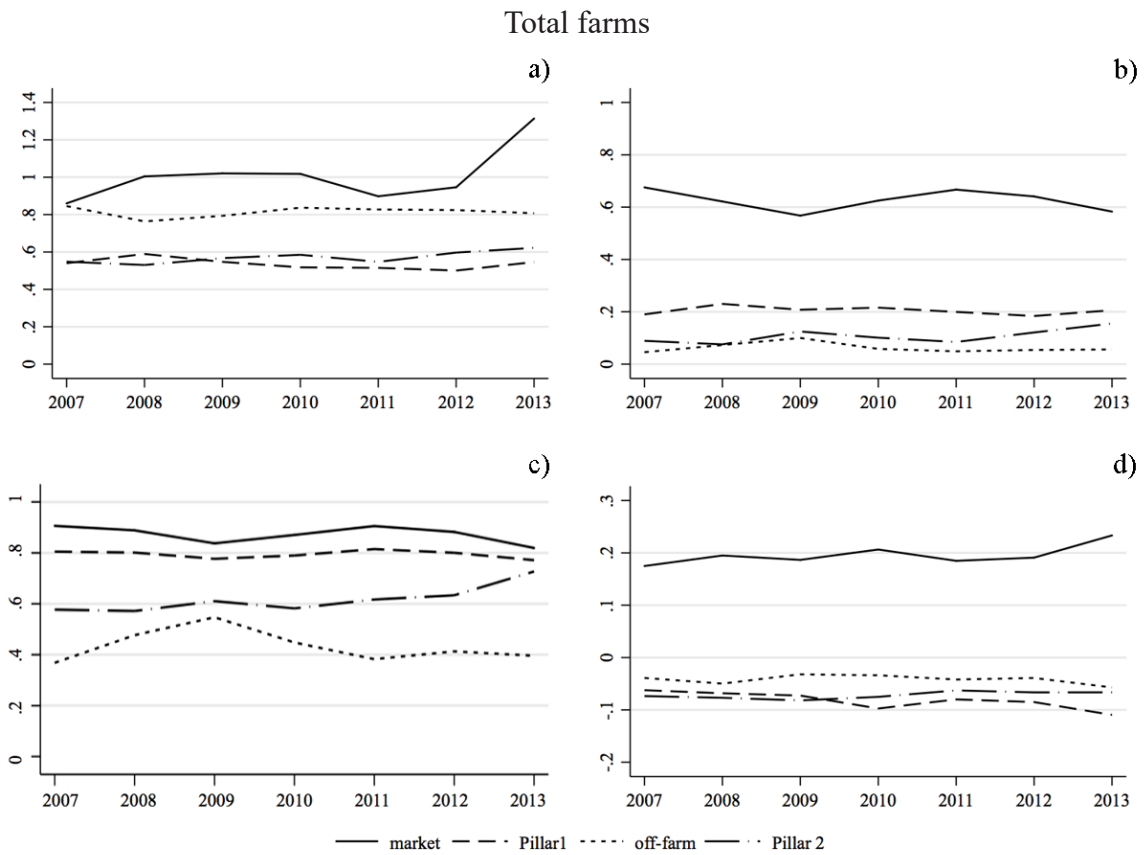
Total farms

Figure 4. Decomposition of Gini index by income sources (total farms): Gini coefficients (a); proportional contribution to inequality (b); correlation coefficients (c); and elasticity (d).

than subsidies from Pillar 1. The Gini coefficients for subsidies from Pillar 2 had, with policy changes, slightly increased and trended upward in comparison to subsidies from Pillar 1, indicating greater inequality. Qualification for subsidies from Pillar 2 may be related to farm location (LFA vs. non-LFA), the application of specific farming practices (agri-environmental measures) and project participation in other rural development programs, particularly rural investment projects. These are measures which are not symmetrically distributed across farms but depend on the type of policy measures related to farm location characteristics and/or specific farming practices, and the successful application and co-financing of investment projects (Unay-Gailhard & Bojnec, 2019, 2020).

Market income plays a crucial role in terms of its proportional contribution to farm income inequality (Fig. 4b). This slightly decreased over the period investigated and was substituted by an increase in the role of subsidies from Pillar 2. The proportional contribution of subsidies from Pillar 2 converged over the period of analysis to resemble the rather stable proportional contribution of subsidies from Pillar 1 to farm income inequality. Off-farm income remained relatively low but made a relatively stable proportional contribution to farm income inequality.

Figure 4c presents the correlation coefficients in the changes in the Pseudo-Gini coefficients of the different farm income sources. All Pseudo-Gini coefficients were greater than 0, suggesting that income from the specific income sources is mainly distributed to farms in the upper tail of farm income distribution (El Benni & Finger, 2013). Except for off-farm income, all other sources of income were strongly correlated with total farm income. The highest Pseudo-Gini coefficients were found for subsidies from Pillar 1 (particularly for market income, because this is still the most important source of income for farmers), but they tend to decline slightly over time. Moreover, the Pseudo-Gini coefficients for subsidies from Pillar 2 increase and approach the highest Pseudo-Gini coefficients for subsidies from Pillar 1 and for market income. This convergence between these three farm income sources indicates that subsidies from Pillar 2 became increasingly important as sources of income for Slovenian farms.

Figure 4d depicts the changes in the Gini elasticities for the different income sources relating to farm income distribution. Values above (below) 0 show that an increase in the income source under consideration of 1% increased (reduced) total farm income inequality (as measured using the Gini coefficient) by the defined percentage, *ceteris paribus*. While an increase in market income increased the inequality of total farm income, other income sources – such as off-farm income and subsidies from Pillars 1 and 2 – decreased inequality.

LFA farms
Most farms in Slovenia are located in LFAs. Consequently, results between all farms (Figs. 4a,b,c,d) and LFA farms (Figs. 5a,b,c,d) are similar. As can be seen from Fig. 5a, the Gini coefficients for the different income sources remained rather stable over time (ranging between 0.5 and 1), except with market income (the exception is market income in 2013, which was negative). Market income and off-farm income were much more unequally distributed than subsidies from Pillars 1 and 2. Inequality in market income and subsidies from Pillar 2 tend to increase. The latter finding is consistent with the policy changes which favoured LFA and other specific, rural development subsidies from Pillar 2.

While market income played a crucial role in terms of its proportional contribution to farm income inequality, it slightly declined (Fig. 5b) over the period of analysis. A slight increase in proportional contribution to farm income inequality is seen for subsidies from Pillar 2 which converged to the rather stable level of the proportional contribution of subsidies from Pillar 1. Since 2008, off-farm income has made a relatively small but nonetheless stable proportional contribution to farm income inequality.

The correlation coefficients in the changes in the Pseudo-Gini coefficients of the different income sources above 0 (Fig. 5c) suggest that the income from specific income sources was mainly distributed to farms located in the upper tail of income distribution. Except for off-farm income with close-to-or-less-than a value of 0.5, all other income sources were strongly correlated to the level of total farm income. The highest Pseudo-Gini coefficients were for market income and subsidies from Pillar 1 (these were the most important income sources for LFA farms), but market income, in particular, tended to decline. The Pseudo-Gini coefficients for subsidies from Pillar 2 increased. In 2013, they approached the rather stable Pseudo-Gini coefficients for subsidies from Pillar 1, and declined for market income. The convergence of the Pseudo-Gini coefficients between these three income sources indicates that subsidies from Pillar 2 became an increasingly important source of income for farms in LFAs in Slovenia. This finding is consistent with those of Knific & Bojnec (2015) and confirms the crucial importance of subsidies, particularly from Pillar 2, for farm income in hilly and mountainous areas in Slovenia.

The changes in the Gini elasticities of the different income sources on farm income distribution show that increases in market income increased the inequality
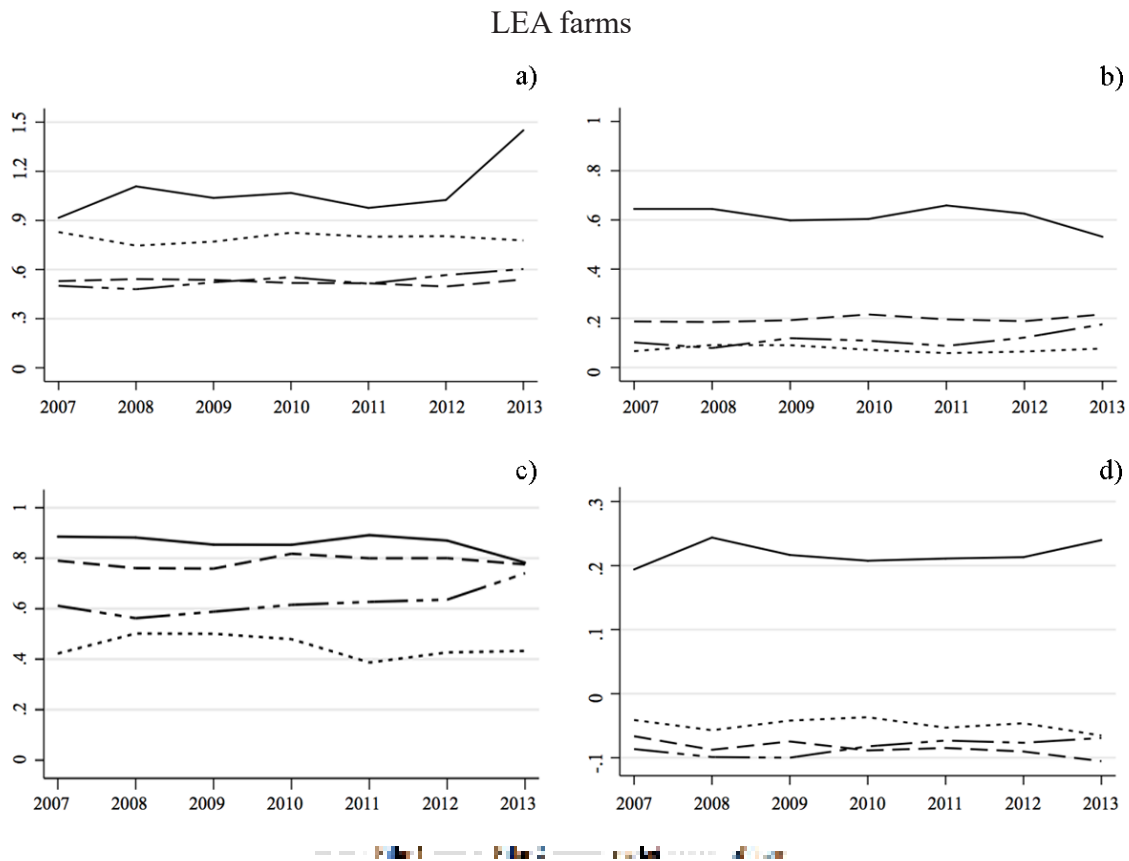
LEA farms

Figure 5. Decomposition of Gini index by income sources (LFA farms): Gini coefficients (a); proportional contribution to inequality (b); correlation coefficients (c); and elasticity (d).

of total farm income, while other income sources – off-farm income and subsidies from Pillars 1 and 2 – decreased inequality (Fig. 5d). For example, an increase in market income of 1% would increase total farm income inequality by slightly more than 0.2 percent points, *ceteris paribus*, while an increase in other income sources – off-farm income and subsidies from Pillars 1 and 2 – would reduce total farm income inequality between 0.05 percent points for off-farm income and subsidies from Pillar 2, and slightly more than 0.1 percent points for subsidies from Pillar 1, *ceteris paribus*.

Non-LFA farms

There were considerable differences in the evolution, structure and sources of income inequality between LFA and non-LFA farms. Gini coefficients for the different non-LFA income sources were more volatile over time, particularly for market income (Fig. 6a). Except for market income in 2013 (when it was higher than 1 due to its negative value), the Gini coefficients ranged between 0.5 and 1. Market income, and particularly off-farm income, were much more unequally distributed than subsidies from Pillars 1 and 2. Inequality in off-

farm income tended to increase, while inequality in subsidies from Pillars 1 and 2 remained more stable over time. However, the gap between higher levels of inequality in the subsidies from Pillar 2 than Pillar 1 was more clearly visible for non-LFA farms than for LFA farms. This suggests greater differences in non-LFA farms regarding their participation in the agri-environmental and other rural development measures promoted by Pillar 2 (Unay-Gailhard & Bojnec, 2015, 2016, 2019).

Market income plays the crucial role in terms of its proportional contribution to income inequality for non-LFA farms, but underwent cyclical oscillations followed by a period of stability after 2010 (Fig. 6b). Since 2008 a slight decline in the proportional contribution to income inequality could be seen for subsidies from Pillar 1, while subsidies from Pillar 2 were rather stable in terms of their proportional contribution to income inequality. Off-farm income contributed relatively less, and following 2010 made a rather stable proportional contribution to income inequality.

The correlation coefficients in the changes in the Pseudo-Gini coefficients of the different income sources were above 0, but underwent cyclical oscillation (Fig.
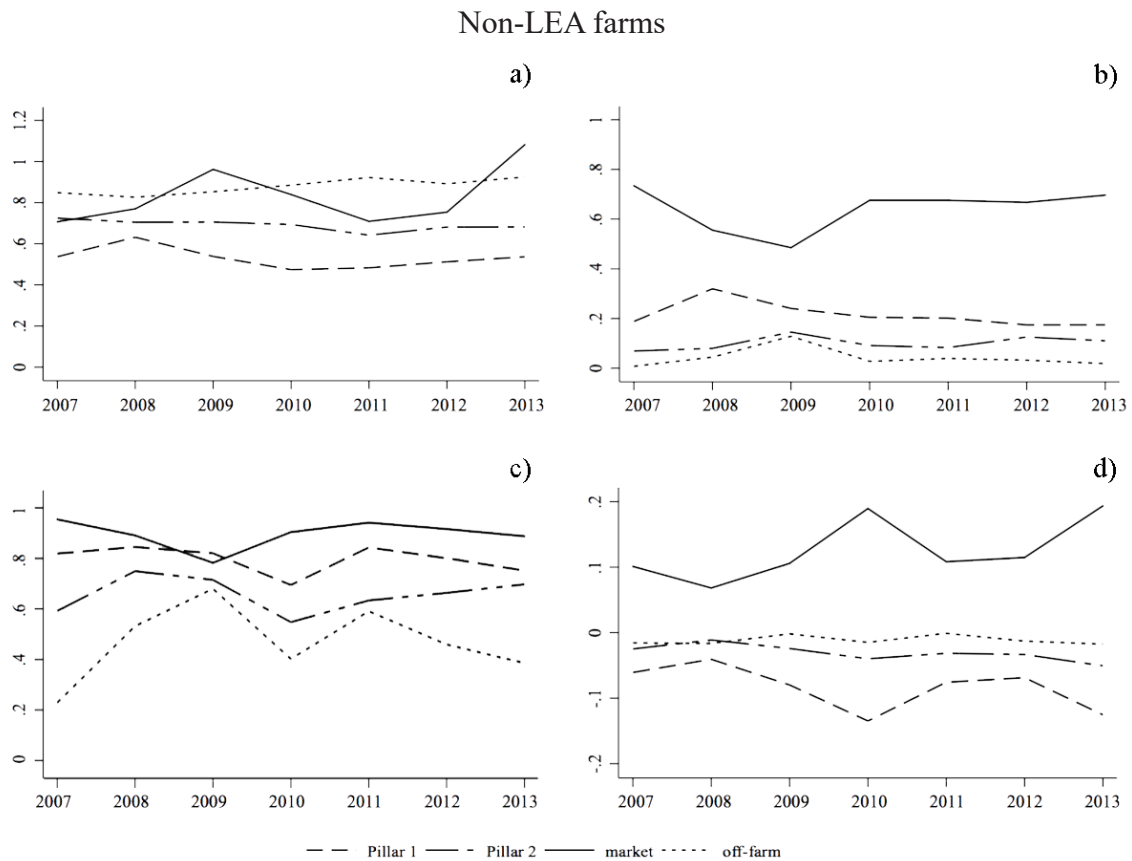
Non-LEA farms

Figure 6. Decomposition of Gini index by income sources (non-LFA farms): Gini coefficients (a); proportion to income inequality (b); correlation coefficients (c); and elasticity (d).

6c). This instability in correlation of income sources with total farm income could be explained by market instabilities and policy changes. The highest Pseudo-Gini coefficients are for market income and subsidies from Pillar 1. Unlike with LFA farms, the Pseudo-Gini coefficients for subsidies from Pillar 1 tended to decline. Since 2010 the Pseudo-Gini coefficients for subsidies from Pillar 2 increased. In 2013, they approached the declining Pseudo-Gini coefficients for subsidies from Pillar 1, but they account less than more stable market income. While market income underwent a similar process of evolution over time, subsidies from Pillar 2 compensated for subsidies from Pillar 1 as an important income source for non-LFA farms in Slovenia. This finding is in line with changes in CAP which have strengthened the importance of Pillar 2 measures such as agri-environmental and other rural development programmes for farm restructuring. Interestingly, off-farm income underwent the greatest cyclical oscillations in terms of the evolution of the Pseudo-Gini coefficients. This could be explained with reference to the rural labour market situation during the recession and post-recession period and the potential difficulty of maintaining off-farm employment and/or

generating stable off-farm income as a contribution to total farm income (Unay-Gailhard & Bojnec, 2019).

The Gini elasticities of the different income sources for income distribution ranged between more than 0 and less than 0.2 for market income, while they were less than 0 for off-farm income and subsidies from Pillars 1 and 2. While market income was the main income source that increased total income inequality measured with the Gini coefficient, subsidies from Pillar 1 were the main income source for reducing total income inequality for non-LFA farms in Slovenia.

Discussion

The aim of the LFA scheme is to improve the environment and the countryside by supporting sustainable land management. Naturally handicapped areas with associated LFA payments are located in hilly and mountain areas or in other areas with natural handicaps (Baráth *et al.*, 2018; Unay-Gailhard & Bojnec, 2020). The three specific clusters of common handicaps on agricultural land use include 1) mountain areas (short growing seasons at high altitude or steep slopes at a

lower altitude, or a combination of the two, and areas north of the 62nd parallel), 2) intermediate LFAs (land with poor productivity, low productivity of natural environment and a small or dwindling population predominantly dependent on agricultural activity), and 3) areas affected by specific handicaps in which farming is important for conserving or improving the environment, maintaining the countryside, preserving the tourist potential of the area and/or protecting the coastline. Not all farms within an LFA receive a compensatory allowance. LFA beneficiaries are required to undertake farming for at least five years after the first payment and to farm a minimum area fixed at the EU-member-state level. In addition, member states employ a range of specific eligibility criteria. LFA payments are granted annually per hectare of utilised agricultural area. Payments ranged between (a minimum of) 25 €/ha and a maximum of 200 €/ha in the programming period 2007-2013.

Aid to farmers in LFA for maintaining the countryside where agricultural production or activity is more difficult because of natural handicaps is classified according to criteria for agricultural areas suffering from natural handicaps such as steep slopes in mountain areas, difficult climatic conditions, or low soil productivity in other LFAs. These handicaps on farming significantly increase the risk of agricultural land abandonment and thus the potential for loss of biodiversity, desertification, forest fires and the loss of highly valuable rural landscape. To mitigate these risks and preserve the farmed landscape and the habitats and attractiveness of rural areas, the LFA payment scheme is an important tool, albeit non-compulsory.

Slovenia is a country with a very high share of farms in LFAs whose evolution in terms of level and structure of farm income and contribution to income inequalities over time were compared in this research with farms in non-LFAs. The research findings have important policy implications in general for other EU member states, but particularly for new EU member states and candidate countries. First, market income explores volatility over time, a phenomena which has been studied in some depth in the past (Manero, 2017), including different on-farm and off-farm diversification measures to mitigate its volatility over time and space (Bonfiglio *et al.*, 2016) and dependent on weather conditions (Graveline & Gremont, 2017; Martinez *et al.*, 2017). Bergmann *et al.* (2015) nicely illustrated seasonal and cyclical behaviour of EU farm gate milk prices after the CAP reform in 2003. This has resulted in farm household income instability. However, unlike results from this approach our analysis provides new evidence about the greater dependence on market income and its volatility of non-LFA farms than LFA farms. In addition, we claim that market income increases farm income inequality for both LFA and non-LFA farms, but slightly more for the latter. Measures that ensure and stabilize market income, particularly for non-LFA farms, are an important policy and practical issue, such as improving organization forms and functioning of agri-food supply chains (Hassouneh *et al.*, 2015). In addition, Olper *et al.* (2014) studied the importance of CAP payments for reduction of farm labour migration across EU regions, while Loizou *et al.* (2019) argue on direct and indirect impacts of CAP payments for farms in an integrated development in a regional rural economy playing the role of the stabilizer, supporting growth, employment and household income of the region. Second, while subsidies from Pillar 1 were important for both LFA and non-LFA farms, their contribution to farm income and its inequality was slightly higher for non-LFA farms which were more often located on agricultural land in flat areas of lower altitude and which produce cereal or vegetable crops. Subsidies from Pillar 1 reduce income inequalities for non-LFA and LFA farms. Third, subsidies from Pillar 2 (which include LFA subsidies) were of crucial importance in terms of income for LFA farms, but also for non-LFA farms in connection with agri-environmental and other rural development project and investment measures (Fertő *et al.*, 2017). While subsidies from Pillar 2 increased the concentration of income rather symmetrically for LFA farms, they were of lower concentration and had a more asymmetrical effect on income for non-LFA farms. Finally, off-farm income in Slovenia was important for both LFA and non-LFA farms (Bojnec & Fertő, 2013). In terms of the effect of off-farm income on farm income, the present research indicates that it provides a certain stability and additional income security for farms due to its lower level of volatility and impact on reducing farm income inequality. This finding about the importance of rural development is highly relevant to the new EU member states which have a high proportion of small-scale farming structures: off-farm income can provide multiple benefits in terms of agricultural and non-agricultural activities in rural areas such as creating jobs and mitigating the pressure for outflow migration, particularly of the young and better educated.

In summary, the research described in this paper investigated the development of income inequality in Slovenian agriculture over the period 2007–2013 using FADN data from farmers located in LFA and non-LFA areas. A shift in CAP policy and related measures has determined the evolution and structure of farm incomes. A special focus of the analysis was its comparison of LFA and non-LFA farm income. LFA subsidies were designed to contribute to maintaining naturally handicapped countryside areas in order to

support agricultural production. While subsidies could distort production activities and agri-food markets and postpone farm restructuring, they could also reduce farm household income inequality.

Our calculations highlight the importance of subsidies in Slovenia and indicate that the role of subsidies in farm incomes increased during the period of analysis. This could be explained by the existence of small-sized farms and poor natural conditions for agricultural production. CAP reform in rural development policy during the period 2007-2013 contributed towards the stabilization of farm incomes which were different at LFA and non-LFA farms. As LFA subsidies are very important in Slovenia, the focus was on making a comparison between LFA and non-LFA farm income structures, which are also different. LFA farm incomes to a greater extent depend on subsidies from Pillars 1 and 2. One striking finding is that subsidies from Pillars 1 and 2 reduce farm income inequality, while subsidies from Pillar 2 increased farm income concentration for LFA farms.

Among the limitations of the research, the applied methodological approach of the Gini coefficient decomposition does not provide evidence of a cause-effect relationship. In addition, we accept that the investigation of the evolution and structure of Slovenian farm income in general and independently for LFA and non-LFA farms would be improved by incorporating consideration of the type of farming and other potential farm characteristics and the exact role of specific CAP measures.

Policy modelling of farm income diversification and the role of subsidies on farm incomes and income inequalities across different farm structures is of significant scientific and policy relevance for improving understanding of the impacts of CAP on different income structures and their associated income inequalities on farms and in rural areas with implications for policy development to reduce undesired greater income disparities. Such findings will be important inputs to CAP in the current period until and after 2020 in terms of improving the management of farm income distribution, agricultural sustainability and international competitiveness.

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