

Analysing farm income distribution in Ireland

The **Teagasc** National Farm Survey shows how farm income distribution is changing.

Using Teagasc National Farm Survey (NFS) data, this research highlights recent trends in farm income inequality. This random survey is nationally representative and enables the detailed analysis of the financial situation on commercial family farms in Ireland. The Teagasc NFS is part of the Farm Accountancy Data Network (FADN) of the EU and has been conducted by Teagasc since 1972. Under the Farm to Fork strategy, the FADN will transition to a Farm Sustainability Data Network (FSDN).

Farm income inequality trends

Twenty years ago, Mary Keeney published an important article in the *Journal of Agricultural Economics* on farm income distribution in Ireland. Using a decomposition approach, Keeney identified a significant decline in farm income inequality between 1992 and 1996, and attributed this decline to the introduction of direct payments. Subsequent studies, including Hynes and O'Donoghue (2004) and O'Neill (2014), indicated that the decline in farm income inequality observed in the early 1990s did not sustain in the following years.

The Gini coefficient is used to calculate farm income inequality. The Gini is a standard measure of income inequality and ranges in value from zero to one. A value of zero would indicate complete equality of farm incomes. A Gini coefficient with a value of one would indicate a scenario whereby one single farm accounts for all farm income. As expected, the Gini coefficient tends to lie somewhere between these two scenarios.

Figure 1 shows the evolution of farm income inequality since 2010. There does not appear to be a clear trend over time, with short-term fluctuations in farm income inequality being evident. The inequality of total family farm income appears volatile, ranging from approximately 0.57 in 2011 and 2012 to 0.67 in 2018. These levels of income inequality are above those observed by Keeney for the mid 1990s. It is interesting to note that 2018 coincides with particularly high income inequality and a summer drought with varying impacts on incomes across farms. This merits further consideration, as the capacity of farmers to adapt to climate change could influence income distribution in the future. It is also notable that the collapse in milk prices during 2016 coincides with a reduction in income inequality. A decline in income inequality does not always have positive origins.

The Teagasc Rural Economy and Development Programme will undertake further analysis to understand the factors influencing farm income distribution in Ireland.

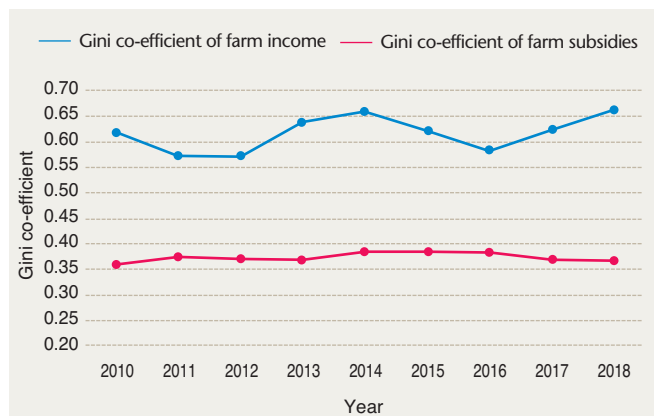


FIGURE 1: Gini co-efficient of family farm income and farm subsidies 2010-2018.
Source: Author's calculations using Teagasc National Farm Survey data.

The distribution of farm subsidies has shown less volatility through time. The Gini coefficient of farm subsidies has ranged from 0.36 in 2010 to 0.39 in 2015. Interestingly, the inequality of farm subsidies declined progressively from 2015 to 2018, which may be associated with the redistribution of direct payments and subsequent increases in the value of environmental payments.

Figure 2 provides a more detailed picture of the distribution using a Lorenz curve approach. In this diagram, the 45-degree line represents a situation of complete equality in farm incomes. Figure 2 shows three Lorenz curves for three recent years, i.e., 2016, 2017 and 2018. The closer the proximity of the Lorenz curve to the 45-degree line, the lower the income inequality. The 2018 Lorenz curve is consistently furthest from the 45-degree line for the whole distribution. This visually illustrates that income inequality was higher in 2018 than in 2016 or 2017.

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Focusing on the 2017 (red) Lorenz curve, Figure 2 shows that the top 20 % of farm income distribution earned or received the majority of all farm income, with a slightly lower proportion in 2016 and a greater proportion in 2018. In all three years, the bottom 40 % of farm income distribution earned or received less than 10 % of all farm income. Farm income inequality is therefore high.

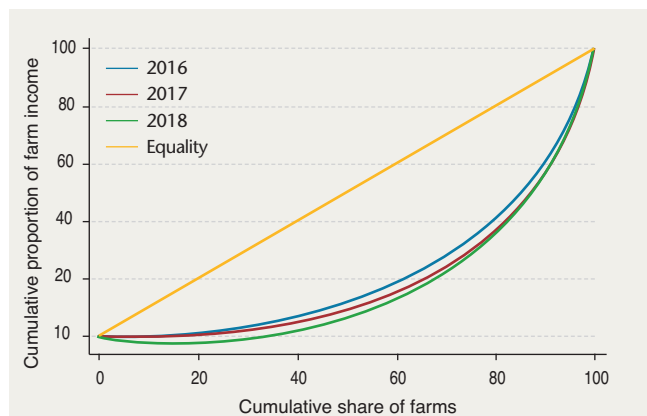


FIGURE 2: Lorenz curve of farm income distribution 2016 to 2018.
Source: Author's calculations using Teagasc National Farm Survey data.

However, the analysis excluded non-farming income, which could influence overall inequality in farm household income. The Teagasc Rural Economy and Development Programme will be undertaking further analysis to understand the factors influencing the shape of farm income distribution in Ireland. Further research will seek to identify the possible distributional impacts of any proposed reforms to the Common Agricultural Policy as these proposals emerge.

Acknowledgements

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References

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