



Cost of and good practices for FADN data collection

Executive summary



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Introduction

The Farm Accountancy Data Network (FADN or EU-FADN) is an instrument, launched in 1965, for evaluating the incomes and business operation of agricultural holdings and the impacts of the Common Agricultural Policy (CAP) viewed from the EU level. To do this it uses data contributed by national farm accounts surveys in each Member State in the form of completed "Farm Returns". Member States receive a standard fee from the Commission for each duly completed "Farm Return", within certain rules established by the FADN legislation. The current legal base is Council Regulation (EC) No 1217/2009.

In the interests of clarity, this report uses the term "FADN" or "EU-FADN" to refer to the EU system (the latter where added clarity is needed) and the term "national farm accounts survey(s)" to refer to the national systems which provide data for the FADN.

There can be benefits from using national farm survey data at the national level, and most Member States take the opportunity provided by the need to contribute to FADN, as well as the data collected, for their own purposes. Many Member States also collect and use additional data beyond the requirements of FADN and/or maintain larger samples for national reasons.

The organisation of the national farm surveys contributing data to FADN at national level, the methods of collecting data and the related costs vary greatly across the EU. In the absence of a comprehensive overview of national farm accounts survey data collection methods and related costs, the Directorate-General for Agriculture and Rural Development (DG AGRI) commissioned this study from Agra CEAS Consulting Ltd, in association with Areté. In addition to providing an inventory of methods and costs, an objective of the study was to help improve the data collection process (including data quality and timeliness) through benchmarking and the sharing of best practice. The study was organised into four themes (organisation and data collection methodologies; costs; benefits; and, best practice which can be shared).

Methodology

This study used multiple methodologies to gather evidence. A literature review was the starting point for descriptive chapters covering the EU policy framework for FADN and the organisation and operation of national farm accounts surveys. The main body of evidence was gathered through two methodologies, first an online survey of all 28 Member State Liaison Agencies (plus their counterparts in Norway and Switzerland) and, second, case studies in nine EU Member States selected to cover the variety of organisational structures used by Member States (plus a desk-based case study of the USA equivalent to FADN, the Agricultural Resource Management Survey (ARMS)). Case studies were carried out in Bulgaria, France, Germany, Italy, Lithuania, the Netherlands, Poland, Sweden and the UK and covered more than half (56%) of all EU-FADN holdings.

The study benefited from a panel of expert advisors who peer-reviewed the analysis.

Additional information came, *inter alia*, from interviews with senior DG AGRI staff outside the EU-FADN unit, senior OECD staff and participation in international workshops and meetings.

Findings and conclusions

The organisation of FADN and methods of collecting the data

Legal framework: The EU-FADN Regulations apply within each Member State without the need for national legislation. However, 16 Member States do have additional national legislation, largely it appears to allocate tasks to institutions.

National legal constraints on the use of administrative records (which can offer a potential way of reducing costs and minimising the burden on farmers) do not apply in most Member States. Even where such restraints are found, access on a permissive basis often offers a way by which this information can be used.

Legal constraints can extend to uses of data gathered from farms. The main such constraint relates to the assurance of confidentiality given to farmers by the Regulation. Our conclusion is that these legal restrictions on use do not constrain access to results at the national level in a way that impacts significantly on the public benefits obtainable. However, for some research purposes, access to individual farm data is desirable, and a variety of arrangements can be found in Member States by which this is possible without compromising disclosure assurances.

Establishment of national farm accounts surveys and current rationale: For many Member States the establishment of national farm accounts surveys predated their requirement to supply data to EU-FADN and was to serve national purposes. While EU Membership carries this obligation to supply data, national purposes are still relevant.

Status of the Liaison Agencies: The status of the Liaison Agency is primarily a matter of administrative convenience and there seems to be no obvious association between this and the functioning of the national farm accounts survey, including the running costs.

Organisation of the FADN supply chain: There is considerable variety in terms of the division of responsibilities along the FADN supply chain. Organisational structure within individual Member States is fairly stable and is explained primarily by history (with a high level of path dependence) and practical considerations.

National FADN Committees: The National FADN Committees typically have representation from along the FADN supply chain. Many National FADN Committees have additional functions beyond those set out in the EU-FADN legislation, although there is no discernible impact on performance within these groups. Regional Committees are only found in Belgium, Germany and Spain.

Representativeness of the sample: Agricultural production and area are well represented by the FADN sample, but this applies far less to the proportion of holdings (and by implication holders) within the FADN field of observation. Given this divergence, EU-FADN is probably rather better suited for policy analyses relating to the economics of agricultural production than it is to the more social aspects of the wellbeing of the wider agricultural population. Any change in the current EU-FADN sample orientation towards a greater coverage of holdings (and holders) would carry cost implications, but may also bring additional benefits, which we recommend be considered should any change be proposed.

Sample turnover and recruitment: Sample turnover is typically 10% or less. There is substantial variation in the methods used by Member States to add fresh farms to their national farm accounts survey. For family farms the two main approaches are: (i) selection at random from a list of farms derived from the Farm Structure Survey; and, (ii) selection from existing clients of data collectors. The first approach offers potential statistical superiority, but a lower recruitment rate. The second approach may introduce selection bias (by focusing on farmers receiving advice), but by building on existing

relationships offers a higher success rate and therefore cheaper recruitment. Our conclusion is that the approach used to recruit farms will carry cost implications, and that there may be a trade-off with statistical quality, though this is by no means certain.

Farmer participation incentives: Participating farmers receive financial payments (at various rates) in 11 Member States. Payment in kind, in the form of a set of completed accounts, is provided in 14 Member States. Participating farmers are provided with benchmarking data in 21 Member States and those in Member States where data are collected by advisory/extension agents also benefit from specific advice based on their documented performance. In conclusion, participating farmers receive different incentives but it is not evident to what extent these are actually required to induce cooperation or to improve sample retention. However, withdrawal of established incentives could be expected to impact on participation.

Data collection methods and sources used: Data collection is a complex, though fairly stable, process with most Member States (18) indicating more than one 'main' method. Even within a single Member State there may be different methods for small farms who are not obliged (by national tax legislation) to keep accounts and for farms that have corporate status. Data collection from farmers/farm secretaries is considered to be a main data collection method in most Member States. Extraction of data by private accounting firms from completed accounts is the main data collection method in eight Member States. Data extracted from secondary sources such as registers and administration systems is a main data collection methodology in 15 Member States.

Data recording methods: Member States use a range of data recording methods and the balance between them will have cost implications; many Member States use more than one method of recording data. The most widely used method remains paper recording for subsequent electronic entry into the national farm accounts survey database. Online entry is used in 16 Member States and offline entry in nine Member States. Thirteen Member States extract data from farm accounting software packages.

Data validation: Data are generally validated at national level before entry to RICA-1, the collection and verification system for the Commission's EU-FADN database. For the majority of Member States, this takes place at multiple points in the data supply chain. A number of techniques are used, ranging from informal examination to deep scrutiny with IT systems. There are three stages at which data can be validated before uploading to the Commission's RICA-1 (which then generates additional queries). Nine Member States employ validation when data are (i) collected; (ii) entered into regional databases; and, (iii) entered into the national farm accounts system. At the other end of the spectrum, five Member States validate data only on entry into the national system.

Typology of national farm accounts surveys: Although it is possible to distinguish groups of Member States with respect to various metrics, there is little consistency in these groups when different categorisations are used. The most relevant typology in the context of this study is by data collection methodology and this is likely to be a key determinant of cost. Our conclusion is that Member States can broadly be divided into three types: those where the Liaison Agency collects data (Type 1: C-LA); those where data collection is carried out by public advisory services (Type 2: C-AS); and those which collect data through a network of accounting firms (Type 3: C-AF).

The costs of collecting FADN data in Member States

Resource requirements: Resource requirements (labour usage) per completed Farm Return, covering data collection, data processing and organisation (including validation), were calculated for 21 Member States for which sufficient data were available. The number of hours required by Liaison Agencies and data collectors per completed Farm Return varied considerably between Member States with the data collection process

forming the most time-intensive activity. The share taken by this activity was higher where the sample size was larger (as fixed costs were spread over a larger number of holdings) and/or where the data collection methodology was more labour demanding.

A more exhaustive coverage of the complete data supply chain, including additional elements not covered in the above analysis (such as time contributed by the farmer), was possible for case study countries. This confirmed the wide diversity of labour requirements: total time required per completed FADN Farm Return ranged from eight hours in Germany to 63 in Poland.

Monetary costs: A similar finding comes from the analysis of costs. The total public cost to budget of Member States for the EU-28, averaged for the 2012-14 period, was just over €58 million. This amounts to a (weighted) average cost at the EU-28 level of €678 per completed Farm Return but with considerable variation between Member States, ranging from an average (2012-14) of €107 in Bulgaria and €156 in Romania, to €2,905 in Belgium.

Factors explaining differences in cost: A number of factors can be identified that explain, at least in part, the differences observed in monetary costs. Some of these relate to the structure and nature of the national farm accounts survey, for example relative scale and scope and different resource requirements resulting from different data collection methods. Others relate to external factors such as different wage levels between Member States and different average farm sizes within the FADN field of observation.

The choice of data collection methodology can offset, at least to some extent, higher costs arising from greater wage levels and from increased farm scale. The most efficient form of data collection in terms of public cost is from existing accounts (which have been produced at private cost) (Type 3: C-AF) and this approach is therefore most suited to Member States with a large sample, large average farm size or high labour costs or any combination of these. Of course, not all Member States require the production of accounts for tax reasons, or at least not for all farms, and so cannot produce national farm accounts survey data on this basis.

Costs of change or adaptation: National farm accounts surveys will be required to adjust the scope or scale periodically to meet the changing needs of the policymakers who form their main group of clients. While we conclude that the costs of adaptation will be specific to each Member State, some general principles are evident. The cost of changing the variables collected under national farm accounts surveys will be related to the extent to which Member States are already collecting this information for national purposes. Although extending the collection of any type of data to the Member States that do not currently collect it would incur costs, these would be marginal to the basic data collection infrastructure already in place. In the other direction, savings from reducing the scope of EU-FADN coverage would be marginal, again as a result of the existing data collection infrastructure. In both cases changes would have impacts on benefits which would need to be taken into account.

Adjustments to sample size involve similar considerations. Any increase would incur additional costs, but these would be marginal rather than average as the existing fixed costs would be spread over a greater number of Farm Returns. Conversely, a reduction in sample size would not lower the total by the average cost, but rather by the marginal cost as fixed costs would be spread over fewer Farm Returns.

The benefits obtained from FADN data to Member States

A main conclusion concerning the benefits obtained from farm accounts survey data is that these are hard to quantify in monetary terms that might be compared with the costs

of carrying out the surveys. The benefits obtained from making use of farm accounts survey information take two main economic forms. First, there are the private benefits, of which the main example will be those accruing to farm businesses in the form of improved performance through, for example, using the data for benchmarking purposes. These are, in principle, measurable, though there are substantial practical problems in doing so. Second there are the public benefits linked to the use of the results to assist in decisions by government on issues of policy; the need for information coming from national farm accounts surveys was a prime reason why accounts surveys that pre-dated the requirement to supply data to EU-FADN were originally set up. Better policy decisions should in turn lead to better and more appropriate outcomes. The rationale for spending public money on farm accounts surveys will be similar to those for maintaining public statistics of any type. Similarly, the value to research of farm accounts results is difficult to determine.

Access to results and data: With a few exceptions, our finding is that availability of the results of national farm accounts survey results is good, although access to farm-level raw data for research could be improved. Almost all Member States publish results from their national farm accounts surveys with an apparent preference for electronic publication. Public databases are available in 15 countries; this should greatly facilitate access, though quite what this gives access to varies. In contrast to the availability of standard results, access to farm-level data, a feature that obviously adds greatly to its value as a research tool, is universally restricted, respecting the general principle of maintaining confidentiality. However, often there are circumstances in which this may be relaxed while at the same time safeguarding precautions are applied, or technical solutions devised that make anonymous data accessible and costless (for example, remote access to the Netherlands national farm accounts survey database and the Data Builder tool in England within the UK).

Users and uses: A clear finding is that the data collected by national farm accounts surveys are widely used by the national (and where appropriate regional) governments of Member States. The data are almost universally used in policy formulation and evaluation and are also a common source of data supplied to Eurostat for the Economic Accounts for Agriculture or for similar accounts at national level; estimating costs of production is another common use.

Results are widely (almost universally) used as the basis of providing extension and advice to farmers, including in the form of benchmarking. This suggests that the various organisational arrangements for collecting data from farms do not impact on this form of use to an extent that can be detected. However, the impact on the economic performance of participating farms that a combined approach to data collection and the provision of advice may give rise to may be significant.

Valuing the benefits: To help fill the information gap on the value of national farm accounts surveys to Member States, a set of contingency questions was put to relevant government departments in case study countries to establish the perceived level of present benefits in relation to the known costs. There was a wide range of responses to the perception of the benefits compared with the total cost, from 'lower' in the UK (England and Scotland) to 'much higher' in Germany and Poland. Overall, Bulgaria, Germany, the Netherlands and Poland regarded their farm accounts surveys as representing good value for money, and the UK (England) reasonable value. Governmental use was clearly seen to be the principal beneficiary. Academic institutions and research bodies came next, followed by farmers through advisors and extension agents. Farmers benefitting directly and farmers' lobby groups were seen as benefitting the least. Our conclusion is that the perceived value of benefits relative to costs would cause Member States to at least consider continuing with national farm accounts surveys in the absence of a requirement to supply EU-FADN with data.

Best practices in FADN data collection and use that can be shared

Based on the types of evidence available to this study, a number of best practices exist that should be considered for general adoption among Member States. Fundamental to improving performance of national farm accounts surveys is the periodic carrying out of evaluation, with associated monitoring exercises. We recommend that all Member States introduce appropriate systems to examine both the costs of data collection and analysis, the variability within this, and the reasons, and the uses to which the results are put. Allied to this, we recommend collaboration at the EU level to introduce a common and consistent evaluation framework.

In terms of collection of data, there are several specific examples of best practice:

- The use of data already in accounts where these have to be kept for taxation purposes;
- the use of administrative data which can reduce data collection costs;
- the provision of access to administrative data via consent that avoids the testing of legal constraints;
- the elimination of stages in the data supply chain that can reduce costs, remove the causes of transcription error, speed the process and assist with validation. The most elementary of these is the replacement of paper data entry by electronic entry;
- the carrying out of validation procedures at multiple points along the data supply chain before data are entered into the national farm accounts system, and the introduction of systems that learn from past experience; there may be the opportunity for international cooperation in the design of programmes for this purpose;
- the necessity of making of payments to participating farmers should be periodically reviewed.

The relatively low level of sample turnover allows panel data (longitudinal sample) to be used to investigate issues such as exposure to risk and productivity growth. However, the availability of panel data is currently by accident rather than design and this imposes limits on its utility. An explicit longitudinal panel, within the overall sample and suitably weighted, would increase the value of FADN as a research tool.

Where a fee is currently charged for access to data, consideration should be made to removing this. However, a preferred solution is that offered by the UK (England) in which access to the basic raw data is provided through a website which allows queries to be raised and returns datasets while maintaining safeguards for confidentiality.

Finally, given the different practices across Member States, frequent lack of awareness of what happens in other countries and a silo attitude to some developments (such as in IT), we conclude that there are currently impediments to the free flow of information on data collection. We recommend that consideration be given to how this might be improved and cooperation fostered to reach solutions to common problems. These may involve building on the existing framework provided by the EU-FADN Committee and its associated working groups and the Pacioli network, but may also need to go beyond these to form technical groups or task forces with the specific aim of sharing information and spreading good practice.

