

## **FARMERS' SHARE OF MONEY SPENT ON FOOD IN AUSTRIA**

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### **ABSTRACT**

There has been renewed interest in the farmer's share of retail food sales recently, in the wake of sharp fluctuations in farm-gate or retail prices. Statistics on farmers' shares were already being developed decades ago and recent updates are a response to these fluctuations. We define the farm share as the average portion from each monetary unit spent on food by consumers that is received by farmers for their agricultural commodities. The same calculation gives the marketing margin, which is the remainder. Calculations show that the farmer's share from retail food sales has been on the decline for more than 60 years. Therefore, the gap between farmers' share and marketing margin is widening. This paper presents (i) the development of the farmers' share for Austria mainly for the period 1995 to 2013 and, where data is available, from 1971 onwards and(ii) compares the results with the developments in Germany and the United States as well as Switzerland. For Austria, two calculation methods are shown: the Agristat method (developed in Switzerland) and the method of the Austrian Institute of Economic Research (WIFO). Both calculations are based on official statistical data (Economic Accounts for Agriculture, National Accounts and trade data) but use different approaches. This paper uses the findings of these calculations to hypothesize on necessary areas for future research.

**Key words:** *farm-to-retail price spread, farmers' share, marketing margin, Austria.*

### **INTRODUCTION**

The production of crops and livestock on farms is just a first step in the often long process of providing consumers with the goods and the food they require. On the way to the consumer agricultural commodities are transformed and value is added. From time to time price changes trigger discussions on the fairness of prices and the farmers' share of expenditure for food, ie. the question of what farmers get for their agricultural commodities relative to consumer expenditure for food consumption.

Consumer expenditure covers two main components besides the duties and taxes: remuneration for (i) agricultural commodities at the farm gate (equal to the

farmers' share) and (ii) the share for processing, trading and marketing of products on the way from the farm gate to the consumer (cf. Elitzak 1997; Orgen 1956; Sinabell 2010). In the remainder of the paper we call 'marketing margin' the part of consumer expenditure for food which does not cover the share farmers get.

The concept of marketing margin, or farm-to-retail price spread, was developed to show the difference between consumer expenditure for food and an associated farm value (Orgen 1956). Data has been collected and calculations have been done for decades by different institutions (El Benni, Hediger 2014; Giuliani 2015; Sinabell 2010; USDA 2015; Wendt, Peter 2014).

In light of the renewed recent interest and given the number of different calculation methods used to identify the respective farmers' share and marketing margin, the question poses itself on two levels: (i) is it possible to harmonize the approaches to achieve more transparent results by employing a standardized method and (ii) what has to be added to make the information useful and transferable to all relevant actors (e.g. policy-makers, farmers, consumers etc.).

With these questions in mind, this paper not only looks at (i) the development of the farmers' share for Austria mainly for the period 1995 to 2013 using two slightly different methodologies but also (ii) compares the results with the developments in Germany, Switzerland and the United States. Finally, this paper outlines some prospective for further research.

## MATERIAL AND METHODS

Comparing the total expenditure for food to the value of the agricultural commodities contained within it can be done using the sector-based (sometimes referred to as 'global') approach or by product specific calculations (e.g. Observatoire de la formation des prix et des marges des produits alimentaires<sup>1</sup>). This paper deals with two global marketing margin approaches to calculating the Austrian farmers' share. The marketing margin can be understood as the total value, added to the agricultural commodities by downstream market stages, i.e. processing, marketing, trading, etc., which is included in the expenditure for food consumption of the population within a year (Sinabell 2010). On the other hand, the farmers' share is the average share of the expenditure for food consumption of the population that is received by farmers for their agricultural commodities. This can be expressed in equations as follows:

Farmers' share in % = (total production value of agricultural inputs for food in mn€ / domestic consumers' total expenditure in mn€) \* 100

Marketing margin in % = 100 – farmers' share in %

One calculation of the Austrian farmers' share for the period from 1995 to 2013 is based on the Agristat method (Giuliani 2015), whereas from 1971 onwards the Austrian Institute of Economic Research (WIFO) (Sinabell 2016) has also provided such data but not over a continuous time series. Regardless of method, the

<sup>1</sup>see <https://observatoire-prixmarges.franceagrimer.fr/Pages/default.aspx> for most recent reports (accessed 25 Aug 2016)

development of the margin and the farmers' share can also be illustrated both in absolute terms and as an index. Both methods have a great deal in common, but there are still important differences. In both cases the calculations rely on primary data as shown in Table 1. The aim is to calculate the Austrian marketing margin or farmers' share for food without beverages, however, the WIFO method includes wine. One main difference, therefore, is in the definition of agrarian commodities for food. Neither calculation takes into account agricultural subsidies. The value added tax (VAT) is not considered in the Agristat method. The VAT producers or consumers have to pay is part of the marketing margin according to the WIFO method. Generally, the main difference is that the food consumption according to the WIFO method is based on the supply balances, whereas the production value of domestic agricultural products is the source for the Agristat calculation of the commodities for food consumption adjusted by import and export values. In light of these differences in the two methods of calculation applied, currently the usefulness of the information very much depends on perspective. One might surmise that the Agristat method be more useful to deal with issues from the farmers' side and the WIFO method be more relevant to the consumer side (see Table 1).

Table 1. Data comparison

Data	Method	
	Agristat	WIFO
Annual production value of domestic agricultural commodities for food production (Economic Accounts for Agriculture, Statistics Austria 2016a)	x	
Farm prices (Economic Accounts for Agriculture, Statistics Austria 2016a)		x
Annual imports and exports of food commodities and products (foreign trade database, Statistics Austria 2016b)	x	
Annual domestic expenditure made by end consumers for food (National accounts, Statistics Austria 2016c)	x	x
Expenditure for eating out (Input-Output-statistics, Statistics Austria 2016d)	x	x
Self sufficiency ratio, domestic food production (Supply balances, Statistics Austria 2016e)		x
VAT		x

*\*Source: own elaboration according to Giuliani 2015; Sinabell 2010*

The problem is therefore, again, the issue of how to package sensibly the information in a homogenous form for policy-makers and further relevant stakeholders in the sense of sustainable agricultural development. The marketing margin illustrates the value added to agricultural commodities on the way from the farm gate to the consumer. However, no information is provided on whether the actual incomes in the agricultural sector or the downstream processing, trading and marketing sectors have increased or decreased or whether the returns at each market stage are economically justified, adequate or fair.

Furthermore, these calculations give no details on the cost categories or the shares at the different stages in the value chain beyond the farm gate (Giuliani, 2015). When interpreting the results, one has to bear in mind that the calculations show developments and not their causes. Principally, the calculations merely highlight developments over time. This notwithstanding, they call for continuous updating, a possible expansion of the time series and a harmonisation of the calculation methods. For in-depth knowledge further analysis is required. In concrete terms, an analysis of the results must consider the respective frame conditions such as (i) the support from the government, (ii) the (average) degree of processing of the products, (iii) the consumers' habits and needs as well as (iv) the diversification of the range of products and so on.

## RESULTS AND DISCUSSION

### Farmers' share of food in Austria

The comparison of marketing margins over longer periods shows that the gap between the shares farmers get compared to others is widening. Figure 1 reveals a continuous growth of the marketing margins for the period 1971 to 2013. For the most part, this growth has been progressive.

On the one hand the WIFO method displays a continuous decline in the farmers' share from 41.7% in 1971 over 24.8% in 1995 to 27.1% in 2013. On the other hand the Agristat method shows a drop from 29.5% in 1995 to 22.2% in 2013. The discrepancies in the values given can be attributed to the fact that the value of food consumed, ie. value of food produced in Austria assessed using farm prices according to the WIFO method shows stronger annual fluctuations than the total production value of foodstuff of the Agristat method. This is due to the farm prices used. Overall, however, the current trend shows that with increased national prosperity the farmers' share declines and the marketing margin becomes larger.

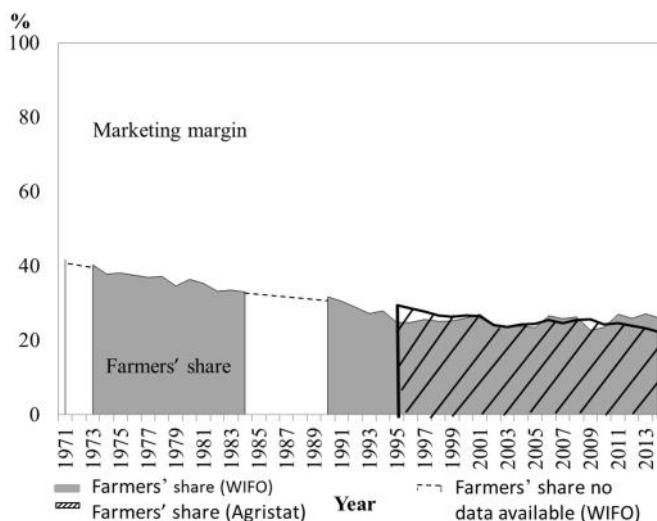


Figure 1. Long-term development of the farmers' share and marketing margin in Austria (in percent from 1971 to 2013) (own calculation; Sinabell 2016).

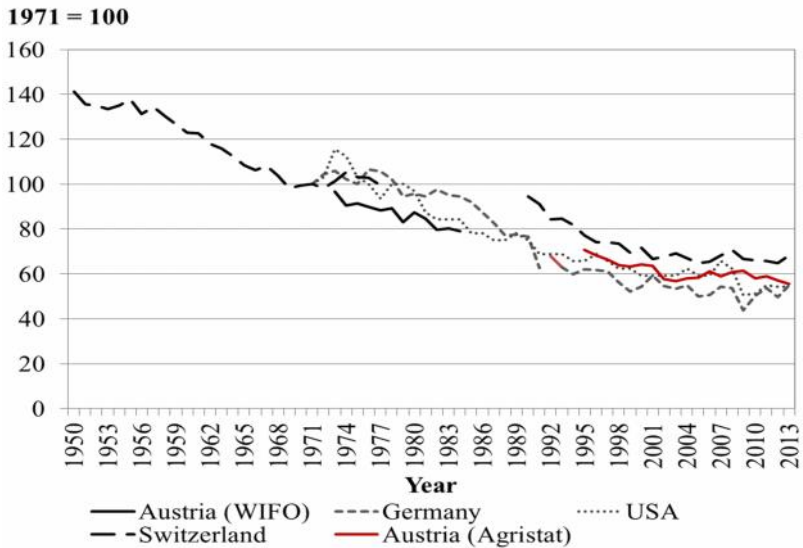


Figure 2. Development of the farmers' share in Austria, Switzerland, Germany and the United States (Index basis 1971 = 100 from 1950 to 2013) (own visualisation according to Elitzak 2016; Giuliani 2015; Senti in Schneider 1980; USDA 2015; Wendt, Peter 2014).

### International developments

In Germany (Wendt and Peter, 2014), Switzerland (Giuliani 2015) as well as in the United States (Elitzak 2016; USDA 2015) the farmers' share in the food sector has been analysed for decades. While the method, the levels of margins and their development are different, the direction of change in the margins is similar and definitely shows a trend – as shown in Figure 4. Apart from the common trend a closer look reveals that the coverage of products, the treatment of taxes and subsidies and the sources of information are very different in the various countries. While other statistics, like the economic accounts of agriculture are based on internationally standardized procedures, the methods to calculate farmers' shares are vary from country to country. In these countries the marketing margin, as shown by available data, has grown relatively continuously and so the farmers' share of food expenditure has correspondingly decreased every year since 1971 and since 1950 in Switzerland, respectively. It would appear, however, that this trend is levelling off to a certain extent. The causes are well documented (Department for the Environment and Rural Affairs 2004; König, Senti 2001; McCorriston 2015, Schneider 1980). The international evidence is, of course, very interesting for the purposes of forecasting. Currently, in-depth comparisons between these countries are hardly possible due mainly to the differences in the statistical data and the methods applied to obtain the results. Nevertheless, one can claim that the countries mentioned have a similar level of prosperity and consumption patterns as well as structure and development of consumer expenditure for food.

## CONCLUSION

The developments of farmers' share frequently arouse public interest. The concept of farmers' share, or marketing margin, was developed to measure the difference between consumer expenditure for food and an associated farm value. Specifically, the marketing margin is calculated by subtracting the net farm value equivalent from food sold at retail price. These price spreads have been examined on many occasions, often in response to concern of the sharp movements in farm-gate or retail prices. Coupled with additional statistics, this information could give insight into trends in the actual formation of marketing margins and the farmers' share and thus contribute to more objectivity when discussing the agricultural and food price formation process. However, as calculations are based on estimates, additional information – such as production and marketing structure, support from the government, (average) degree of processing of the products, the consumers' habits and needs, diversification of the range of products – is needed to draw conclusions about the efficiency and performance of markets in the price formation process. The current results only reveal considerable growth in the marketing margins and a corresponding decline in the farmers' share. Since the nature and cause of these changes are not easy to identify, there is clearly room for additional empirical analysis. Important fields of research include in-depth trans-national comparisons and rigorous econometric or statistical analyses on the: (i) possible explanation behind both the extent of the price divergence between producer and consumer prices and its recent development; (ii) estimation of vertical price alterations from farm to retail level to test whether there is empirical evidence of the use of market power in the food chain, (iii) understanding of market drivers, and hence the economic well-being of producers operating in today's marketplace and (iv) development of cost elements or the profits of the various actors in the value chain. These all together, when properly applied could contribute to a holistic monitoring tool on trends, customs and drivers within the value chain based on agricultural produce. Furthermore, combining it with other instruments will potentially provide a viable tool for political decision making and stakeholder awareness.

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