



OWC 2020 Paper Submission - Science Forum

Topic 5 - Political and economic frameworks as drivers for a vibrant development of the organic sector

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THE CONSUMER OR THE CITIZEN: WHO SHOULD PAY FOR THE BENEFITS OF ORGANIC FARMING?

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Abstract: Organic farming delivers a range of benefits for individual consumers and society at large, which is often referred to as the dual role of organic farming. In recognition of societal benefits -- often referred to as public goods - that correspond to policy goals organic farming receives public support in many countries. The growing interest of consumers in organic products is illustrated by the market. In this paper, we present an economic framework, distinguishing between public and private goods and explore where public support is justified and for what consumers can be expected to pay a premium price.

Introduction: Organic farming delivers a range of societal benefits, including improved biodiversity, climate mitigation, protection of soils, water, and air, as well as improved animal welfare, reduction of flood risk etc. (Sanders and Heß 2019). In recognition, governments provide public support, for conversion and maintaining organic production. Public support may come under threat, when funding becomes scarce or political majorities change, in particular with reference to the economic argument of not intervening where there is a functioning market (as observed in some European countries like the Netherlands).

The growing global market attests to the willingness of consumers to pay a premium price for organic food. Judging by the stated motives, organic consumers pay for (perceived) 'private' benefits to their health or better taste ahead of environmental or other public benefits. Premium prices can also be seen as a reward for the marketing activities of organic farmers/food businesses. If the benefits generated by organic farmers accrue to a much wider public than those willing to pay for organic food, there is a free-rider problem of citizens receiving benefits that they are not paying for.

Material and methods: Drawing on research on public benefits, public support and consumer studies, we review the broad range of benefits of organic farming quoted in the literature. We use an economic framework to distinguish between private (marketable) and public (non-marketable) goods and services to analyse the dual role of organic farming. We discuss why and when organic agriculture deserves public support and explore how market solutions and the consumers' willingness to pay can be integrated in developing support strategies for the organic sector.

Results: Which role should governments play in supporting the benefits of organic farming? According to neoclassical economics, free markets lead to optimal resource allocation. Nevertheless, market failures exist and represent a reason for public intervention. The absence of markets for outcomes of societal benefit (public goods and avoiding negative externalities) represents market failure (Lampkin et al., 2020) and is the focus of this paper.

In the current debate of public funds for agriculture (reform of the CAP in the EU), the term public good is often used loosely to describe a range of public benefits and reduction of external costs. In economics, ‘*public goods*’ stand in contrast to ‘*private goods*’. Public goods are defined as being non-excludable (free riders can enjoy benefits without making a contribution), non-rival (consumption by one does not prevent consumption by others) and non-rejectable (the collective supply cannot be rejected by individuals). Private goods can be exchanged between market actors (such as producers, intermediaries or consumers). The market is expected to balance supply and demand, i.e. the consumer willingness to pay a certain price with the producer’s willingness (or ability) to supply products at that price.

Sanders and Heß (2019) - based on a review of a total of 528 studies - summarised the societal benefits of organic farming as water protection, soil fertility, biodiversity, climate protection, climate adaptation, resource efficiency and animal welfare. The report also highlights that the public expects agriculture to produce and provide food.

The motives of why consumers buy organic food have been summarised as personal health protection, taste, ‘no chemicals’ and consideration for environmental protection or animal welfare (e.g. Padel, 2017, Zander et al. 2018).

In Table 1 we have listed the most important private and public goods delivered by organic farming with the likely beneficiaries.

Table 1: Summary of benefits of organic farming, distinguishing between public benefits and private goods compared to conventional farming

Benefit/ Product attribute	Primary beneficiary	Secondary beneficiaries	Public or private good
Water protection	Society	Water companies Consumer	Public
Soil fertility and health	Farmer	Citizens /Society	Public and private
Biodiversity	Society	Farmers Consumer	Public and private
Climate protection	Society	Consumer	Public
Climate adaptation	Society	Farmer	Private
Resource efficiency	Society	Farmer	Public and private good
Animal welfare	Animal	Consumers & Citizen Farmer	Public and private good
Personal health protection	Consumer	Citizens /Society	Private

Clean water is important for public health and ecosystem functionality. Organic farming reduces the contamination with pesticides and fertilizers and contributes to improving water quality, thus generating a public benefit. This is also of benefit to water companies and environmental protection agencies that save costs for water treatment. Examples of water companies paying organic producers exist (Barataud, 2016).

Healthy soils count as a natural capital, in recognition of their provision of key ecosystems services, carbon sequestration and food production, but the food produced and fertiliser used are marketable products.

Biodiversity on farms covers a wide range of species, habitats and ecosystems, incl. soil micro-organisms, insects, plants, birds and mammals. Practices enhancing biodiversity generate a public benefit, but agriculture also benefits through the provision of ecosystem services such as pollination and pest/disease control. Evidence of benefit generated by organic farming is strong, but finding a fair a value for supporting biodiversity as such remains difficult.

Climate protection arises from reduced use of fossil energy and from the potential of sequestering carbon in soils.

Adaptation to a changing climate benefits farmers in securing future production, but is also of benefit to society in terms of long-term food provisioning. Valuation of the contribution could be linked to carbon quota trading, but the methods to assess carbon sequestration in soils remain contested. Closely related is resource use efficiency that covers a wide range of agricultural inputs, including fossil energy and nutrients. In addition to greater efficiency reduced use of scarce resources is also important.

Animal welfare firstly is a benefit for the animals and citizen/society. It is also highly valued by consumers and represents a private good to the extent that poor animal health impacts on productivity and food safety. Animal welfare thus is a good example of a benefit that is both a public and a private good. Some attempts exist to operationalise animal welfare in the policy arena, for example the German Tierwohl Initiative¹ and a number of labelling schemes (.

Personal health is a typical example of a private good, a product attribute that organic consumers are willing to pay for, but arguably there is also a benefit to public health in terms of reduced public healthcare costs. Related to this is the non-use of certain ingredients or inputs. Another example of a clearly private benefit is the product taste.

Discussion: Organic farming delivers public and private goods and-in line with its dual role-this is paid for by both consumers and taxpayers. Consumers of organic food are known to have both altruistic and egoistic or hedonistic motives (Zander et al. 2018). We argue that consumers can be expected to pay for personal (egoistic) benefits, and even pay for societal (public) benefits in so far as this produces some individual benefit, referred to as warm glow of giving (e.g. Andreoni, 1990).

However, if consumers alone are left to pay, the amount of public benefits provided might not be in line with societal preferences. For example, the German government decided to have a target of 20% of organic area, but has so far only reached nearly 10%. So, political intervention is needed. There are mainly two issues to consider:

(1) The free-rider problem: people not buying organic food also benefit from the provision of public goods. It can be argued that expecting consumers alone to pay for all societal benefits is not equitable, although organic consumers are free to decide if they buy organic products at higher prices or not.

(2) Major changes in the sector: For example, by increasing policy support for organic farming farmers may be encouraged to convert to organic farming and deliver higher quantities to the markets. As a consequence, market prices may fall (unless consumers simultaneously are motivated to extend their demand), and the economic feasibility of organic farming decreases. In order to carry on providing public goods, farmers will need higher public supports.

In addition, the high price for organic food is the most frequently quoted barrier for market growth (Padel 2017) and thus also a barrier to the growth of the sector. This limits the ability of organic farming to deliver genuine public goods on a larger area of land.

To conclude, the need for public support for organic farming depends on societal preferences. Although, there are no longer many doubts about the valuable ecosystem services delivered by organic farming, the valuation of these services for which no markets exist, needs to be discussed and agreed on by societies at large. And specific payment programmes that support farmers who deliver more than just the baseline may need to be developed, whilst the benefits also need to

¹ <https://initiative-tierwohl.de/>

be communicated to consumer to support their continued willingness to pay. Consumers hereby have a dual role as consumers engaging for their personal gain, but also as citizens shaping the future food systems through democratic engagement in policy making. This highlights the importance of public private partnerships in further developing support for the organic sector.

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