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Proper and Fair Pricing

Fair prices for food products have been an important item for discussion over the past decades, with fair pricing being a complex phenomenon that involves economic and ethical elements. Nevertheless, the notion of 'fairness' has been recently gaining attraction in several countries when debating about farm income, prices at farm-gate and retail level. As it is well-known, prices are at the heart of the market and help to align independent decentralised decisions in an orderly manner. In doing so, prices continuously fluctuate, complicating the identification of a fixed number or value.

This white paper focuses on the economic aspects of fair pricing. It also discusses several options to 'intervene' in the price-formation process, considering their potential benefits and drawbacks. In spite of the concerns regarding 'intervention' in the price-formation mechanism, this white

paper concludes that well-designed and targeted taxes and/or subsidies could help policy-makers to integrate externalities. This would allow for the consideration of their impact during the decision-making process of all economic players.

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1 Social Demand and Policy

The agricultural sector must not only produce sufficient food that is safe and of high quality, but must also meet other social demands, such as taking animal welfare into account, maintaining biodiversity and an attractive landscape, ensuring a clean environment, and reducing its contribution to greenhouse gas emissions. The rules for meeting the demands of society have been drawn up in policies (European and national) and in agreements with customers. Fulfilling these demands means, in many cases, higher costs for the primary producer (the farmer), but does not always result in higher turnover. This leads to the complaint of farmers (horticulturists and fishermen)

Box 1 Prices and Rules for Food in the Netherlands and the EU

In total, more than 924 billion euros (approximately 34 billion euros in the Netherlands) is spent on food every year in the EU. The share of costs in the total household expenditure by consumers in the EU ranges from around 10% to over 30%. In the Netherlands, consumers spend a relatively small part of their income on food. Eurostat compares price levels of food in EU Member States. The differences are considerable, despite the *single market* in the EU. The price level for food and drinks in the Netherlands is more or less the EU average. In Scandinavia, Denmark, Ireland, and Austria, food is relatively expensive, while price levels in the Eastern European Member States are relatively low (with Romania being the cheapest country). For example, food prices in Denmark are about 30% higher than in the Netherlands and in Poland the price level is about 30% lower than in the Netherlands. There are many factors that lead to these differences, including differences in efficiency in food chains (Bunte et al., 2009; Baltussen et al., 2014). Differences between Member States in taxes and excise duties are an easy cause to analyse.

Food research shows that price is an important factor in the purchase of food, but certainly not the only one that counts. Taste and convenience are more important than price. Other factors are habits (food culture), availability, sustainability characteristics, origin, nutritional value, knowledge, and beliefs about food. Furthermore, a 'typical' consumer does not exist. While some of them are willing to pay more for sustainable products, some are not (Aerts, 2013).

There are rules in the EU which ensure that consumers can buy 'fair' products. Misleading advertising and aggressive sales practices are prohibited. In addition, consumers must be able to make certain assumptions, such as that food labelled 'organic' always meets the same standards. Non-EU countries must comply with comparable (but not identical) standards for organic food.

that they do not receive 'fair' or 'correct' prices for the products and services they provide to society and by extension, to citizens and consumers (Baltussen et al., 2018).

Simultaneously, food has become cheaper over time. According to Minister Schouten of the Dutch Ministry of Agriculture, Nature, and Food Quality, food is even too cheap, and the fact that prices are too low is a factor contributing to irresponsible food waste (see Box 1 Prices and rules for food in the Netherlands and the EU). Moreover, many citizens also follow an unbalanced diet in which they consume too much of some of the products (meat, sugar) and too little of others (fruit and vegetables). This type of diet has harmful effects on health and adds to rising health costs. This leads to calls from some parties to take action regarding food prices, demanding that some products become 'extra-expensive' (fat tax, sugar tax) and that other products are subsidised (fruit) (Biesbroek, 2019). Several EU Member States are now experimenting with this kind of targeted taxation. Nevertheless, food can also be too cheap because there are all sorts of 'hidden social costs' that are not or insufficiently reflected in the price.

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Headlines illustrate the current relevance of the price topic: 'The farmer gets too little for his product,' 'Food is too cheap,' 'Consuming meat should be discouraged, and consuming fruit should be encouraged.' Is the solution to adjust and manipulate prices? What are the possibilities for governments to work with excise duties and subsidies? Will that improve the farmer's position? Will it make consumers healthier? Will it decrease food waste? And how high would excise duties and subsidies have to be in order to achieve a certain healthy diet? Will it allow us to reach the people that we want to reach? Can we do this in the Netherlands, or is cooperation in an EU context necessary? In short, what exactly is a 'fair', 'good' or 'correct' price?

There are quite a few opinions on what constitutes a fair price. Some of them are placing a strong emphasis on ethics, while others are arguing more from an economic point of view (Maxwell, 2008). In this document, the emphasis is more on the economic aspects. That choice serves as a limitation. It implies that a great deal of

attention is paid to 'correct prices', which are not the same as 'fair prices', although both are often used interchangeably in everyday speech. Understanding the economical aspect of prices (correct prices) is crucial and part of the debate on the function of the agricultural and

food system as it currently operates. Better insights about these issues are needed when discussing about topics such as the ethics of pricing and remuneration in a balanced and informed manner. This white paper contributes to that.

2 Starting Point and Setup

The starting point in this white paper is that a price is first and foremost an expression of economic value. The primary perspective when thinking about prices should therefore be an economic one: How does the price come about? What is fair when it comes to economic value creation? (See also Box 2 Price and Value).

Prices also influence income generation because they contribute to the amount of income and expenses. The outcome of the price formation process in the economy partly determines the distribution of income in the economy and in the food supply chain. When this distribution is perceived as unfair or unjust, it is often a reason why unfair prices are discussed.

In the next section, we will first discuss the role of market forces, some of their implications, and the functions of prices in the economy. We will then discuss seven causes of 'unfair' pricing (in an economic sense) and indicate how these can be 'corrected'. Moreover, the ethical notions surrounding the 'fair' or 'just' price will be addressed. We conclude by returning to the questions from the introduction and trying to apply the insights gained along the way. The role that public policy can play in this context is also discussed and gives an indication of the pros and cons that should then be taken into account.

Box 2 Price and Value

It is sometimes said: "Economists know the price of everything, but the value of nothing!". There has also been discussion in economic science itself about the relationship between value and price. The example is the so-called 'consumer paradox': the price of water (essential for human life) is low, while the price of diamonds is high. After all, the price is determined by the value of an additional unit of product, not by the value of all the units. There may be a direct link between the level of the price (economic value) and a specific value in use, but this is not necessarily the case. Economic value is determined by relative scarcity, both on the production and the consumption side. Consumer appreciation plays a role in this. Things like fashion trends, hypes, lifestyle, advertising, and the stories (image) surrounding products influence prices. Sociocultural factors also influence the economic value, e.g. flowers are relatively expensive around Mother's Day; a Muslim does not eat pork, even at a low price, etc.

3 Prices as a Result of Market Forces: 'Haggling' Our Way Towards an Equilibrium Price

Prices are the result of a process of 'two-way haggling', of voluntary exchange between of supply and demand. The 'equilibrium price' is created when supply and demand are equal and the market is exactly free: for the last unit of product traded, the equilibrium price is based on equality between the *willingness to pay* (WTP) of the consumers and the *willingness to accept* (WTA) of the suppliers (see Figure 1). In other words, there is a relationship between what consumers are willing to pay for a product and the minimum price that suppliers want

to accept in order to be able to offer the product in the requested quantity. Suppliers (and demanders) have an opinion on what they need to produce to cover their costs (and what they are willing to pay). Those opinions about "the economic value for me" exist and are influenced by income, preferences and other matters. All these opinions together determine the market equilibrium that will eventually be established, and therefore, the equilibrium price.

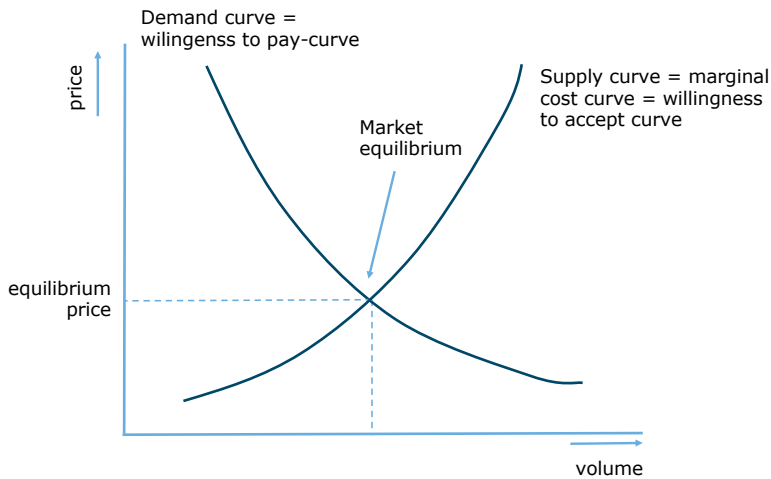


Figure 1 Market forces, demand, supply and equilibrium price

4 Equilibrium Price 'Discriminates'

Prices are economic indicators that not only pinpoint the exchange value, but also "discriminate" between demanders and suppliers. In the case of the equilibrium price in a market, all consumers who have a willingness to pay less than the market price will not receive the good or service (Acharya et al., 2011). In the long run, producers with a cost higher than the market price will not be able to offer or produce the product. In the short term, where the product has already been produced, will suffer a loss that can create a sense of "unfairness" (see Box 3 Fair Price and Perception).

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Market prices therefore discriminate and exclude certain producers and consumers. There are a competitive process and ever-changing dynamics on both the supply and demand side. Ultimately, those who deliver a product or service most cost-effectively will 'produce' the product. Only those who really want a product or service and are willing to pay its price will 'consume' it. It is clear that the latter is also related to a person's income.

Is the discrimination referred to above unfair? Not in a general economic sense. This is how market allocation works. With the acceptance of the market economy principle as the primary form of economic order, we can



also accept this process and its operation. Particularly in a market context where new competing suppliers enter, those producers that were previously able to supply may be pushed out. Those "losing producers" can see the prices as too low and unfair. More generally, the perception of whether a price is fair or unfair has to do with understanding how value is created within supply chains (see Box 3).

Box 3 Fair Price and Perception or Experience of Fairness

There is research into unfair commercial practices that suggests that unfairness in prices is common (Di Marcantonio et al., 2017; AMTF, 2016). This observation is based on information from respondents, in which the perception of price or the way in which prices are established is an important factor (Xia et al., 2014). For example, it is surprising that in the case of organic farming, farmers find prices fairer than in conventional farming, even though both groups earn roughly the same income. This is probably because organic farmers are more involved in the price formation process and there is consultation about the costs and benefits at various stages of the chain. This is happening at a time when price formation in conventional agriculture is much more anonymous, less transparent and comprehensible.

The farmer will probably perceive the price he receives for his product as 'fair' when:

- he sees that others receive similar prices (fair treatment);
- the price is in reasonable proportion to the effort and/or production costs involved (fair remuneration);
- there is no party in the chain that makes a lot of money for the price paid at the farmer's expense (distributive justice); and

- the price was established by following the usual rules in the economy (procedural fairness).

The above implies that the degree of transparency and insight and/or mutual discussions between chain parties about the role in value creation in the chain will enhance the perception of fairness and also provide a more factual basis on which the perception of fairness can be assessed (Maxwell, 2008). If there are changes and/or transitions in the economy, which may sometimes be sudden, prices can quickly change and a discrepancy can easily arise when compared to what producers had expected based on the past. This can also be a factor behind the 'experience of unfairness'.

In order to be able to keep up with trends in market prices (e.g. declining actual prices for various agricultural products), business and technological development is necessary. If this technological development becomes uncertain and/or is slowed down, it hinders the potential to continue earning a good income even with narrowing margins between costs and turnover. This can also be a factor in the perception of price unfairness (see recent farmers' demonstrations in the Netherlands).

5 Functions of the Price

Prices have three functions in the economy (Phelps, 1985): (1) passing on information; (2) encouraging participants in the economy to take appropriate action on the basis of price information; and (3) contributing to the remuneration that a person receives for their activities. These three functions are directly related to each other:

- 1) Prices pass on information from consumers to shop owners, retailers, and manufacturers about what they are interested in and what they are willing to pay for a particular product. But it also works both ways, e.g. butter will become more expensive if less milk is produced due to drought.
- 2) The function of prices to pass on information would be useless if people do nothing with the information. However, at the same time, prices are also incentives for people to make decisions and take action, such as reducing or expanding production, looking for alternative consumer goods/services (e.g. if butter becomes more expensive, consumers may respond by using margarine instead), etc.

- 3) The mentioned encouraging function is directly linked to the third function of prices. On the one hand, prices contribute to the process of remuneration and income generation. On the other hand, prices provide an opportunity for meeting needs.

The particular characteristics and functions of prices mean that they play an important role in the development of the economy.

The particular characteristics and functions of prices mean that they play an important role in the development of the economy. Intervening in the price system is therefore something that should not be done lightly since it distorts price formation based on the supply and demand mechanism. Nevertheless, there are a number of reasons for intervening in price formation.

6 Seven Reasons Why Prices Can Be Unfair in Economic Terms?

A crucial assumption for the proper functioning of the market is that there is sufficient competition between suppliers and consumers, where none of the parties will be able to manipulate price formation in their own interest. If that is the case, there is no reason for the government to intervene. If there is 'imperfect' competition (monopoly, oligopoly, monopoly, oligopsony, etc.), the parties may influence the price in such a way as to increase their own profits at the expense of other parties (Swinnen and Vandeplass, 2010; Sheldon, 2017). This use of economic dominance may also manifest itself in commercial practices which, in addition to price, affect supply conditions or contract specifications with third parties (Acharya et al., 2013; ; AMTF, 2016). Economic competition law and the competition authority (the ACM in the Netherlands) monitor (to the extent possible) that no overly powerful parties are created and that economic power is not abused, e.g. no cartel agreements (for further details, see, Bonanno and Menapace, 2017).

A second reason why price formation is a problem is in those cases in which markets fail, as is the case, for example, for collective or public goods (justice, roads, infrastructure, defence, biodiversity, landscape, etc.). Due to the nature of these goods (*non-rivalry, non-exclusiveness*), they cannot be supplied through market forces unless additional structures such as public budget funding are created. If it is decided to do so, the question is: at what price will the public good be offered? The supply is often freely available to the consumers, or a limited fee is charged that does not cover costs (e.g. dues, school fees). In order to offer the required production, cost-covering price signals are needed (unless the government decides to produce 'in house' and makes it itself).

A third reason why prices may not be optimal ('unfair') in economic terms is because of the existence of negative or

positive external effects (e.g. environmental impact of groundwater due to nitrate losses from agriculture). These are, by definition, effects on third parties which are not included in the private economic considerations of the party causing these effects. For example, the costs of groundwater pollution are borne elsewhere in the economy (e.g. by households paying for purification costs for the drinking water) or are passed on to later generations. From an economic perspective, the most obvious solution seems to be to internalise these costs and yields (pricing) by incorporating these external effects into market prices via levies and/or subsidies (e.g. deposits). Since a lot of information is needed to implement a scheme like this, governments often prefer to work by regulation rather than pricing (see Box 4 True Price).

A fourth reason is that an important precondition ensuring market parties with access to perfect information is usually not met. The role of information is of great importance since information can be crucial to be able to recognise the (desirable/unacceptable) properties of goods or services. Standards or labelling products can help to reduce this problem. The consumer can then choose and mark which premium they want to pay (or which discount they want), while the producer can determine the quantity and quality of the product as well as the method of production. A 'fair price' discussion should not only be about prices, but about other aspects as well. The reason behind is that prices are expressions of value, which can only become 'real' if it is clear what consumers are buying and are paying for.

A fifth reason is that price formation does not work because some markets simply do not exist (missing markets) and therefore good prices are missing. This is mainly due to prohibitive transaction costs and/or imperfect information. An example of this is an insurance

Box 4 True Price

The *true price* is a calculated price that shows how much a product should cost if all hidden social costs (e.g. costs of environmental pollution) were neatly included in production costs (Groot Ruiz et al., 2018). The difference between the calculated true price (actually the calculated true costs) and the market price gives an indication of the social costs expressed in monetary terms. There are all kinds of forces (lack of environmental legislation, competition, *free-rider* behaviour) that make it difficult to turn market prices into true prices. The value of true price calculations is that they give a signal to consumers, producers, and policymakers about the role of 'hidden'

social costs or fundamental injustices (child labour), and in turn, provide information that can help policy making and consumer behavior to become more sustainable. For example, consumers can get an idea of the differences in social costs of comparable products and choose the more sustainable variant. Tony Chocolonely, as a social enterprise, has mapped out the true price of chocolate for 2013 and 2017. During this period the social costs have been halved, but not yet reduced to zero. The ultimate goal is for all chocolate to become 100% slave-free. Consumers can now opt for a chocolate with low social costs, but possibly with a slightly higher price at the checkout.

market to cover weather risks. It may be a reason for the government to come up with certain policy measures such as the facilitation and support of *risk management* tools in agriculture or crisis prevention and management policy.

A sixth reason is the existence of high (non-prohibitive) transaction costs. Consumers are not directly and automatically informed of prices, price changes and/or adjustments in product quality. Companies need to invest in informing and convincing consumers (*customer market-model*). Information constraints and the transaction costs

of bridging information gaps lead to transaction costs, which can limit the effect of competition (Phelps, 1985).

A seventh reason is that in reality people are not as simplistically economically rational as defined in the standard model. In reality there are issues such as *trust*, *reciprocity*, *expectations*, and *mood* (Falk and Fishbacher, 2006) that also explains their behaviour. The latter two factors are related to the role, availability, transparency and quality of information that consumers have at hand (Baltussen et al., 2019).

7 Ethical Aspects of Fair Pricing

Concepts such as 'fair price', 'fair remuneration' perhaps refer more to ethics than to economics in everyday speech. In the introduction, the aspect of the fair distribution of incomes in the food chain was already mentioned in a general sense. A concrete example is Fair Trade with its promise to pay small farmers a fair price for their coffee, tea, and cocoa. Fair coffee is coffee for which an ethically good price has been paid, so 'fairness' becomes associated with the coffee by consumers. The Fair Trade example is interesting in this respect, but it also shows how difficult it is to reconcile economics and ethics around prices. There have been fierce discussions in this type of organisation to establish a fair price for sustainably produced coffee and

similar products. Production costs are then taken as the basis for determining the minimum price. The 'development premium' is an additional fee that is incorporated into the minimum or market price. However, production costs differ between farmers and locations (see Box 5 The Objective Price Does Not Exist). This is perfectly understandable from an economic point of view, but the question is what conclusions you draw from this for determining the fair price (Cox, 2001; Diller, 2008).

With market forces operating, a price outcome based on the cost of production on the supply side and the willingness to pay (consumer interest) of consumers is obtained. However, some producers and consumers will be excluded in this process (see above). If Max Havelaar wants to continue to working with all their coffee farmers, they will probably have to come up with a relatively high price, allowing the least efficient grower from the entire target group to just barely stay afloat (no loss). But are consumers willing to pay that price? Or are they going to drink less coffee or switch to conventional coffee? What is fair? What is tenable? Surely Max Havelaar will have to have a business model in which they can at least cover the costs from the sales, right?

Box 5 The Objective Price Does Not Exist

An objective or generally applicable price does not exist in the economy (Van Damme and Sauter, 2018). Prices differ per location and production costs differ per company depending on context-specific (e.g. taxes or weather conditions) or company-specific (e.g. knowledge) situations (Swinnen and Vandeplass, 2010; Acharya et al., 2011). Moreover, prices are constantly in flux in order to respond to the ever-changing context and its significance for supply and demand. For example, on 2 July 2018 the price of potatoes suitable for the production of French fries was €4/100kg, while within a month it rose to €26/100kg (+550%). This means that there is no unambiguous reference that can serve as an anchor to determine when the price is a fair price. Economists have tried in the past to relate prices to costs (labour theory of value), but although costs influence prices, many other factors also serve as determiners, such as appearance or image (e.g. Danone caps in colourful small cardboard packaging) and the available alternatives. Nevertheless, there may be grounds for suspicion if significant price shifts are seen that cannot easily be explained through the course of normal factors (Van Damme and Sauter, 2018).

The conclusion may be that the ethical perspective is not unimportant, but that, even if ethical considerations are put forward, the economic context in which prices are primarily an expression of economic value must be taken into account. If ethical considerations or social desires are privatised without regard to the economic aspects (moralisation of economic life), this easily leads to widely divergent views on what constitutes a 'fair price'. However, one must also be aware of the pitfall of declaring economic independence (economism) and market prices 'inviolable'. Although prices reflect primary scarcity, this is partly influenced by the rules and preconditions that are applied in a society.

8 Getting Prices Right: Dilemmas, Prices, and Policy

The introduction raised a number of questions about farmers who felt that they were being insufficiently rewarded for the increasing efforts they had to make, about food that would be too cheap, about products that would be consumed too much or too little for a healthy diet, as well as about hidden social costs that would not be reflected in the price. There is also a desire to use policy to intervene in price formation in order to solve the problems mentioned. Table 1 (see below) provides an illustrative overview, which takes into account insights mentioned earlier (see also the comments mentioned above).

The summary is that influencing prices through policy is more difficult than it seems at first sight: for example, because subsidies cost money or there are restrictive EU rules. The expected effects may also be much smaller than expected, such as because subsidies to farmers may lead to rising land prices.

The pricing policy also offers opportunities. Examples:

- Through protected brand names or targeted payments (subsidies) to farmers who take certain management measures (see as illustration Box 6 The Black-tailed Godwit in Friesland).
- Internalising social costs in market prices (e.g. by means of an environmental tax that can also be used to top up a sustainability fund) can help promote circular agriculture (better management of resources and ecosystem services) and reduce the negative social effects (see Box 7 on Circular Agriculture, Resource Efficiency and Prices as an illustration).

Although people respond to prices, their behaviour for consuming certain foods also depends on other factors such as habit, taste, convenience, presentation, or availability/lack of alternatives. Prices can help to inform consumers about the social costs, even if these cannot be reflected directly in the market price. Information about the *true price* or *true cost* can therefore help consumers to make a better decision at the checkout, such as ignoring products with high social costs. Information about the fair price can also have the same effect.

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In addition to the role of government policy, we can also see that the business community is looking for its own solutions in various sectors. In part, this moves towards working with closed systems, in which a retailer/processor commits to a certain group of producers who produce items with added value and is also rewarded for this in accordance with a certain agreed method. Another route is working with certification marks and the associated appreciation of distinctive qualities in the market. In the case of closed chains, there is often a *closed shop* and therefore exclusion of certain producers, while in the case of labels any producer who qualifies can in principle participate.



Table 1 Issues, Prices, and Policy: a Brief Overview

Issue	Motivation	Options for pricing policy	Comments
Farm output prices are too low.	Farmers have to make additional efforts (e.g. for the environment) and are not paid enough for this.	Price-support policies can correct underpricing, or the additional effort can be rewarded by targeted surcharges.	<ul style="list-style-type: none"> - Price-support policies have not really been possible since the liberalisation of agricultural markets in the EU began in the 1990s. It happened in the past and led to surpluses and the dumping of products (with subsidies) in developing countries. - Working with targeted payments may be possible (there are options in the CAP), but it is costly, and monitoring and control can be cumbersome. - There are some leakage effects. By providing general income subsidies, the market price falls and the net effect on farmers' incomes is lower than previously expected. In addition, direct income supplements generally lead to higher land prices.
Too much sugar, salt and meat are eaten.	Consumption levels are such that health suffers.	Targeted food excise duties (fat tax, sugar tax) can make a product more expensive, discouraging consumption.	<ul style="list-style-type: none"> - There are EU rules on excise duties (alcohol, tobacco, energy) and the possibility of imposing excise duties on food is limited (partly through VAT). The question is whether price increases (via excise duties/taxes) have any effect. Indeed, the demand for food is relatively inelastic with regard to price: this means that high excise duties may be necessary to sufficiently discourage consumption. Political and social support for this is probably difficult (negative welfare effects and unevenly distributed income effects). - Excise duties/taxes lead to substitution and avoidance behaviour (e.g. decrease in fish and beef consumption, but increase in chicken consumption). - Consumption also depends on behavioural patterns and on food sector policies (sugar/salt content in food) and retail (compare supply of certain portion sizes).
Too little fruit and vegetables are eaten.	Increased consumption of fruit and vegetables could have a positive impact on health.	Through a subsidy, consumers are encouraged to consume more fruit and vegetables and in turn, live healthier lives.	<ul style="list-style-type: none"> - There is a school fruit scheme in the EU, also in the Netherlands. EU rules on subsidies limit the Dutch' room for manoeuvre. - Subsidies are expensive from a budgetary point of view and require resources within the government budget. - Prices only determine consumption to a limited extent; behaviour and behavioural patterns are likely more important (see also above).
The societal costs are not clear and are not reflected in the price.	If consumers have no insight into their selection behaviour, they cannot take control of and responsibility for it.	Policies could require producers to provide an indication of the societal costs (<i>true price</i>) for products, distinguishing between environmental, social, and health impacts (see Box 6 and 7). It is also possible to create a 'right' market in which freedom to use the environment comes at a price.	<ul style="list-style-type: none"> - Consumers will then have additional options for choosing products with low societal costs (but perhaps a slightly higher price at the check-out). - Not every consumer attaches importance to societal costs and/or has the same awareness of such costs. - Where feasible (easily determinable/clear division of 'property rights') it is more obvious to charge external costs to producers (as is currently the case with manure disposal costs), so that these are reflected in the price (<i>willingness to accept</i>). - Determining and dividing (privatising) the environmental space for use leads to respect for environmental limits and a cost-efficient use of it (tradable rights).

Box 6 The Black-tailed Godwit in Friesland

The black-tailed godwit is an important and valued meadow bird in the Dutch province Friesland. However, its population is being threatened. Suppose it is decided to help conserve the black-tailed godwit in Friesland and that citizens indicate that they are prepared to pay a little extra for a carton of milk. The dairy farmers all promise to take certain management measures to create a more favourable

habitat for the black-tailed godwit. What economic effects does this lead to (including for prices)? The management measures to be taken by farmers increase the cost of producing one litre of milk (see shift of supply curve from S_0 to S_1). At the same time, consumers are prepared to pay a little more for a carton of milk (see the shift from demand curve D_0 to D_1).

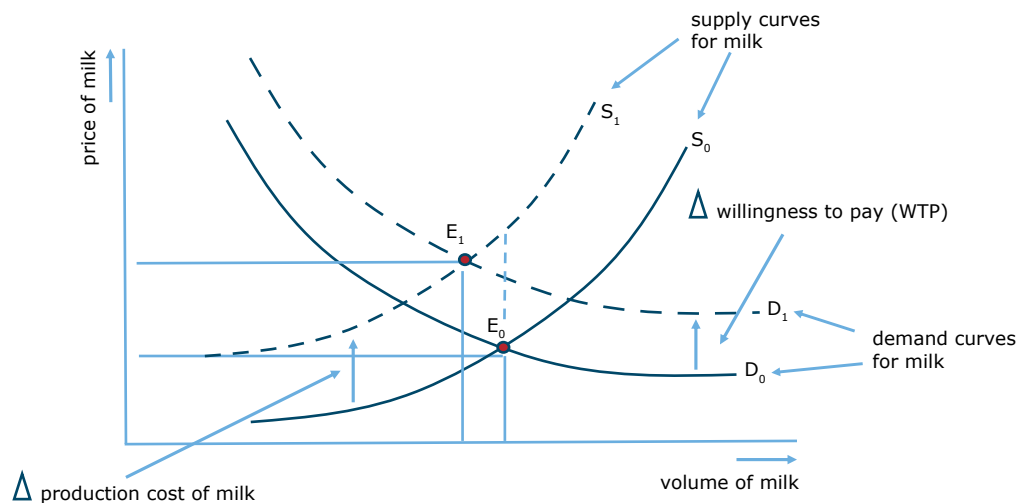


Figure 2 Black-tailed godwit milk in Friesland

Can this work? Yes, as long as the increased willingness of consumers to pay is higher than the increase in costs among dairy farmers. No, if the willingness to pay a little extra is insufficient to cover the costs of the management measures. Incidentally, this not only covers the costs incurred by farmers, but also those of labelling and the separate *handling* of the black-tailed godwit milk by industry and retail. If the willingness to pay is too low, the premium for black-tailed godwit milk is not high enough to create a *supporting* earnings model. The consequence will be that, due to lack of profitability, private parties will not pick up and implement the plan. If the province or the Water Board were to decide to make the management measures compulsory, the black-tailed godwit could still be 'saved', but then part of the farmers would receive too little compensation (they pay the price) and the Frisian consumers would get their black-tailed godwit and their carton of milk for 'too cheap' (playing fast and loose with 'preserving biodiversity', while letting others pay part of the costs).

Friesland is beautiful, but it is also small. If most of the milk produced in Friesland is consumed outside Friesland, the story becomes even more complex. In order for the black-tailed godwit plan to work, in addition to Frisian consumers, all non-Frisian milk consumers must also be prepared to pay as much. But what if they're not as worried about Friesland or the black-tailed godwit?

A solution could then be to pay for the service of conservation of the black-tailed godwit separately, through an additional charge like a conservation fee. This is already happening without obligation, on a voluntary basis, through agricultural policy. The farmer then produces two products: milk and the service for supporting black-tailed godwits. National and international consumers pay for the milk and the (Frisian) consumer/citizen, and indirectly all EU consumers pay for the black-tailed godwits via the taxes.

Box 7 Circular Agriculture, Resource Efficiency and Prices

For a very long time, the emphasis in agriculture has overwhelmingly been placed on increasing productivity, i.e. improving economic efficiency. Circular agriculture tries to shift that focus by also taking resource efficiency into account. An example of the application of the circular

principle is to achieve a better closure of the feed-fertiliser cycle on livestock farms. Improved use of organic fertiliser (i.e. nutrients derived from forage) for crop growth can save on the purchase of artificial fertiliser (see shift from market balance E_0 to E_1).

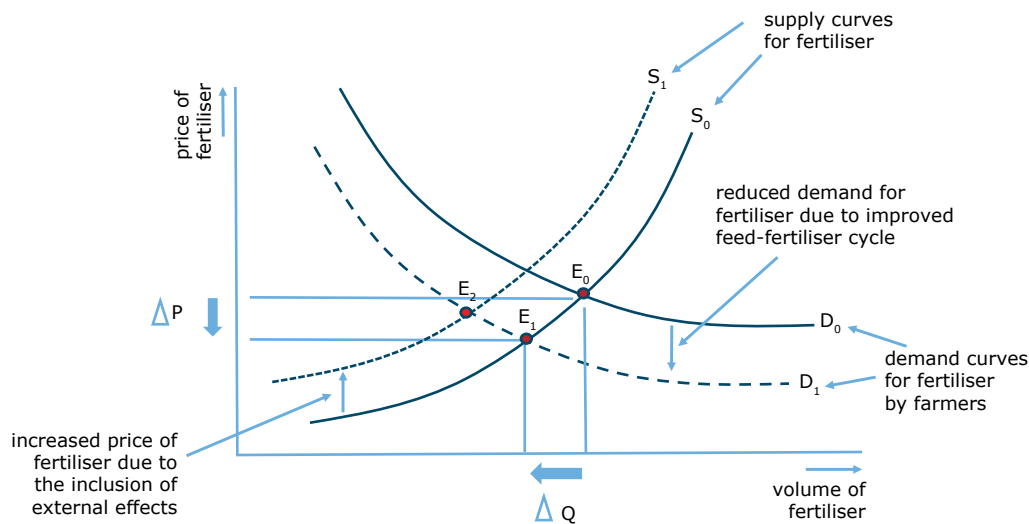


Figure 3 Improved feed-fertiliser cycle and fertiliser savings

The improved utilisation of the feed-fertiliser cycle means that the farmer needs to purchase fewer external inputs (fertiliser). An expected economic effect is that the reduced demand for fertiliser, if widespread across Europe, will also lead to a decrease in the price of fertiliser - until the fertiliser plants have adjusted capacity. In this case, the farmer saves both resources (fertiliser) and costs (*win-win*).

The question may arise as to why farmers no longer work according to the recycling principle if it is economically attractive to use 'waste' fertiliser. This may have to do with all kinds of 'barriers' such as legal regulations regarding the application of organic manure and the lack of techniques and innovations that 'unlock' new recycling possibilities.

Circular agriculture can also be attractive if the current price of artificial fertiliser is too low, such as because CO₂ emissions in production (external effect) have not been

adequately passed on. Or it may be that the price does not reflect the risk of exhausting a finite supply (phosphate). It is also possible that artificial fertiliser rinses out more easily than solid manure and increases costs for water purification, meaning that it is priced too low. If the external or societal costs of fertiliser were to be 'priced in', this would be equivalent to an upward shift in the fertiliser supply curve (with a new market equilibrium of E_2). The farmer will then have a lower price advantage, but will use even less artificial fertiliser and in turn, help to reduce societal costs.

Circular principles can also be blocked by economic mechanisms: there will not always be win-win situations, as the use of more sustainable resources can also involve higher costs. The farmer's earnings model and the principle of resource savings in circular farming are then not 'unified', i.e. not in line with each other, and the question remains whether farmers will choose the circular option in such cases.

9 Conclusion

The discussion about fair or just prices appeals to moral notions such as a fair distribution of remuneration for all parties and their performance in the food chain. Correct prices are mainly associated with the well-functioning and malfunctioning of the economy. Since prices are primarily economic value indicators, the economic perspective must always be explicitly included in discussions on fair, just, and correct prices. The need to take the economic dimension into account applies both when analysing problems and devising solutions. Ultimately, coherence with the economy and the way markets function is also needed if 'injustices' are to be removed for ethical reasons.

There are seven ways in which reality deviates from the economic model: (1) imperfect competition; (2) market failures in the provision of public goods; (3) the occurrence of negative and positive external effects; (4) problems with missing framework conditions, in particular with regard to, sometimes asymmetrical, information; (5) the absence of markets; (6) the role of transaction costs; and (7) human behaviour that deviates from economic rationality.

For the agriculture and food sector, the following issues are important in the notion of fair price: competition and pricing policies (including unfair trading practices and remuneration for non-statutory requirements), standards and certification, addressing externalities (taxes/subsidies), and missing markets. Moreover, with regard to price perception, insight into the formation of prices (remuneration) in the chain is important, especially in view of the dynamics in markets and the changes in price relationships.

Policy can be used to shift the remuneration of farmers and the consumption behaviour of citizens in a positive direction. When it comes to internalising external effects, in theory, price corrections are even the first appropriate means. However, this kind of policy is often complex and does not offer simple solutions, although 'correction' of prices can indeed be one of the building blocks in a larger story, which simultaneously includes other measures.

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