

Whitepaper

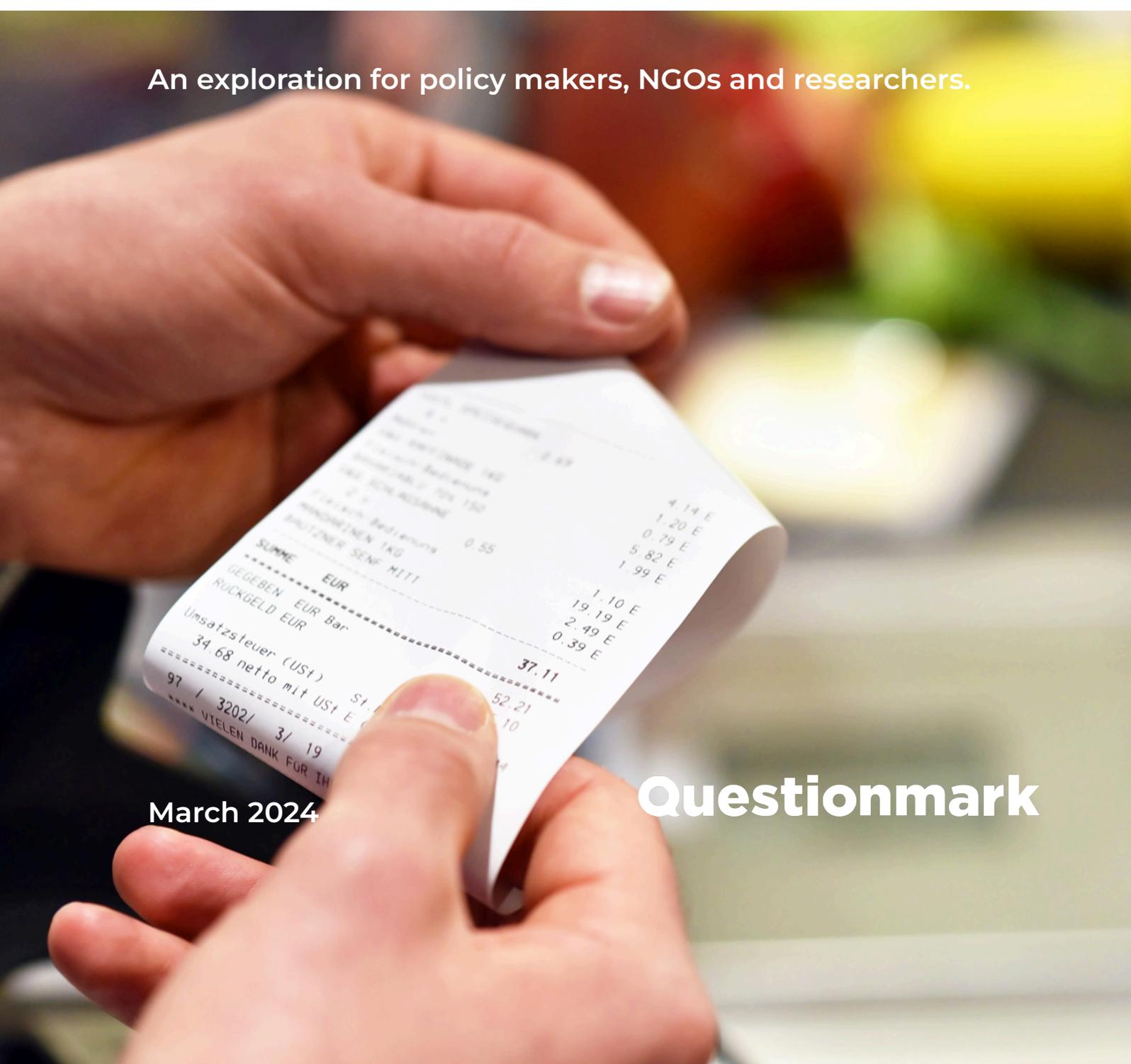
A Fair Living

What do we know about the price structure of food?

An exploration for policy makers, NGOs and researchers.

March 2024

Questionmark



Item	Price
4.14 E	
1.20 E	
0.79 E	
5.82 E	
1.99 E	
1.10 E	
19.19 E	
2.49 E	
0.39 E	
SUMME	37.11
DEGEBEN EUR Bar	52.21
RÜCKGELD EUR	10
Umsatzsteuer (USt)	
34.68 netto mit USt E	
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VIELEN DANK FÜR IHRE KAUFE	

Colophon

Execution

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Questionmark

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Summary

The price structure of food increasingly raises critical questions in the public and political debate. How do we keep food affordable for everyone? Is food unnecessarily expensive? Is everyone in the chain getting a fair price?

To answer these questions, policymakers, politicians, NGOs and researchers need a better understanding of how food prices are constructed. This paper explores what it takes to do that.

Chapter 1 provides an overview of the figures relevant to understanding the price structure of a single product. But price-setting is sensitive to competition and therefore kept secret. **Chapter 2** shows that in practice only two types of figures are available: market prices of unprocessed agricultural products and the final price on the supermarket shelf. Indirectly, other price components can be calculated, but overall, prices are not transparent.

Chapter 3 examines what a 'fair price' entails. Roughly speaking, it means three things:

- The profit is *equally* distributed across all chain links; or
- The profit is reasonable, *in proportion* to the value the link adds; or
- The food product is *affordable* to all.

It turns out that the price structure of an individual product by no means always tells us something about these aspects of fairness. In fact, supermarkets base the price of a product only partly on the purchase price. Some products are priced low to attract customers, and to compensate for this, other products are priced higher. This 'margin mix' makes the link between what consumers pay and what the farmer earns very tenuous. With this insight, **chapter 4** makes suggestions for making the price structure and pricing mechanism of supermarkets more transparent.

Given the incomplete picture of price structure currently available, **chapter 5** suggests three directions in which to look for measures to ensure 'fair' food prices:

- **Social objectives for supermarkets.** If supermarkets incorporate certain societal values into their objectives, they may be able to bring food prices more in line with those values.
- **Price promotions.** Promotions do not lower the average price of food. Moreover, the benefits of promotions do not accrue equally to consumers. It should be investigated whether the average consumer might benefit more from fixed low prices than from temporary discounts.
- **Marketing expenditures in the food industry.** Marketing expenses account for about 3.5 percent of the price of food. However, that expenditure serves little to no consumer interests.

Introduction

Suddenly, food prices are at the centre of public and political debate. After years of fairly stable prices, concerns about livelihood security are associated with 'shrinkflation and greedflation'. People also increasingly see price as an instrument to get people to eat healthier or more sustainably, for example by adjusting the VAT. At the same time, calls for fair prices for farmers have not become less strong.

One of the difficulties in the debate is the intransparency of price formation in the food chain. No one seems to have a comprehensive understanding of all the factors that determine what an ounce of minced meat costs, an apple or a bag of crisps. That makes it difficult to answer crucial questions such as:

- Is food unnecessarily expensive? Are consumers paying a 'fair price'?
- Can farmers (in the Netherlands) earn a fair living?

Foodwatch approached Questionmark with the question: why is it so difficult to get an understanding of prices in the food chain?

Subject of this exploration

This exploration compiles available facts and figures that can help answer the above questions, and also identifies crucial information that is not yet available. To maintain an overview of this research area, we focus primarily on:

- Pricing at the end of the food chain, particularly within the supermarket.
- Supply chains within the Netherlands
- The influence of prices on consumers and farmers
- The current price -setting

What this document is NOT about

Food prices are related to many, large and pressing societal concerns. Due to time, we deliberately disregard important aspects in this report:

- Prices on the (world) market for food and commodities, food speculation, the influence of banks, subsidies and geopolitics
- The position of farmers and producers outside the NL and the EU
- The influence of prices on the sustainability of agriculture or on health
- The possibilities to influence price formation, prices as an instrument for sustainability or healthier diets

What figures do we need?

There are several types of figures that can help to better understand the price structure of a food product. Below we discuss the different components that determine the price of a product.

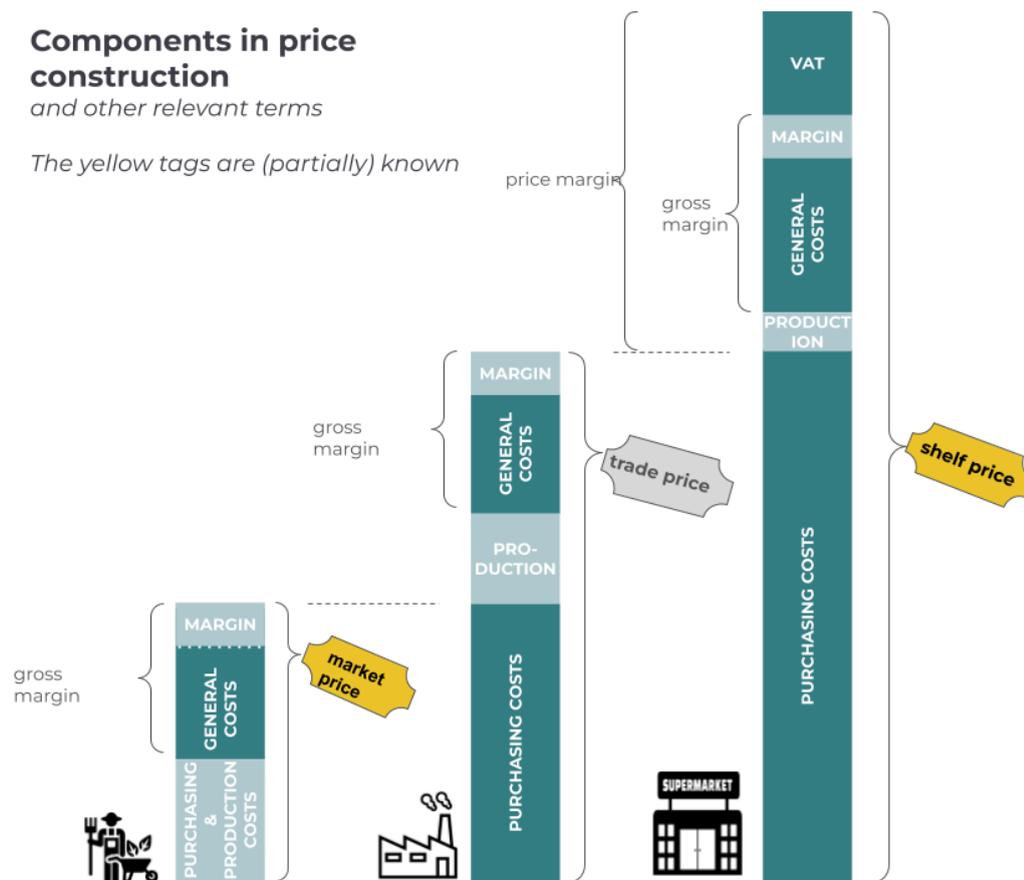


Figure 1. Components in the price structure of food products. In reality, the boundaries between different components are not so well defined; not every company maintains the same classification of costs.

Purchasing costs

Purchasing costs are costs of purchasing the product or ingredient. In the picture above, this is the purchase at one Dutch farmer. In reality, different ingredients come from different farmers, and there are also non-agricultural purchase costs such as packaging materials.

Production costs

This includes all other costs directly related to the product. For example:

- Transport from the supplier
- Pallet costs
- Labour for processing the product
- Cooling/freezing
- Labelling/best before dates
- Production/purchasing of the (outer)packaging.

General costs (also: overhead)

Every company also incurs costs that are not directly attributable to one product. For example:

- Marketing and sales
- Depreciation of machinery and office buildings
- Administration and management.

Gross margin

This is the price margin minus production costs. This is what the company is left with to cover all the company's overhead costs, and possibly leave a profit.

Margin (also: nett margin or profit margin)

The margin is what remains when all the above costs have been paid, including the overheads.

Margin does not mean the same for all links in the chain. For example, for a large company, all salaries and other operating costs fall under 'general costs' and the margin is really what is 'left'; profit that can be distributed among shareholders.. However, many farmers do not pay themselves and their family members a fixed salary. So the margin is what they have to live on.

VAT (also: sales tax)

Most food products are subject to a 9% VAT rate. Important product groups to which the higher 21% rate applies are stimulants (alcohol, tobacco). These product groups may also be subject to excise taxes, which we will not discuss in this report.

Some retailers include VAT in their margins, others do not.

What figures do we have?

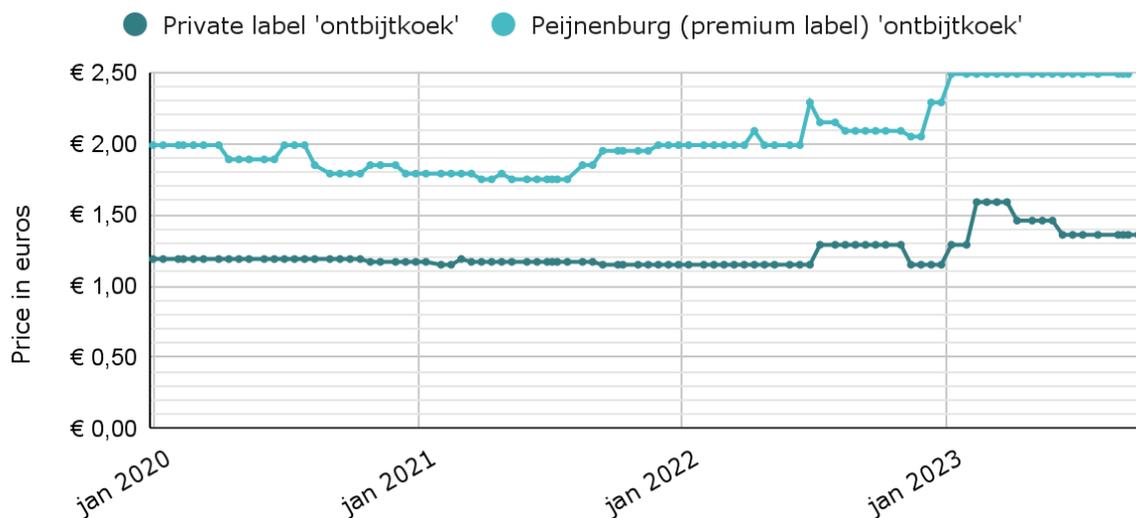
Ideally, we know the size of all the components in Figure 1. Roughly speaking, however, only two types of figures are known: market prices (for unprocessed agricultural products) and shelf prices (in the supermarket). See the yellow 'price tags' in the [figure](#) above. All the specific components that make up those prices are sensitive to competition and thus trade secrets. However, some of the size of those unknown components can partly be calculated from the available figures.

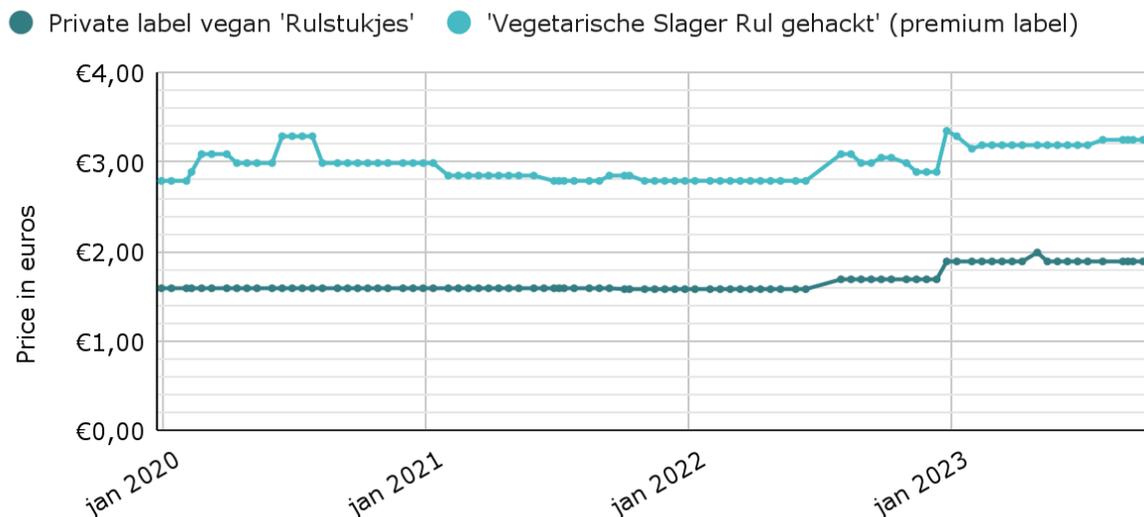
Shelf price → partially known

The shelf price is the 'normal' price the supermarket charges outside of promotions and offers. Shelf prices are fairly easy to figure out, for example by noting prices yourself in the supermarket. To get an accurate picture of shelf prices, it is important to take the following into account.

Shelf prices are not stable

Supermarkets adjust the price of many products regularly, sometimes every week. It is noticeable that the price of private labels is usually more stable than that of premium labels, probably because supermarkets compete most strongly among themselves on premium labels (see "margin mix"). As an example, below is the price of gingerbread and vegetarian mince at both premium label and private label in the same supermarket.





Moreover, prices can vary by region or even by branch if they are aligned with local competitor prices.

Promotions distort the picture

Many products have a 'promotional price' part of the time. During such a promotion, much more of the product is sold than outside that period, especially when it comes to non-perishables such as toothpaste, soft drinks, crisps and laundry detergent. Some 20-30 percent of what consumers spend in the supermarket goes towards products with a temporary promotional price. Manufacturers and supermarkets have to compensate for those promotional prices. They can do so by making the margin outside the promotional period or the shelf price of other products slightly higher.

Therefore, the price consumers pay *on average* is actually significantly lower than the regular shelf price. To find out what that average price paid is, we need information on so-called promotional pressure (how much is sold at promotional price and how much at shelf price?). Supermarkets rarely release those figures.

Often promotional discounts are co-paid by manufacturers. This is negotiated in so-called annual talks. Supermarkets enforce full or partial margin retention during action weeks. Supermarkets may also purchase more during those action weeks, only to sell the products again at regular price after the action week, thus temporarily having a higher margin. This is called 'forward buying'. All of these practices obscure the view of what constitutes margin and the price of a single product.

Availability of shelf prices

In the Netherlands (at least) the following parties have structural insight into shelf prices (and partly into promotional prices and sales figures):

- [Questionmark](#) foundation - independent think tank
- [Hiiper](#) - commercial consultant
- [IRI/Circana](#) - commercial consultant

- [Nielsen](#) - commercial consultant

There is also information at an aggregate level on food prices, for example at [CBS](#). Little can be deduced from this about prices through the chain, but the general price level of food in the Netherlands can be deduced from this.

Market prices → partially known

(Average) market prices are known for some food products. These are usually unprocessed agricultural products. Sources for such prices include food auction houses, trade media and research institutes that track prices. Examples:

- Wageningen Universiteit track market prices in [Agrimatie](#)
- Fruits and vegetables: [GF Actueel](#)
- Fish: [Visafslag IJmuiden](#)
- Dairy: [Dutch Dairyman Board](#)

Supermarkets often have their own price agreements with regular suppliers, outside of the public market. Thus, the prices offered by the sources above are merely indicative.

Trade prices → unknown

Prices that middlemen or private brands charge supermarkets are almost never available. Those prices are negotiated between companies and thus can also vary greatly from company to company and week to week.

Price margin → can be approximated

In some cases, the supermarket's price margin can be calculated (approximately) if the purchase price and sales price are both known. This is only possible with products that exchange (almost) directly from the farmer to the supermarket, i.e. without any additional costs added by an intermediary trader or producer. Note that the uncertainty in this type of calculation is large, if only because both market and shelf prices fluctuate widely.

Gross margin → can be approximated indicatively

The gross margin is not known outside the company. Information on prices and costs is sensitive to competition.

In some cases, production costs are limited, for example, for unrefrigerated products with high turnover rates and low transportation and packaging costs. In those cases, the price margin gives an indication of the gross margin.

Net margin → only an indication at company level

The net margin for an individual product is also difficult to ascertain. The same is true incidentally for supermarkets themselves. Some supermarkets allocate profits directly to products, the so-called "direct profit per product" (DPP). Not all supermarkets do so in detail, because such a figure is always largely determined by assumptions. So the supermarket itself does not always know exactly what the margin per product is. Even if

the supermarket does calculate such a DPP, a company is usually reluctant to share it with the public.

In some cases, it is possible to get an indication of net margin by looking at the company's final profit figures: after all, that is roughly a sum of all profit margins on products. In doing so, the following limitations apply:

- Only listed companies are required to disclose profit figures. In the Netherlands, Albert Heijn is the only supermarket owned by a listed holding company (Ahold Delhaize).
- Profit figures apply to the company (holding company) as a whole, while not all products receive the same margin (see: 'margin mix'). Based on the profit figures of the company as a whole, it is impossible to determine what part of the profit was generated by the Dutch branch, within that the food, let alone within those foods the individual products.
- Profit margins are also affected by, for example, company takeovers, offsetting losses from previous years, etc. That further distorts the picture.

An example is Ahold Delhaize. We know that Ahold Delhaize made about a 3.6% margin on the total European arm of the company in 2022. There is no way to know what part of that came from the Netherlands, or from food sales (about 25% of total sales in Europe come from non-food) (Ahold Delhaize, 2023).

Even less is known about the profit margins of the other Dutch supermarkets.

What does the government know?

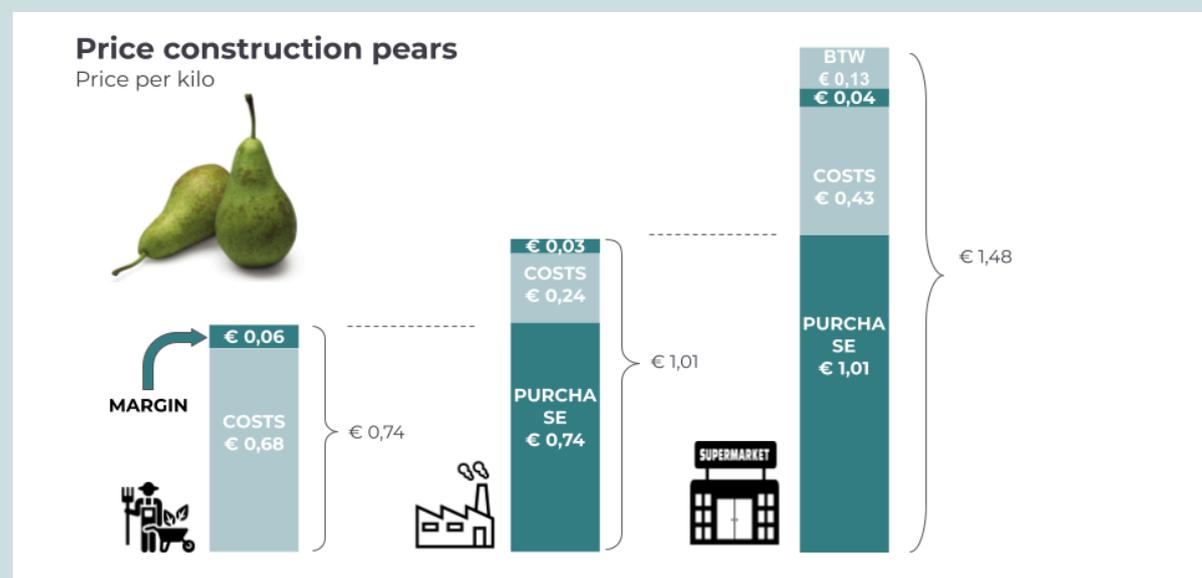
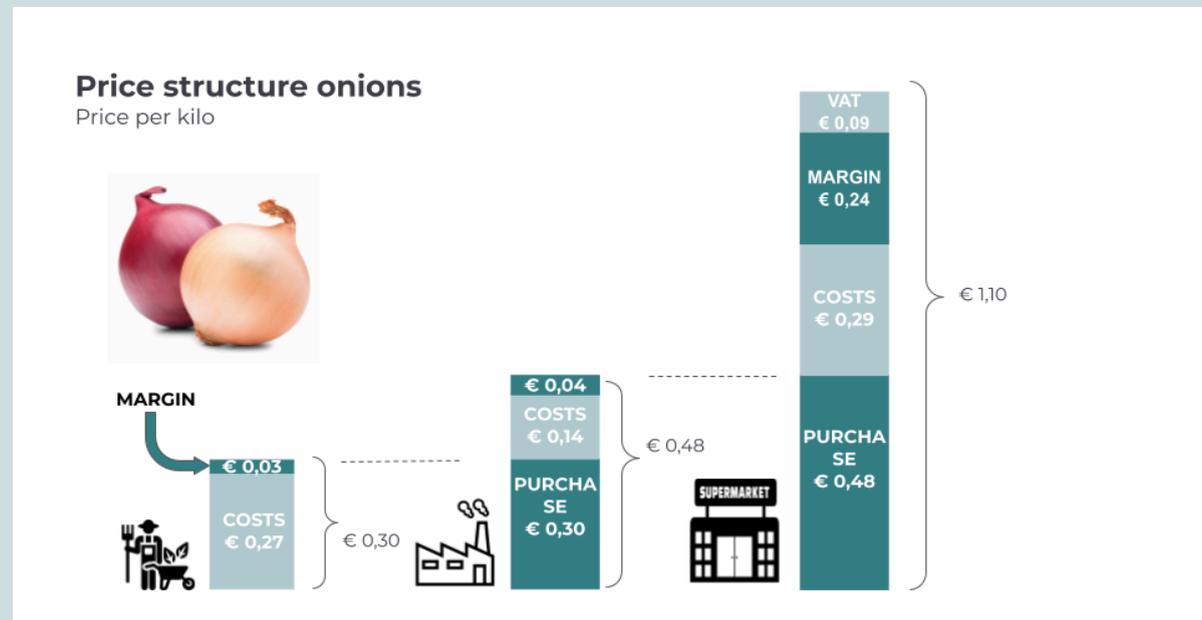
The Netherlands Authority for Consumers & Markets (ACM) has the authority in the Netherlands to request information from companies on purchase prices, gross and net margins. In the food sector, this has been done - to our knowledge - only for the Agro-Nutri Monitor (WEcR, 2020; 2022b). That report (2020 and 2022), mapped prices and margins throughout the chain for a number of product groups:

- Potatoes
- Onions
- White mushrooms
- Chestnut mushrooms
- Pears
- Tomatoes
- Milk
- Pork

For each of these chains, both the organic and non-organic chains were examined, making a total of 18 chains. Below we give two examples from these.

Case: onions and pears

Using the figures from the Agro-Nutri Monitor¹ (WEcR, 2022a), the price structure for a number of products can be roughly reconstructed. Below are two examples for onions and pears.



The figures in the Agro-Nutri Monitor are not strictly delineated everywhere. For example, there is no sharp distinction between production costs and general operating

¹ The figures of purchases, costs and profits of the various links in the Agro-Nutrimonitor do not always match up well, due to the fact that different sources are used for the various links, due to seasonal influences, and due to the way prices per chain link are aggregated and averaged across farms (WEcR, 2022a). To show a logical price structure, small changes have sometimes been made in the onion and pear figures to the items "costs" at the farmer or "purchases" from trade or supermarket.

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costs. But also the boundary between purchasing costs and production costs, upon inquiry, is not rigidly applied everywhere. For example, sometimes transportation is counted as 'purchasing', while in other cases it is excluded. Also, food loss (throwing away products past their expiry date) is sometimes included in the purchasing costs (thus increasing the purchase price per product). Nonetheless, these pictures give a decent picture of the cost structure of two food products.

Do they know more abroad?

More product groups have been analysed abroad. We list a few to serve as inspiration.

- Sustain has conducted research in the **United Kingdom** on consumer prices and farmers'/growers' income: [Unpicking food prices](#) (sustainweb.org)
- In **France**, consumer organisation Que Choisir conducts research on [margins](#).
- Also in **France**, Le Parisien once got its hands on a [document](#) with all the purchasing and sales prices of supermarket chain Franprix.
- In **France**, the government makes greater use of the power to see supermarket margins. These are not made public, but the French law [Egalim](#) prescribes that the margin can never be less than 10% of the purchase price.
- **Belgium** also has a law that sets requirements for the level of the margin. Supermarkets are not allowed to sell food products [below cost price](#). Recently, that law has come under pressure because it is allegedly not in line with European framework directives.

What do these figures say about *fairness*?

One reason for this exploration is the question whether the price structure of food is 'fair'. Although the previous chapters provide little information about the price structure, the little information available may be able to provide an initial answer to that question. To do so, we must first ask: what do we mean by a *fair* price? In the debate about food prices, there seem to be several aspects of fairness that play a role separately and, often intermingled.

1. Equity

The question here is: do all links in the chain earn (approximately) the same from a product? In other words, it is about the distribution of value across the chain.

2. Reasonableness

This aspect is about the question: is what a link in the chain earns from a product *proportional* to the work put into the product by that link? The more (or the more valuable) the work, the more the link may reasonably earn.

3. Affordability

The key here is that food is a basic need. Affordability of food is more important for this aspect than whether there is profit and how it is distributed.

We can test the construction of costs in onions and pears based on these aspects.

Are supermarkets' net margins fair?

The net margin on onions (see above) does not seem fair at a first glance, based on several aspects. One might note the following:

- A. The margin is not *reasonable*: over 20% of what consumers pay for an onion is pure profit for the supermarket (€0.19)
- B. The margin is not *evenly* distributed: The supermarket makes over 6x more profit on onions than the farmer (€0.19 versus €0.03).

These observations suggest that the price of onions in the supermarket is not fair; consumers pay too much and farmers get too little.

We see that studies abroad (see above) often draw these kinds of conclusions.

Yet, this is not entirely justified. The picture of pears shows us why: the supermarket's margin is actually *smaller* than the farmer's. Not every product in the supermarket gets

the same margin. Therefore, the 'pure profit' that the supermarket makes on onions certainly does not end directly with shareholders. We saw above that Ahold Delhaize as a company 'only' made a 3.6% margin in Europe in 2022. In the case of Ahold Delhaize, that's a lot of money, but compared to the return on investment of other companies, it's not unreasonable. Apparently, the margin for an average product is much lower than that for onions.

This does not counter observation (B): the onion farmer clearly earns less per kilo than the supermarket. Yet the margin mix also puts this disparity in perspective. If the supermarket wanted to distribute margins more equally, it would not necessarily mean that the onion farmer would get more money. It is more likely that the margin would then have to be distributed differently among products, making onions slightly cheaper and (say) pears slightly more expensive. Perhaps the pear grower would even have to give up margin.

So observation (A) and (B) may be true for onions, but it is important to also see the context of all the margins supermarkets charge on products. See the box: [margin mix](#). For the price structure of onions and pears above, you could say: the high margin on onions helps keep pears affordable.

For the last aspect of fairness, food affordability, prices of individual products are also not very informative. After all, no one eats only onions or pears. To speak of 'affordable food', food prices must be affordable across the board.

To answer questions about fairness, then, we must look not at individual products, but at

- The (profit) margin of the company as a whole
- The way that margin is distributed across all products.

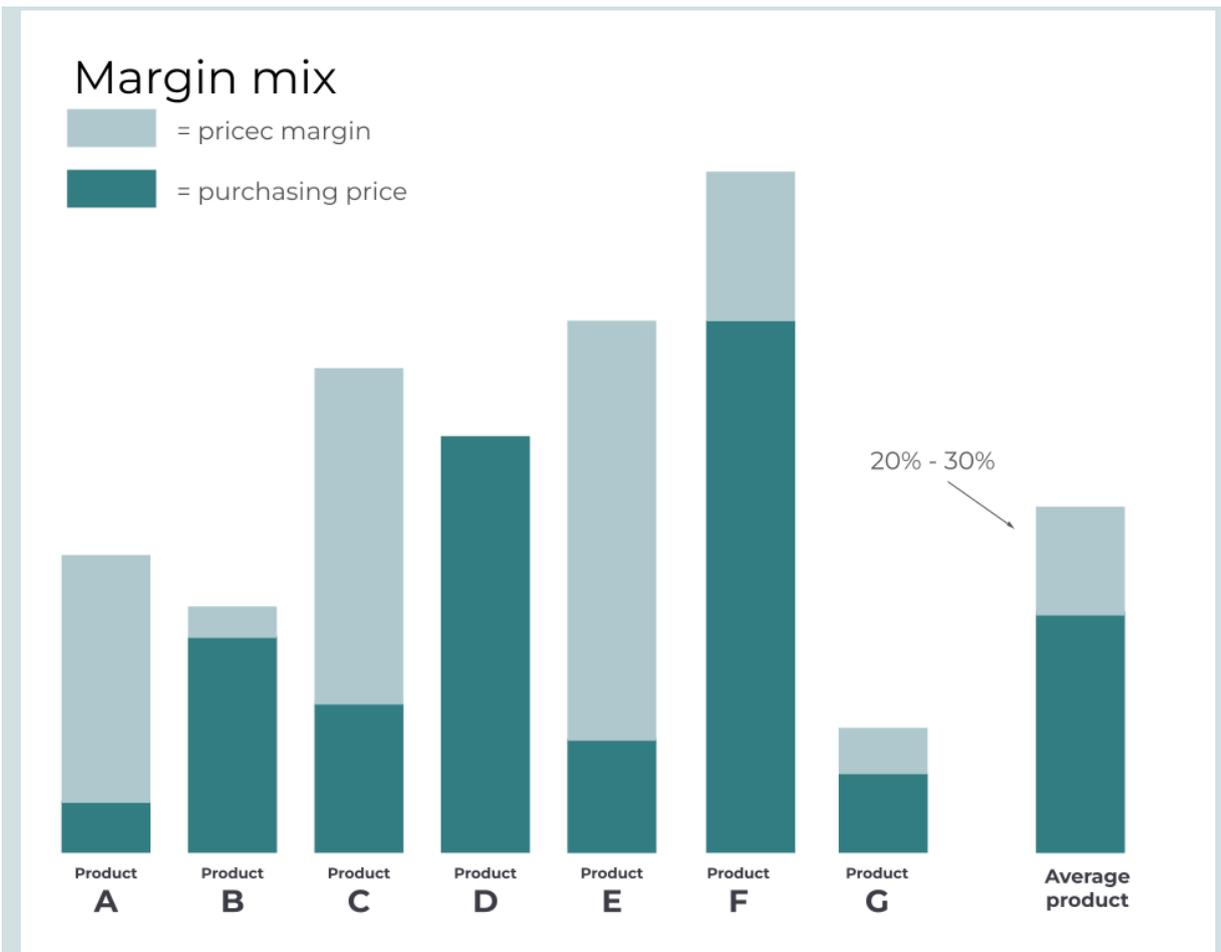
This is not to say that onion farmers or pear farmers in the Netherlands get a fair (or unfair) price. The conclusion is that shelf prices provide little to no insight to answer questions about fairness.

Margin mix

On average, the shelf price (ex VAT) in the supermarket is about 20 to 30 percent higher than the purchasing price the supermarket paid for the product. We call this the average price margin.

However, not every product has the same price margin. That margin is determined separately for each product, and forms a mix of high and low margins across the entire product range. This margin mix is not a management objective in itself; the mix is the result of a complex game in which all kinds of factors and objectives play a role: the share of promotions, the available supply, targets for online sales and share of private label, limitations in shelf space. Sustainability targets can also play a role.

Market share and profitability targets dominate in this game. For example, there are 'customer-pullers': products that are priced extra competitively to attract customers. This means that the product may be on the shelves at a lower price than the cost price. On the other hand, other products are sold with higher margins. The number of products sold also vary widely. In retail, people speak of the 80-20 rule: 20 percent of the products earn 80 percent of the margin.



Example of the margin mix. **Product A** could be a pumpkin; the supermarket buys it for little money and makes a high margin on it. **Product B** might be a bottle of Coca Cola: the supermarket pays the producer quite well, but at the same time does not want to make the product too expensive because consumers compare that price with the price in another supermarket. **Product D** might be beer, which the supermarket does not even have a margin on at all because it is an important product to pull customers to the supermarket. **Product E and F**, for example, are luxury chocolate products, where E is the house brand variety and F is the original private label product.

Are general costs reasonable?

Above we mainly looked at the supermarket's (distribution of) net margin, i.e. the profit margin, of the supermarket. The margin mix also distributes the company's general costs across products. These are overheads such as salaries, bonuses and marketing costs. Besides the question of how that distribution comes about, we can also ponder to what extent consumers really benefit from all those costs being incurred. Do those costs benefit the product or primarily the company?

Wages and bonuses

Do employees of supermarkets or food brands receive unreasonably high salaries?

At a first glance, this does not seem to be the case. The average salary at AH is €27,000 per year, just over €14 per hour. In the food industry, that average is slightly higher, estimates range from €29,000 to €37,000. Higher, but not unreasonable.

However, salary levels on the shop floor are not comparable to those at headquarters, where top salaries and bonuses can sometimes be paid. Top executive Muller at Ahold Delhaize alone was paid a total of €6.5 million in 2023. It is not known what top executives are paid at other supermarkets. In general, society increasingly sees million-dollar bonuses for company executives as exorbitant and undesirable.

Compared to a supermarket's total sales, however, such bonuses are not large enough to say that they noticeably increase the price of food. Regardless of whether high salaries and bonuses are generally desirable, they are unlikely to make the price of food 'unfairly' high.

Marketing

It is not apparent whether advertising and promotions increase the value of the product. Advertising and promotions mainly aim to influence consumers' purchasing decisions: what do I buy and where? In this sense, marketing can also be at odds with consumer interest. In the end, the marketing cost must be paid by the very same consumer.

In the Netherlands, €1.6 billion is spent on food advertising, out of a total of €47.3 billion spent on food in the Netherlands. This means the advertising component in the average food product accounts for about 3.5 percent of the price. That is only the media spending; it does not yet include all the costs a company incurs internally (marketing staff, in-house productions, etc).

It should be noted that marketing expenditure is primarily incurred by private labels. Supermarkets play a different role. In recent years, a number of supermarkets have increasingly established themselves as a *medium* for private label marketing. Those supermarkets therefore also offer promotion as a service, whereby private labels are both customers (of the medium) and suppliers (of the product).

What is the effect of the margin mix on affordability?

In itself, the margin mix does not make the supermarket range more expensive or cheaper *across the board*. Although the margins are unevenly distributed across products, on average the total profit margin of a supermarket - as we showed above - is not necessarily unreasonable.

However, this does not mean the discussion on the affordability of food in the margin mix is closed. Two comments:

- Margin is an important factor in the sales price, and sales prices influence purchasing behaviour. It is to be expected that the margin mix is partly determined with the aim of having people spend as much money as possible at the supermarket. The way in which high and low margins are distributed across the range is not a neutral, *zero-sum game* in that respect. The distribution can certainly cost consumers money. An example of this are multi-buys (see below: *do price promotions make food affordable?*).

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- We wrote above that affordability is key for food as a *basic need*. But not all supermarket products are a basic need: a relatively high margin on crisps and coke is not necessarily a problem. But what if the margin mix makes basic commodities unnecessarily expensive?

These comments touch on a broader concern about the margin mix. This mix is an optimisation tool. The question is: optimise for what? If optimising profit and market share is the only or most decisive factor for the margin mix, this may be detrimental to broader societal interests within the food system. It is difficult to determine the extent to which this is the case. What margin does organic food get? Does the margin mix make meat more attractive than plant-based? And: does the margin mix keep staple food affordable?

Conversations with (ex-) supermarket managers on the margin mix sketch the following image:

- Profit and market share targets dominate the mix of margins and promotions in supermarkets. However, there is not one person or department who determines the mix; targets are divided top-down into different departments. To a certain extent, the departments determine themselves how they use prices and promotions to achieve their targets. Social objectives can also play a role in this, if they have been imposed from above.
- Products that usually yield a high margin include: luxury products, private label products, seasonal products and products with a risk of loss (for example due to a low turnover rate). Examples: organic peppers, private label chocolate biscuits, strawberries.
- Products that usually yield a low margin include: products of large (international) private labels, products which supermarkets compete on or which are intended as customer-pullers, also known as loss leaders. Think of minced meat, beer or 'Unox worst' (smoked sausage). Soft drinks from private labels sometimes even have a negative margin.
- The margin mix is not a goal in itself for a department, or the responsibility of a manager. There is no artificial intelligence that determines margins. The margin mix, including promotions, is based on commercial intuition from different departments.

This picture of how the margin mix comes about is not necessarily alarming, but not entirely reassuring either. In order to know how the results of the margin mix help or harm societal interests, more insight is needed into the actual distribution of margins.

Case: France and Belgium

In France and Belgium, the government has been directly interfering in the margin mix for several years. Supermarkets are prohibited by law from selling products with less than 10% margin (France) or below cost (Belgium). Supermarkets can therefore offer less at knock-down prices. The law intends for supermarkets to have more financial room to pay farmers a fair price.

Opinions differ greatly about the effect of the measure. The French Consumers' Association is under the impression that nothing has changed except that supermarkets have put the extra margin in their own pockets (UFC-Que Choisir, 2022). This additional margin would come from products that previously had a margin below 10%, probably mainly private label products. In theory, products that previously had a high margin should become cheaper over time, but it is not clear whether this occurs.

Do price promotions make food affordable?

Price promotions (deals, offers, advertised products) seem to be a way to keep food affordable. In practice, this is only partly the case. A few comments.

- Price promotions do not make the total product range cheaper *on average over a longer period*. A supermarket needs a certain margin to be profitable. Any price reduction must therefore be compensated; either in the 'normal' price of the same product or in the price of other products.
- Organising price promotions entails additional costs, which are ultimately paid by (other) consumers. These include, for example, the costs for planning promotions, making advertising leaflets, the weekly redesign of all shops (usually outside office hours with high labour costs), etc. An American study estimates those costs at about 2.5 percent of the supermarket's sales. These costs are ultimately paid by customers (Buzzell, Quelch, and Salmon, 1990).
- Price promotions can make food cheaper for *individual* households. People who follow the advertising leaflets save money. This advantage comes at the expense of people who are not guided by promotions. The advantages and disadvantages of price promotions are by definition unevenly distributed.
- To take advantage of promotions, people need to:
 - Have time to track and compare price promotions
 - Have time to visit different shops
 - Have space in house to store / freeze food
 - Have a financial buffer to sometimes finance a food supply for weeks in advance.

It is unclear whether promotions are on average at the advantage or disadvantage of people with a smaller budget. Given the above notes, there is no reason to assume so without a doubt, but no research is known (to us) on the distribution of promotions among economic groups. It is known that promotions have a strong psychological effect, regardless of economic groups

- Price promotions make people spend more money on food than they had planned. Note: this does not make food more expensive, but people simply buy and eat more (PHE, 2020).
- This is because:
 - People buy more through promotions than they intended; and
 - Once people have stored food, it is consumed faster than people intended.

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- This effect is measurable and occurs with all types of price promotions. In general, the higher the discount, the stronger the effect. Multi-buys (for example: 'buy 2, get 1 free', '3 for £2') have the strongest effect.

Does VAT make food unaffordable?

VAT raises food prices of each individual product by 9 percent. This is a substantial percentage and for people less well off, this is an undeniable large amount.

Which figures are still missing?

The price structure of food products is not transparent. Previously, we have mapped the intransparency more closely. The question is: what information would we need to detect *unfair prices*?

Profit margins

Ahold Delhaize's 2022 profit does not seem unreasonable. Shareholder's profits are unknown for other supermarkets. Given the importance of affordable food and the crucial role that supermarkets play in this, it would be helpful if supermarkets provided insight into their profit margins, with a specific breakdown of the margin on (basic) foods.

Margin mix

What considerations are taken into account in determining the margin mix? The abovementioned indicates this question is at least as important as the question of how prices have been constructed across the chain. At the end of the chain, all kinds of costs are redistributed across the product range, resulting in a much weaker direct link to the purchasing price (or: the price the farmer gets) and the consumer price than many people assume.

At the same time, it may not be necessary to know how supermarkets distribute their profit margins exactly among products; as long as we as a society have the certainty that the outcome falls within certain socially responsible frameworks. We will return to this in the next chapter.

General costs

Society has no insight into the general costs that private labels, in particular, pass on in the price of food: does everything the brand do actually add value? The Netherlands Authority for Consumers & Markets could use its power to gain more openness in this. The comparison between onions and pears we made above becomes even more relevant for debate on food prices, if it also includes the price structure of crisps, soft drinks and corn flakes.

Questionmark

It is quite possible that there are products for which the price is strongly determined by advertising costs. Consumers then pay for the manipulation of their own purchasing behaviour, which opposes their own and society's interests.

Currently, however, the size of marketing costs cannot be determined.

It would also be interesting to investigate the size 'bonuses' make up in the price of certain products.

Earlier in the chain

Finally, in this report we focused on price construction at the end of the chain; by food brands and especially supermarkets. There are all kinds of factors earlier in the chain that may have a greater impact on food prices, and where large excess profits may be made. This concerns (international) commodity trade, food speculation, financing of farmers and food companies by banks or investors, etc. In this report, we have not investigated their impact on the food prices.

How can we create more fair prices?

Society does not have good insight into the price structure of food. It is beyond the scope of this report to gain further insight into this, let alone formulate solutions to improve that pricing.

However, based on the above observations, we can give a number of directions in which measures can be sought to keep food prices affordable and fair. We also comment on two frequently discussed ideas for using food prices as a driver: 'true cost' and VAT reduction.

Social frameworks for marketing

The question is not so much whether the supermarket makes unreasonable profits on our food. But the question is: how does the supermarket distribute profits over products? As noted above, optimising profit and market share are the dominant considerations in determining prices. Social interests also play a role, but it is not known how big that role is. This can result in prices that may thwart certain social targets. These kinds of targets are, for example:

1. By 2030, 15 percent of the agricultural area must be organic
2. By 2030, 50 percent of the proteins we eat must come from plant-based proteins
3. For a healthy diet, about 85 percent of calories must come from healthy products (according to the Dutch Dietary Guidelines: the Wheel of Five).

In order to prevent the margin mix from (unintentionally) interfering with social objectives, it could already help to set frameworks. For sustainability targets, such as (1) and (2), society does not necessarily have to look 'under the bonnet of the supermarket's pricing policy. It could help if supermarkets have an *individual target* to sell certain percentages of sustainable products. Such individual targets can be:

- Until 2030, sales of organic grow by 30% per year
- Until 2030, the share of animal-based food shrinks by 5% per year.

If a company's management commits to such a target, it will likely translate into targets that lower-level managers will include to optimise prices. They can do this at their own discretion and expertise.

In theory, this does not necessarily mean that a sustainable product always gets the lowest margin. Tempting consumers can occur in a wide array of manners and supermarkets are experts in how to achieve this.

Whether and how the supermarket uses the prices for sustainability is therefore irrelevant; What is important, is that *the effect* of the total marketing policy fits within certain social frameworks.

The situation is slightly different for health purposes. A goal to sell a certain percentage of healthy food is not enough, it is also about making healthy food affordable for *everyone*. If the supermarket manages to sell more and more healthy products, that is good in itself, but if those products only end up with rich customers, little has been gained.

Unlike sustainability, the margin mix itself must therefore meet certain conditions for health purposes, not just its *effect* on general sales figures of healthy products. The framework which the margin mix should adhere to could be:

- Of all staple food categories, the most affordable variant meets the criteria of the Wheel of Five
- The supermarket reports the percentage of sales that fall within the Wheel of Five
- The percentage of sales within the Wheel of Five is at least X.

In order to determine exactly how such a framework should be defined (and maintained), more research is needed, but also a social discussion should be held on the role of supermarkets in society.

Limiting promotion-intensity and level of discount

Promotions can benefit consumers, but only consumers who have the willpower, planning capacity, time and money to make those promotions work to their advantage. For consumers who cannot or do not want to, promotions are a disadvantage.

It might be better for the *average* consumer if promotions make way for a fixed, lower regular price of (healthy, basic) products.

It might help if there are limits to the number of products in promotion and / or the amount of the discount. In our neighbouring countries, such limitations are regulated by law:

- Belgium: ban on sales below cost price
- France: ban on margins below 10 percent
- United Kingdom: no multi-buys on unhealthy food.

Supermarkets can also develop individual policies to unburden their customers by working with fixed low prices as much as possible. This direction should also be further investigated first.

Limit advertising expenditure

Finally, food advertising deserves more attention. Advertising largely serves the interests of industry, not consumers. It is therefore undesirable that the costs of advertising are passed on to consumers.

Companies can demonstrate responsibility by limiting their advertising expenditure to a certain percentage of turnover, and by being transparent about that percentage.

Governments can limit advertising by food companies, for example by regulating food advertising. Here too, research is needed to determine the effects of regulating marketing expenditure on the food industry, and to what extent citizens and consumers benefit from it.

Other proposals to steer prices

In the public debate, proposals to use food prices regularly emerge as a tool for steering. It is beyond the scope of this report to discuss those ideas in detail. However, in response to the insights from this report, we would like to make a few comments about two of those proposals.

VAT reduction

Regular votes are taken to reduce VAT on staple foods, or specifically healthy or sustainable foods, to 0 percent.

It is by no means certain that such a measure will make all healthy (or sustainable) products 9 percent cheaper. Within the margin mix of the supermarket, the VAT reduction can also (partially) contribute to lower prices of other, perhaps unhealthy products. Healthy staple products have a relatively small price elasticity: a reduction in price does not ensure proportional growth in turnover. It can be more lucrative for supermarkets to lower the prices of unhealthy extras, because the effect on their sales is often greater.

True cost / true price / real prices

There are regular proposals to calculate / offset the social costs (externalities) for food production in the price of food. The reason for this is a justified observation: the shelf price does not in any way reflect the social costs of production.

This report should make it clear that this observation is not surprising. The shelf price has only a weak relationship with the purchasing price anyway. All production costs (that are actually paid) are also not always reflected.

This does not make it any less important to map the social effects of food production. But there is no guarantee that expressing those problems in euros will lead to a 'real price'. Also in the reverse direction, a higher price on the shelf, will not directly lead to the desired change at the beginning of the chain.

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