The Cascade Effect between Theory and Market Reality

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Executive Summary

Key Findings

- **The cascade hypothesis is unsubstantiated.** Regulation of relations between manufacturers and retailers is also justified on the grounds that it benefits agriculture. Even the European Commission has provided no evidence of this.
- **Being able to pay more does not mean having to pay more.** Whether suppliers share in a benefit accruing to their buyer depends on their bargaining position and outside options.
- **Each stage presents another hurdle.** Pass-through can weaken or stop at any stage. The final step towards producers, whose bargaining position is often weak, is particularly difficult.
- **The empirical evidence does not support the cascade effect.** Prices at the different stages of the food supply chain develop independently of one another over periods of years. In France, stricter regulation led to higher consumer prices but no higher producer prices.
- **Measures should target agriculture directly.** Regulation of downstream stages primarily shifts margins between manufacturers and retailers. The Monopolies Commission ("Monopolkommission") recommends focusing UTP rules on relationships involving agricultural producers.

Main Conclusions of the Report

The economic situation of farms and their position within the food supply chain have been central to the policy debate for years. Against this background, rules have been introduced at European and national level to curb certain unfair trading practices and protect suppliers in their dealings with buyers.

The European Directive on unfair trading practices ("UTP Directive") is associated with a further expected effect: regulation of business relationships between manufacturers and retailers is also intended ultimately to benefit agriculture. The European Commission justifies this by reference to the so-called cascade effect. Burdens imposed on manufacturers in their dealings with retailers could be passed on through upstream supply relationships as far as agricultural producers.[1] However, the underlying Impact Assessment provides no empirical evidence of such a general cascade effect. Rather, the Commission itself acknowledges that pass-through depends on market structure and bargaining power. The then Chief Economist of the Directorate-General for Competition, Tommaso Valletti, even explicitly considers such pass-through unlikely (see European Commission 2018, pp. 15–17, 55 and 262–263).

This report therefore examines whether such a cascade effect can be expected on economic grounds. If regulation prevents a burden from being imposed on a manufacturer, the manufacturer is economically better off; avoiding a disadvantage also constitutes a benefit. The key question is therefore whether the manufacturer's additional financial headroom actually leads to higher prices or more favourable terms for its suppliers. If prices and terms for its suppliers remain unchanged, regulation merely shifts margins

[1] See European Parliament (2019), Directive (EU) 2019/633 of the European Parliament and of the Council of 17 April 2019 on unfair trading practices in business-to-business relationships in the agricultural and food supply chain, available at https://eur-lex.europa.eu/eli/dir/2019/633/oj?locale=de, accessed on 25 August 2026.

between the manufacturer and retailers, without benefiting agriculture (see Monopolkommission 2025, paras 398–400).

The Monopolkommission's empirical findings provide no confirmation of a general cascade effect. While mark-ups at the manufacturing and retail stages have risen over the longer term, average agricultural mark-ups show no clear upward trend. If benefits were regularly passed through, agriculture would also be expected to benefit visibly; however, no such relationship is apparent (see Monopolkommission 2025, paras 25, 29, 37–38, 46 and 398–400).

The economic analysis explains why the pass-through of economic benefits cannot be taken for granted. Purchase and selling prices are economically connected but are determined in separate business relationships. Additional financial headroom therefore initially changes the position of the firm that benefits directly. Whether its suppliers share in this benefit depends in particular on contractual arrangements, bargaining positions and the parties' outside options. This is also confirmed by the economic literature on vertical price transmission.

Where there are several intermediate stages, the conditions for pass-through would have to be met anew in each subsequent business relationship. If only part of the benefit is passed on at each stage, its effect diminishes along the chain; if nothing is passed on, it ends there. The final transmission step presents a particular hurdle, as numerous producers face a much smaller number of suitable buyers, perishability and limited alternative sales outlets further weaken their bargaining position, and international reference prices shape the attainable price level for standardised agricultural commodities (see Monopolkommission 2025, paras 71, 83–85 and 176–179). Even a benefit that reached producers would not necessarily remain with them. Where market conditions permit, suppliers of seed, fertilisers or other farm inputs could capture part of it through higher prices.

This can be illustrated by the German prohibition of certain listing fees for products already on the market. Compared with a situation in which a manufacturer would have to pay a retailer to keep its product in the range, the prohibition leaves the manufacturer economically better off.[2] However, its own suppliers do not automatically receive higher prices or more favourable terms as a result. The prohibition does not ensure that this relief is passed on through all supply relationships as far as producers, and such pass-through is unlikely in view of the hurdles described above.

Nor does stricter regulation guarantee a cascade effect. The French "SRP+10" example illustrates this limitation: raising the resale price floor was intended to create additional retail margins that would ultimately also benefit agriculture. According to the French Senate, higher consumer prices were observed, but a corresponding flow of benefits back to producers was not apparent.[3] Effects in the opposite direction were even reported in certain product categories. A comparison of seven EU Member States corroborates this finding: more heavily regulated countries such as France, Slovakia and Hungary do not systematically achieve higher producer prices for raw milk, pork and wheat (see Düsseldorf Competition Economics 2026).

[2] See https://www.gesetze-im-internet.de/agrarmsg/BJNR091710013.html, accessed on 14 October 2026.
[3] See https://www.senat.fr/rap/r21-799/r21-7991.html, accessed on 14 October 2026.

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Against this background, a general cascade effect that reliably benefits agriculture is not economically plausible. Instances of pass-through in particular circumstances cannot be ruled out. However, they do not constitute a structural mechanism capable of justifying regulation of downstream business relationships on the grounds of benefits to agriculture. If the aim is specifically to improve the economic situation of agricultural producers, measures should target the conditions facing farms as directly as possible. The Monopolkommission likewise sees scope for action primarily on the cost side of agriculture. It also recommends that the scope of the UTP rules should in principle be concentrated on supply relationships involving agricultural producers and considers the protection afforded by competition law sufficient for the other business relationships in the food supply chain.

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1. Background and Research Question

The economic situation of farms and their position within the agricultural and food supply chain have been central to the policy debate for years. A particular question is whether agricultural producers have a sufficiently strong bargaining position vis-à-vis downstream processing, manufacturing and retail stages and receive an appropriate share of the value added in the food sector.

Against this background, rules have been introduced at European and national level to curb certain unfair trading practices and strengthen suppliers' position vis-à-vis their buyers. The direct effect of such measures initially concerns the particular business relationship being regulated. However, policymakers associate them with a further expectation: agricultural producers should also benefit from regulation of downstream business relationships. This expectation underlies, in particular, Directive (EU) 2019/633 on unfair trading practices in the agricultural and food supply chain ("UTP Directive").[4] The European Commission justifies regulation of relations between manufacturers and retailers by reference to the so-called cascade effect: burdens imposed on manufacturers in their dealings with retailers could be passed on through upstream supply relationships as far as agriculture. Preventing these burdens is therefore intended indirectly to prevent disadvantages for agricultural producers (see European Commission 2018, pp. 16, 27 and 45).

Whether this expected effect holds generally remains an open question. The underlying Impact Assessment provides no empirical evidence of a general cascade effect; rather, the Commission acknowledges that pass-through depends on market structure and bargaining power. In the accompanying Annex H, the then Chief Economist of the Directorate-General for Competition, Tommaso Valletti, also explicitly questions whether upstream suppliers benefit when regulation strengthens large manufacturers. A manufacturer that thereby secures higher selling prices from retailers would have neither an obligation nor incentives to share the additional benefits with its suppliers; such pass-through would be unlikely (see European Commission 2018, pp. 15–17 and 55, and pp. 262–263).

This objection also applies to the Commission's expectation that disadvantages will be prevented from being passed on. Avoiding a burden also constitutes an economic benefit for the manufacturer. Its position improves compared with a situation without regulation. In this respect, preventing a disadvantage and creating a benefit describe the same economic change. For agricultural producers also to benefit, this relief would have to extend as far as them, for example through higher purchase prices or more favourable terms. Both perspectives therefore raise the same crucial question: does protecting the manufacturer actually improve the economic situation of its upstream suppliers?

Relieving the manufacturer of a burden does not in itself answer this question. If prices and terms for its agricultural suppliers remain unchanged, regulation may merely shift margins between the manufacturer and retailers. The Monopolies Commission ("Monopolkommission") likewise doubts that benefits are generally passed through to agriculture and regards such a shift in margins as a possible consequence of strengthening downstream market stages (see Monopolkommission 2025, paras 398–400).

[4] See European Parliament (2019), Directive (EU) 2019/633 of the European Parliament and of the Council of 17 April 2019 on unfair trading practices in business-to-business relationships in the agricultural and food supply chain, available at https://eur-lex.europa.eu/eli/dir/2019/633/oj?locale=de, accessed on 25 August 2026.

Against this background, this report examines whether, and under what conditions, systematic pass-through of economic benefits as far as agriculture can be expected on economic grounds. It first describes the participants and market relationships, the mechanisms of price formation and their empirical development along the food supply chain (see Chapter 2). It then examines the economic conditions for a potential systematic cascade effect (see Chapter 3). On this basis, it assesses the effects of existing and possible further regulatory measures and whether these can be expected to generate a cascade effect benefiting agricultural producers (see Chapter 4). Chapter 5 presents the conclusions.

2. The Food Supply Chain: Participants and Price Formation

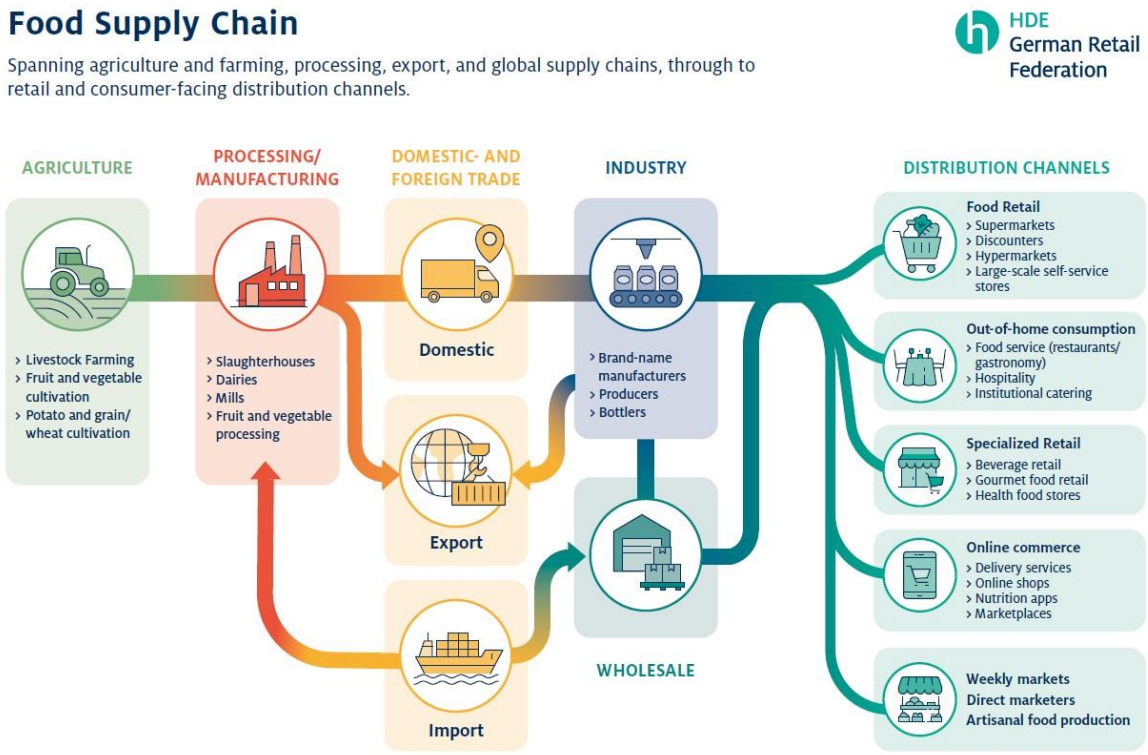
To assess a potential cascade effect, it is first necessary to establish how prices are formed along the food supply chain and what influences them. It must be recognised that the individual stages are characterised by separate business relationships and that market structure, competition, outside options and bargaining positions sometimes differ considerably.

Section 2.1 first describes the participants and market relationships along the food supply chain. Section 2.2 then explains how purchase and selling prices are determined at the different stages and how margins arise. Finally, Section 2.3 compares empirical developments in prices and mark-ups and examines whether they provide indications of systematic pass-through of economic benefits along the food supply chain and hence of a cascade effect.

2.1 Participants and Market Relationships

For the purposes of the following analysis, the agricultural and food supply chain can be divided, in simplified terms, into three main areas: agricultural production, processing or food manufacturing, and food retailing. Separate supply and contractual relationships exist between these areas. The chain is not structured in the same way for every food product. For drinking milk, for example, it may run from the dairy farm through a dairy processor directly to retailers. For a frozen pizza, by contrast, several supply chains converge: cereals, milk, vegetables and, where applicable, meat are initially produced and processed separately before a manufacturer uses them to make the finished product and supplies it to retailers or other distribution channels. The food supply chain is therefore better understood as a network of interconnected business relationships than as a single linear chain. Figure 1 below illustrates this complexity, which is also described in detail in the course of this chapter.

Figure 1: The Food Supply Chain



Source: HDE.

The agricultural production stage is at the beginning of this network. It comprises both crop farms, producing cereals, fruit or vegetables, for example, and livestock farms producing milk, meat or eggs. A characteristic feature is the large number of individual farms: in 2024, Germany had around 255,000 farms. Around 85 percent farmed less than 100 hectares, while farms with more than 1,000 hectares accounted for less than one percent of all farms.[5] The agricultural production stage can thus be described as comparatively highly fragmented (see also Monopolkommission 2025, para. 21).

Individual farms differ considerably in size, specialisation and production methods. What matters most for their market position, however, is that an individual farm generally produces only a small share of total supply. Moreover, it does not usually negotiate with all downstream firms, but with its immediate buyer. A dairy farm, for example, supplies its raw milk directly to a dairy processor. For cereals, the sales relationship often involves more stages: most of the harvest is initially sold to agricultural traders or agricultural cooperatives, which are responsible in particular for collection, storage, aggregation and marketing. From there, depending on quality and intended use, cereals are supplied to mills, starch

[5] See Federal Statistical Office, Tables 41271-0001 and 41271-0002, https://www-genesis.destatis.de/datenbank/online/table/41271-0001/search/s/NDEyNzEtMDAwMQ%3D%3D and https://www-genesis.destatis.de/datenbank/online/table/41271-0002/search/s/NDEyNzEtMDAwMg%3D%3D, accessed on 25 August 2026.

manufacturers or export markets, for example. A direct supply relationship between an agricultural producer and a food retailer is, by contrast, more of an exception.

The dairy sector illustrates how greatly relative size can differ. In 2025, Germany had around 47,157 dairy farms.[6] On the processing side, the six dairy companies with the highest turnover alone accounted for more than half of domestic sector turnover in 2022 (see Monopolkommission 2025, para. 104). While this example does not in itself permit any direct inference about the price in a particular supply relationship, it already illustrates the structural difference between a large number of individual producers and a much smaller number of relevant processing firms.

Alongside these structural characteristics, the agricultural production stage is closely integrated into European and international markets for many agricultural commodities. Particularly for standardised and internationally tradable products such as cereals, prices attainable in Germany are largely guided by international reference and world market prices (see Section 2.2 for a detailed discussion).

Agricultural production is followed by collection, processing and manufacturing firms. It is often impossible to draw a sharp distinction between these activities. A dairy processor not only collects raw milk but also processes it into drinking milk, butter, cheese or milk powder. Meat companies may combine slaughtering, cutting and the manufacture of ready-to-eat products within the same firm. Other food manufacturers, by contrast, purchase inputs that have already been processed and combine them to make a new final product. A frozen pizza manufacturer, for example, generally does not purchase cereals or raw milk itself, but flour, cheese and other ingredients that have already been processed.

The processing and manufacturing stage is itself far from a homogeneous group of firms. In 2025, the German food and drink industry comprised around 6,100 establishments, generated turnover of approximately €240.8 billion and employed just under 674,000 people. Around 90 percent of firms are classified as small and medium-sized enterprises. Alongside regional processors and specialised medium-sized manufacturers, there are also large international groups with broad product portfolios and well-known brands (see Bundesvereinigung der Deutschen Ernährungsindustrie 2026, pp. 28 and 49).

However, this aggregate perspective reveals little about concentration in individual product categories. There are considerable differences: as described above, the six largest dairy companies accounted for around 54 percent of domestic sector turnover in 2022; in pig slaughtering, the six largest firms accounted for just under 65 percent of slaughterings in 2024. In the starch industry, the turnover share of the six largest firms was as high as around 79 percent in 2021, compared with only around 14 percent for bakery products (see Monopolkommission 2025, paras 104, 158, 205 and 213).

Alongside market structure, the international orientation of many firms at this stage is also significant. On the purchasing side, these firms buy agricultural products or inputs that have already been processed, while on the sales side they sell processed foods. In 2025, around 37.5 percent of sector turnover was generated abroad. For an exporting manufacturer, sales conditions are therefore shaped not only by

[6] See https://www.ble.de/SharedDocs/Pressemitteilungen/DE/2026/260415_Versorgungsbilanz_Milch.html, accessed on 17 September 2026.

demand from German retailers but also by revenue opportunities in European and international markets (see Bundesvereinigung der Deutschen Ernährungsindustrie 2026, p. 28).

The final stage consists of the various distribution channels through which food reaches final consumers. These include food retailing, specialist and online retailing, weekly markets and the out-of-home market, particularly restaurants and hotels. Food retailing is by far the most important sales channel: according to a survey by the Federal Cartel Office ("Bundeskartellamt"), it accounts for more than 75 percent of total sales by the food manufacturers surveyed.[7]

Food retailing comprises more than 36,000 shops, employs over one million people and records around 50 million customer visits each day. Larger food shops regularly stock more than 10,000 different items.[8] Retailers' immediate suppliers are generally processing and manufacturing firms rather than individual farms. A retailer negotiates with a dairy processor over supplies of yoghurt, cheese or drinking milk, for example; the price paid by the dairy processor to its milk suppliers is determined in a different business relationship. Even this simple example reveals two separate relationships.

Food retailers provide the interface with final consumers and bring together products from numerous manufacturers in a comprehensive range. They compete for consumers, particularly through prices, quality, brands and private labels, locations and service. At the same time, purchasing conditions vary by product and supplier; particularly for brands that are in high demand and difficult to replace, retailers may themselves have only limited outside options (see Bundeskartellamt 2014, p. 23).

The food supply chain thus connects participants with different functions and economic starting points. Although individual business relationships build on one another along the flow of goods, prices and terms are agreed in each case between the firms directly involved. There is therefore no single price along the food supply chain, but separate prices between producers and processors, manufacturers and retailers, and retailers and consumers. The following section examines how these price formation processes operate and how they are connected.

2.2 Price Formation at the Different Stages of the Food Supply Chain

There is no single price formation process along the food supply chain. Rather, each business relationship gives rise to a separate price for a different product or service. A dairy farm, for example, receives a price for raw milk. The dairy processor then sells processed and packaged dairy products to retailers at its own selling price. Retailers finally set the selling price charged to consumers. Thus, there is no single price that is merely divided up along the chain, but several prices formed in succession between different participants.

Prices generally arise from the interaction of supply and demand. A scarce product facing high demand can usually be sold at a higher price than a product offered in a comparable form by numerous suppliers.

[7] See https://dserver.bundestag.de/btd/19/307/1930775.pdf p. 62, accessed on 19 October 2026.

[8] See https://einzelhandel.de/presse/aktuellemeldungen/15005-hde-handelsreport-frische-lebensmittel-50-millionen-kunden-pro-tag-im-lebensmittelhandel and https://einzelhandel.de/presse/aktuellemeldungen/14922-lebensmittelpreise-hde-warnt-vor-einfuehrung-neuer-zusaetzlicher-preisbeobachtung, accessed on 2 September 2026.

In economics, the extent to which suppliers and buyers respond to price changes is described by supply and demand elasticities. If buyers can switch to another product or supplier without significant disadvantages in response to even a small price increase, the scope for raising prices is correspondingly limited. If, by contrast, few alternatives are available, a supplier is more likely to be able to secure a higher price (see Pindyck and Rubinfeld 2009, pp. 32 et seq.; Varian 2016, Chapter 1).

In business-to-business relationships, these general market conditions are given concrete expression in price and contract negotiations. Agreements generally concern more than an isolated price. Delivery volumes, quality, contract duration, payment terms, discounts and the allocation of certain risks may also form part of the overall economic package. A lower nominal purchase price therefore does not necessarily mean more favourable overall terms if, for example, the buyer assumes greater logistical or marketing responsibilities in return. In addition, longer-term contracts may mean that changes in market conditions become apparent in agreed prices only after a delay.

Firms' costs also play an important role. They influence whether producing and selling a product at a particular price is economically worthwhile. However, they do not directly determine the market price. If a manufacturer reduces its costs by five percent through more efficient production processes, this does not automatically imply a corresponding five percent reduction in its selling price. Whether, and to what extent, the cost advantage is passed on to buyers through lower prices depends on the prevailing market conditions. If buyers can readily switch to other suppliers or products and competition is intense, there may be a stronger incentive to pass it on. If, by contrast, outside options are limited or demand is relatively insensitive to price, a larger share of the cost advantage may remain with the manufacturer and increase its margin.

A cost reduction may also have effects on volumes and market shares: if a manufacturer gains additional sales and therefore purchases more inputs, this may come at least partly at the expense of competing manufacturers' purchasing volumes. Whether this also changes total demand for agricultural inputs is a separate question; the following analysis abstracts from such volume and market share effects.

For the reasons outlined above, selling prices do not automatically follow from costs plus a fixed margin, but from the relevant demand, competitive and bargaining conditions.

For agricultural production, an additional consideration is that prices for many agricultural products are integrated into European and international markets. An increase in the costs of an individual farm alone does not automatically raise the producer price attainable in the market. Falling international prices can put pressure on farm revenues; conversely, farms may also benefit from rising international prices.

The way international markets affect producer prices differs across products. For standardised agricultural commodities that are directly tradable internationally, the relationship is often direct. This is particularly evident for cereals. Agricultural traders connect German production with foreign trade and coordinate imports and exports in relation to domestic production and demand. However, neither an individual farm nor agricultural traders can determine cereal prices largely at will, as the world market price essentially provides the relevant benchmark. This price is formed on futures exchanges such as Matif (Euronext

Paris)[9] or the CBOT (Chicago)[10], where cereals are quoted continuously and transparently for all market participants. Accordingly, global supply disruptions are reflected directly in prices. The outbreak of the war in Ukraine in 2022, for example, caused cereal prices to rise sharply.[11] Extreme weather events associated with climate change, such as droughts or heavy rainfall, also affect prices directly through crop failures. Since international trade in agricultural commodities is predominantly conducted in US dollars, exchange rate movements also influence cereal prices (see also Monopolkommission 2025, paras 176 et seq.).

For other products, international influences operate more strongly through processing firms' sales markets. Due to its perishability, raw milk is predominantly supplied to dairy processors regionally. However, the revenues that dairy processors can earn from the products made from it are relevant to the price paid to farmers. German prices paid for raw milk thus closely track the so-called 'milk commodity value' calculated by the Kiel Institute of Food Economics (Kieler Institut für Ernährungswirtschaft e.V.),[12] which is derived from average market prices quoted on the Kempten exchange[13] for butter and skimmed milk powder.[14] Since these products are traded in European and international markets, international revenue opportunities indirectly feed back into the price that dairy processors pay for raw milk (see also Monopolkommission 2025, paras 83 et seq.).

In both cases, an individual farm's scope to set prices independently is limited. For largely standardised products, a farm cannot generally secure a price significantly above the prevailing market price as long as comparable goods are available from other suppliers or regions. Its individual costs are therefore a major determinant of its own economic performance, but do not directly determine the market price. Against this background, the Monopolkommission likewise identifies key opportunities to improve agriculture's competitive position on the cost side. It points in particular to more cost-efficient production structures and to efficiency gains from innovative technologies, which may also be accessible to smaller farms (see Monopolkommission 2026, p. 3).

At the processing and manufacturing stage, two separate price formation processes intersect. Firms purchase agricultural products or inputs that have already been processed at a purchase price and then sell the resulting products to other processors or retailers. Manufacturers' sales markets frequently extend beyond Germany: in 2025, the German food and drink industry generated around 37.5 percent of its turnover abroad. For export-oriented firms, attainable selling prices are therefore shaped not only by demand from German retailers but also by price and demand conditions in European and international markets (see Bundesvereinigung der Deutschen Ernährungsindustrie 2026, p. 28).

A processor may therefore face rising prices for agricultural raw materials without being able to pass these on in full to its buyers. Conversely, it may achieve higher prices on the sales side without this automatically increasing the price it pays for its own inputs. The processing and manufacturing stage thus illustrates

[9] See https://live.euronext.com/de/produkt/rohstoffe-futures/EBM-DPAR/weizen-future-matif-kurse, accessed on 14 September 2026.
[10] See https://www.cmegroup.com/markets/agriculture/grains/wheat, accessed on 14 September 2026.
[11] Before the outbreak of the war, Ukraine accounted for around one tenth of global wheat exports and was temporarily unable to export any cereals.
[12] See https://www.ife-kiel.de/kieler-rohstoffwert-milch/, accessed on 14 September 2026.
[13] See https://www.butterkaeseboerse.de/, accessed on 14 September 2026.
[14] See https://www.ife-kiel.de/ife-rohstoffwerte/, accessed on 14 September 2026.

particularly clearly that purchase and selling prices are economically connected but are determined independently in different business relationships.

Finally, consumer prices are set at the food retail stage. Key determinants include consumer demand, consumers' price sensitivity and competition between retailers. Unlike at upstream stages, the focus is not to the same extent solely on the individual product. Retailers offer a broad range of products and compete for consumers' entire shopping baskets. The price of an individual item may therefore also depend on its role within the product range.

Frequently purchased items, products whose prices consumers pay particular attention to, and temporary special offers may thus be priced relatively low, while other items are priced differently. There are also different price and quality segments and the coexistence of branded products and private labels. The consumer price of a food product does not follow mechanically from the retailer's purchase price but is set in competition for consumers and in the context of the overall product range.

Overall, prices at the different stages of the food supply chain are connected but arise in separate business relationships and are shaped by different market and competitive conditions. Accordingly, prices and economic outcomes at the individual stages need not develop in parallel.

2.3 Empirical Findings on Developments in Prices and Mark-Ups

The differences between the various parts of the food supply chain described in the preceding sections are also evident in empirical developments.

The Monopolkommission's report on the food supply chain provides a comprehensive analysis of this issue. Among other things, the Monopolkommission examines developments in so-called mark-ups. These express the price achieved by a firm relative to the marginal cost of production, that is, the cost of producing one additional unit. A rising mark-up means that a firm can sustain a larger gap between its price and these costs. Mark-ups should not be equated with accounting profit margins but can indicate firms' scope to set prices and how this scope changes over time (see Monopolkommission 2025, para. 24).

The Monopolkommission finds no clear trend for agriculture. Average farm mark-ups remained largely stable between 2006 and 2023, fluctuating by only around seven percentage points over the entire period. However, this average may conceal very different developments, for example in productivity, farm size or prices in purchasing and sales markets. No clear increase can be identified for agriculture as a whole (see Monopolkommission 2025, paras 25 and 29).

At the manufacturing stage, by contrast, a different picture emerges over a substantial part of the observation period. Food manufacturers' turnover-weighted mark-ups initially fell from around 26 percent in 2007 to approximately 20 percent in 2011, but then rose significantly, reaching around 33 percent in 2020. This increase is predominantly attributable to existing firms raising their mark-ups. By contrast, shifts in market shares between firms, and market entry and exit, play only a minor role in developments in the aggregate mark-up (see Monopolkommission 2025, paras 37–38).

A longer-term increase in mark-ups can also be observed in food retailing. According to the Monopolkommission's calculations, the turnover-weighted average mark-up increased, with some fluctuations, from approximately eight percent in 2013 to around twelve percent in 2023. As at the manufacturing stage, this development is explained primarily by changes in mark-ups within existing firms rather than by a shift in market shares (see Monopolkommission 2025, para. 46).

The differing picture is not limited to the aggregate perspective. Detailed analyses of individual supply chains also show that prices at the different stages have not consistently moved in parallel. In the dairy sector, for example, the Monopolkommission finds that prices paid to farmers and prices in downstream sectors have increasingly diverged, particularly since 2014. It also observes increasing divergence in the meat supply chain from around 2013: prices at downstream stages sometimes remained stable or rose even as agricultural prices fell. Between 2013 and 2021, there were extended periods in which agricultural prices fell or stagnated while prices at the manufacturing and retail stages continued to rise (see Monopolkommission 2025, paras 76–78, 130 and 174).

These differing developments do not in themselves permit an unequivocal conclusion as to why prices and mark-ups at the individual stages develop differently. Nevertheless, the findings are informative for the question of a general cascade effect. If economic benefits at downstream stages were regularly passed on along the food supply chain to upstream firms, one would at least expect the latter to benefit visibly in their economic performance. Yet no such systematic relationship is apparent in the empirical findings. Rather, mark-ups at the manufacturing and retail stages have risen over extended periods without a comparable development being observed in agriculture.

The available findings therefore provide no indications of a general cascade effect and tend to argue against such pass-through occurring systematically. The Monopolkommission likewise concludes that strengthening downstream sectors does not necessarily benefit agriculture (see Monopolkommission 2025, paras 398–400). The following chapter therefore examines the economic conditions that would have to be met for such pass-through and why these are not automatically fulfilled or are even highly unlikely.

3. Economic Assessment of the Cascade Effect

The preceding analysis has shown that the agricultural and food supply chain consists of a series of separate market and contractual relationships. Prices at the individual stages are economically connected, but are formed under different supply, demand and competitive conditions. Prices, margins and profits must also be distinguished from one another, and each permits only limited inferences about a firm's financial headroom.

The analysis of the cascade effect therefore does not hinge solely on whether prices or margins at different stages can influence one another. Rather, the question is whether an improvement in economic conditions at one stage gives rise to a general and systematic mechanism through which upstream suppliers also receive higher prices or more favourable terms. A cascade effect requires more than a mere economic connection between market stages: the benefit would have to be passed on in a particular direction and through several successive business relationships until it ultimately reaches agricultural producers.

3.1 Separate Price Formation in Purchasing and Sales Markets

The empirical findings in Section 2.3 show that prices and mark-ups at the different stages of the food supply chain can develop differently over extended periods. However, they do not in themselves explain why this is the case. To examine a potential cascade effect, it is therefore first necessary to establish the mechanism through which an economic benefit at one stage could be transmitted to an upstream stage at all.

As discussed in Section 2.2, a firm at the processing or manufacturing stage generally has both a sales relationship and a purchasing relationship. A food manufacturer, for example, sells its products to retailers while obtaining raw materials or inputs from its suppliers. The terms in both business relationships are economically connected but are not determined jointly. An improvement in the economic terms of the relationship between a manufacturer and retailers therefore does not directly determine the price that the manufacturer pays its upstream supplier.

This can be illustrated by the German prohibition of listing fees for products already on the market. The Agricultural Organisations and Supply Chains Act (Agrarorganisationen-und-Lieferketten-Gesetz, "AgrarOLkG") transposes the European UTP Directive into German law and goes beyond its minimum requirements in imposing this prohibition. While the Directive generally permits payments for listing where these have been clearly and unambiguously agreed in advance, § 17 AgrarOLkG prohibits such payments for products already on the market. Listing costs incurred on market introduction are exempt.[15]

A listing fee is understood here as a payment made by a manufacturer to a food retailer in order for its finished product, which is already on the market, to be stocked in the retailer's range. Without the prohibition, the manufacturer in the example considered would have to make this payment to the retailer. It would consequently retain a lower return from the revenue generated by its supplies of goods.

[15] See https://www.gesetze-im-internet.de/agrarmsg/BJNR091710013.html, accessed on 14 October 2026.

The prohibition therefore gives the manufacturer an economic benefit in its sales relationship with the retailer. However, it purchases raw materials or inputs in a separate business relationship with upstream suppliers. The prices and contractual terms agreed there are not simultaneously redetermined by the prohibition. For these suppliers also to benefit, the relief afforded to the manufacturer would first have to be reflected in higher purchase prices or other contractual terms more favourable to them.

The effect of the listing fee prohibition can be illustrated using a specific supply relationship. Suppose a food manufacturer supplies an agreed quantity of a product already on the market to a retail chain and receives €100,000 in return. The inputs required cost it €60,000; processing, packaging and other services cost €25,000. Without the prohibition, the manufacturer in this example would also have to pay a listing fee of €5,000 to the retail chain. It would thus retain a profit of €10,000. With the prohibition, by contrast, its profit is €15,000.

In this example, the listing fee prohibition concerns the manufacturer's payment to the retailer. The separate agreement with the input supplier remains unaffected: the supplier continues to provide the agreed input and receives €60,000 in return. The manufacturer thus earns a higher profit without any change in its purchasing relationship. The additional profit of €5,000 alone gives it no reason to pay a higher price for the same supply. The prohibition therefore does not automatically result in the input supplier sharing in this profit.

This distinction is also consistent with the findings of the economic literature on vertical price transmission. This literature examines how changes in prices and costs are transmitted between different stages of a supply chain. In their review of the theoretical and empirical literature, von Cramon-Taubadel and Goodwin (2021) show that price relationships within food supply chains depend heavily on the prevailing market conditions and are correspondingly context-specific. There is therefore no general mechanism whereby changes at one stage are transmitted to other stages in a fixed or proportional ratio. Gaudin (2016) likewise shows for vertical business relationships that the extent of pass-through is influenced in particular by the specific contractual arrangements and the relative bargaining power of the firms involved. Haucap et al. (2021) also show that the extent of cost pass-through in vertical business relationships depends on the specific structure of contractual and market relationships and is therefore not necessarily complete.

When assessing a cascade effect, it is therefore necessary to distinguish between the ability to pay and the price actually paid. The fact that a manufacturer could pay more as a result of a regulatory measure does not in itself explain why its supplier should actually receive a higher price. This requires an additional transmission mechanism that changes the outcome of the business relationship on the purchasing side. The literature on vertical business relationships in particular shows that the pass-through of economic changes depends on the specific contractual and bargaining conditions between the parties (see Gaudin 2016).

Such a mechanism may arise, in particular, where the upstream supplier is able to secure part of the additional financial headroom for itself in price negotiations. Whether, and to what extent, it succeeds depends in particular on the parties' respective outside options and bargaining positions. The following section therefore examines the factors determining the pass-through of an economic benefit.

3.2 Determinants of the Pass-Through of Economic Benefits

A bargaining-theoretic approach is well suited to analysing such business relationships. Under this approach, a party's bargaining position depends crucially on the economic alternatives available to it if negotiations break down ("outside options"). The more easily a manufacturer can switch to other suppliers, or a supplier to other buyers, the stronger its position generally is. Firm size and market share may indicate buyer power, but do not in themselves permit reliable inferences about the actual bargaining position (see Inderst and Wey 2008; Haucap et al. 2014).

The importance of these outside options is well established in the economic literature. In a model of bilateral bargaining, Iozzi and Valletti (2014) show that a supplier's outside option influences negotiated input prices. Inderst and Montez (2019) likewise emphasise that bargaining power is determined to a significant extent by the available alternatives and the mutual dependence of the buyers and sellers involved. The decisive factor is thus not which party is larger, but which can more easily do without the other if negotiations break down.

The importance of outside options can be illustrated using the example in Section 3.1. The manufacturer pays €60,000 for the volume of inputs required and is €5,000 better off in its dealings with the retailer as a result of the listing fee prohibition. If it can obtain the same quantity, of comparable quality and on similar terms, from several other suppliers for approximately €60,000, its existing supplier will hardly be able to secure payment of €65,000 in a new round of price negotiations solely on account of this additional profit. The manufacturer could switch to another supplier. If, by contrast, the existing supplier is difficult to replace and switching would entail considerable disadvantages, the supplier has a stronger bargaining position. It is then better placed to try to capture part of the additional financial headroom through higher payment.

The fact that the manufacturer could pay more is therefore not decisive in itself. Whether the upstream supplier actually achieves a higher price depends crucially on market structure, competition between suppliers and the manufacturer's outside options. These market conditions determine both parties' bargaining positions. The manufacturer's additional financial headroom does not in itself lead to a higher purchase price.

The strength of these outside options in turn depends on the specific market and product conditions. Relevant considerations include, first, how many realistic alternative suppliers or buyers are available and how easily the product concerned can be replaced. The number of firms alone is not decisive. For example, a buyer that exists in theory is not a viable alternative if high transport costs make it practically inaccessible or it cannot purchase the product concerned. Conversely, even a large firm may depend on a particular supplier if its input is difficult to replace. This situation may arise in particular for products with strong brand loyalty. Using local beer brands as an example, Heimeshoff and Klein (2024) show that even comparatively small suppliers can have considerable bargaining power vis-à-vis much larger retailers if consumers specifically demand their brand and delisting would cause substantial profit losses for the retailer. Sexton and Xia (2018) similarly point out that market concentration alone does not mechanically establish the actual extent of market power; what matters are the specific conditions within the relevant supply chain.

For agricultural products in particular, outside options may be further restricted by specific product characteristics. Perishable products can be stored only for a limited time, transport costs may restrict the geographical range of potential buyers, and specific quality requirements or certifications may make switching more difficult. For agricultural markets, Durham and Sexton (1992) highlight the combination of few suitable processors and high transport costs for raw agricultural products as a possible reason for producers' limited sales options. For raw milk, for example, limited storability and the need for continuous sales may weaken farms' bargaining position. For other products, requirements or certifications tailored to a particular buyer during production may also make switching more difficult (see Monopolkommission 2025, paras 71 and 373).

Broader market or reference prices may also shape outside options and hence the scope for negotiation. This applies particularly to standardised agricultural commodities traded internationally. If comparable goods are available at a transparent market price, an individual supplier has only limited scope to demand a different price solely because its particular buyer has become economically better off. As discussed in Section 2.2, the level of German cereal prices is substantially shaped by the world market price. The transparent international price likewise limits the discretion of individual market participants. Raw milk is also connected to international markets through butter and skimmed milk powder prices.

For pass-through to occur, it is therefore not enough that a regulatory measure leaves the buyer economically better off and able to pay more. Rather, the upstream supplier must be able actually to secure a higher price. Whether it succeeds depends in particular on the strength of both parties' outside options and hence on which party is more dependent on the other if negotiations break down. Additional financial headroom for the buyer therefore leads to pass-through only if the bargaining conditions in the next business relationship allow it.

However, even successful pass-through of this kind is not sufficient for a general cascade effect. The same process would have to be repeated at every subsequent stage of the food supply chain until the economic benefit ultimately reaches agricultural producers. The following section examines this additional requirement.

3.3 Pass-Through across Multiple Stages of the Food Supply Chain is Highly Implausible

Section 3.2 has shown that even the pass-through of an economic benefit between two firms directly linked to one another cannot be taken for granted. Whether an upstream supplier shares in it depends in particular on market structure, competition and both parties' outside options. For a cascade effect benefiting agriculture, however, these conditions would have to permit pass-through not just in a single business relationship, but at every subsequent stage as far as agricultural producers.

If a regulatory measure leaves a food manufacturer economically better off in its dealings with retailers, its immediate input supplier would first have to receive higher prices or more favourable terms. That supplier's own supplier would then have to benefit from the advantage received there. Each of these transitions concerns a separate business relationship with different market and competitive conditions.

Pass-through at one stage therefore does not in itself permit any inference as to whether it will continue at the next.

The literature on price transmission across multiple stages also illustrates this dependence on the prevailing market conditions. Vavra and Goodwin (2005) explain that price shocks can in principle be transmitted through several stages of a food supply chain, but incomplete pass-through at intermediate stages impedes overall transmission. The empirical findings differ considerably across products and countries, as well as in the extent, speed and direction of pass-through. In addition, McCorriston and Sheldon (1996) show in a theoretical multi-stage model that both the number of vertical stages and their competitive conditions can influence the extent of overall transmission.

Each additional business relationship thus adds another hurdle. If only part of the benefit is passed on at each stage, its effect diminishes along the chain. If no pass-through occurs at some point, it ends there. Even if individual firms at intermediate stages share in a benefit, this does not therefore ensure that agriculture also benefits.

It is precisely at the transition to agricultural producers that the market conditions described above militate against such an expectation. Numerous individual producers often face a much smaller number of suitable buyers. Perishability, transport costs and specific production requirements may further restrict their alternative sales outlets; for standardised agricultural commodities, market and reference prices extending beyond the region limit individual pricing discretion (see Section 2.1 and Section 2.2). A processor may therefore have a strong bargaining position vis-à-vis a food manufacturer and benefit from an improvement in the latter's position, while its own agricultural suppliers have little scope to achieve higher prices. The processor's additional financial headroom does not improve their outside options or market position. Producers' often weak position thus presents a particular hurdle at the crucial final transmission step.

Finally, even if a benefit reaches agriculture, it is not certain that it will remain there permanently. Farms themselves purchase inputs such as seed, fertilisers and other operating inputs. Where the relevant market conditions permit, the suppliers of these inputs could share in an improvement in producers' position through higher prices or changes in terms. The assumption of pass-through along the chain therefore does not in itself explain why an economic benefit should remain specifically with agriculture.

Against this background, a general cascade effect benefiting agricultural producers is implausible. It would have to pass through several separate business relationships, overcome in particular the often unfavourable market conditions at the producer stage, and generate an economic benefit that remains there. An improvement in downstream firms' position, or the sharing of benefits at individual intermediate stages, does not provide a sufficient basis for this.

4. Regulation and its Actual Effects

The preceding chapters have shown that economic benefits, whether arising from general market changes or regulatory measures, are not automatically passed on to upstream stages of the food supply chain. What matters is whether the relevant market and bargaining conditions allow such pass-through.

Using an existing UTP regulation as an example, Section 4.1 therefore shows that benefits created by regulation do not necessarily lead to a cascade effect. Section 4.2 then examines whether more extensive or stricter regulation can change this and why additional regulation likewise creates no automatic pass-through mechanism along the food supply chain.

4.1 Existing Regulation and its Effect on a Potential Cascade Effect

Through Directive (EU) 2019/633 on unfair trading practices, the so-called UTP Directive, the European legislature has prohibited or restricted certain practices in business relationships within the agricultural and food supply chain. These include, for example, late payments, short-notice cancellations of perishable products, unilateral changes to certain contractual terms, and various payments and cost contributions imposed on suppliers. Differences in bargaining power between suppliers and buyers are a particular starting point for the Directive. The Directive expressly distinguishes between the direct effects of unfair trading practices on agricultural producers and possible indirect effects through cascade effects along the supply chain.[16]

In Germany, these requirements were implemented primarily through the AgrarOLkG. The protection afforded by these provisions is not limited to agricultural producers as immediate suppliers. Depending on the statutory turnover thresholds and limits on scope, firms at downstream stages, such as processors or manufacturers, may also be protected as suppliers. The current § 10 AgrarOLkG generally bases this protection on the relative size of supplier and buyer and contains additional provisions on scope for certain product groups.[17]

The distinction between the direct effects of regulation and a possible indirect cascade effect can be illustrated using the listing fee example in Section 3.1. § 17 AgrarOLkG prohibits suppliers from contributing to listing costs through payments or price reductions; costs incurred on market introduction are exempt. In the example considered, the prohibition concerns a payment by the manufacturer to the retailer for listing a product already on the market in its range. Compared with a situation without the prohibition, the manufacturer retains a higher return from its supplies of goods, all other conditions remaining unchanged.

This benefit arises directly in the business relationship between manufacturer and retailer. The manufacturer's separate purchasing relationships are not simultaneously re-structured: its upstream suppliers initially continue to receive the agreed payment for the same supplies. For them also to benefit,

[16] See Directive (EU) 2019/633, recitals 7, 9 and 14, available online at: https://eur-lex.europa.eu/legal-content/DE/TXT/PDF/?uri=CELEX:32019L0633, accessed on 4 September 2026.
[17] See https://www.gesetze-im-internet.de/agrarmsg/BJNR091710013.html, accessed on 4 September 2026.

the improvement in the manufacturer's position would first have to be reflected in higher purchase prices or other more favourable terms. Whether this happens depends on the market and competitive conditions discussed in Section 3.2. Where there are several intermediate stages, the conditions for pass-through would have to be met in each subsequent business relationship accordingly.

This must be distinguished from provisions that can provide direct protection at several stages separately. An example is the payment deadlines under § 11 AgrarOLkG, which generally provide for a maximum of 30 days for perishable products and 60 days for other products covered. Within the statutory scope, these requirements may apply both to supplies from a manufacturer to retailers and to supplies from an agricultural producer to a manufacturer.

If the requirements lead to earlier payment in both business relationships, manufacturers and producers each benefit directly from regulation of their own sales relationship, for example through lower financing costs. The producer's benefit then arises from its own entitlement to timely payment. It does not require pass-through of the benefit that the manufacturer receives in its dealings with retailers. Even where the same provision protects several stages, these are therefore separate direct effects rather than a cascade effect.

The direct effectiveness of a UTP rule must therefore be distinguished from its possible indirect effect. A provision may effectively relieve manufacturers of burdens and directly protect agricultural producers in their own business relationships. Neither, however, answers the question of whether an additional benefit accruing to the manufacturer is passed on through upstream supply relationships as far as agriculture.

It is precisely this further assumption that the Monopolkommission also views critically. It points out that protection of downstream stages under UTP regulation is partly based on the notion that the benefits arising there will be passed on along the supply chain as far as primary producers. According to its analysis, however, there is no indication that the legislature examined whether such a cascade effect actually exists in the various supply chains. Rather, strengthening the manufacturing stage could shift economic benefits between manufacturers and food retailers without benefiting agriculture. In the Monopolkommission's assessment, the proposition that farms benefit when manufacturers improve their position vis-à-vis retailers is neither apparent from the available data nor generally plausible in theory (see Monopolkommission 2025, paras 398–400).

This assessment is confirmed by the preceding analyses. Neither the structure of price formation along the food supply chain nor empirical developments at the individual stages support a general mechanism through which economic benefits at a downstream stage are reliably passed on as far as agriculture. Prices and terms arise in separate business relationships; pass-through at each stage again requires the respective upstream supplier actually to be able to secure part of the economic benefit. In supply chains involving several stages, this mechanism would also have to be repeated several times in succession.

A general or systematic cascade effect is therefore not plausible from an economic perspective. Regulatory benefits at the manufacturing or other downstream stages may indeed be effective there, but do not in themselves establish a reliable benefit for agricultural producers. This does not rule out instances of pass-through in particular circumstances; however, these do not constitute a structural mechanism on which general regulation of the food supply chain can be based.

4.2 Stricter Regulation Does Not Generate a Cascade Effect

Since existing regulation reveals no reliable cascade effect, the question arises whether more extensive or stricter regulation could change this. From a policy perspective, it may seem natural to expect that greater regulatory intervention could also produce a stronger economic effect at upstream stages.

Stricter regulation does not, however, alter the underlying mechanism. A stricter rule may increase the economic benefit at the directly regulated stage or change its distribution between two firms directly involved. Yet this does not create an additional mechanism ensuring that the benefit is passed on to the next stage. In particular, greater financial headroom for a firm does not mean that its upstream suppliers thereby acquire better outside options or a stronger bargaining position.

This applies even more where an economic benefit would have to pass through several stages before reaching agriculture. The conditions for pass-through described in Section 3.2 would still have to be met in every individual business relationship. Stronger regulation may therefore change the starting point of a potential cascade, but it does not remove the hurdles to pass-through along the chain.

French regulation provides a particularly clear example. The EGAlim Law raised the threshold for resale below cost for food products by ten percent ("SRP+10"). In simplified terms, this means that if a retailer buys an affected food product for one euro, it generally may not resell it for less than €1.10. According to the French Senate, the aim was to limit price competition on these products and create additional financial headroom for retailers, which would in turn allow higher purchase prices and ultimately also benefit agricultural producers. The French Senate expressly describes this logic as a theoretical "ruissellement", that is, a trickling of the economic benefit from downstream to upstream stages.[18]

However, it was precisely this expected pass-through effect that could not be reliably identified. The underlying expectation was that retailers would sell food previously offered at low prices at higher prices as a result of the increased price floor. With purchase prices initially unchanged, this was intended to increase the margin between purchase and selling prices. This additional headroom was intended to enable retailers to pay their suppliers higher prices, which would ultimately also benefit agricultural producers. In 2022, referring to available estimates, the French Senate put the additional retail margins at around €600 million. This referred to the estimated additional financial headroom for retailers that was intended to arise from higher consumer prices. According to the Senate, higher consumer prices were observed, but a corresponding flow of benefits back to agricultural producers was not apparent. Effects in the opposite direction were even reported in certain product categories (see the following excursion).[19]

[18] See https://www.senat.fr/rap/r21-799/r21-7991.html, accessed on 4 September 2026.
[19] See ibid.

Excursion: Gariguette Strawberries: When the Price Floor Increases Purchasing Pressure

The French "SRP+10" rule introduced in 2019 raised the resale price floor for food to the retailer's effective purchase price plus ten percent. The additional retail margins expected to result were intended to allow higher payments to suppliers and thus ultimately also improve payments to agricultural producers.

However, the hoped-for effect could not be reliably demonstrated. For Gariguette strawberries, the French Senate even describes a response to the higher price floor in the opposite direction. Some retailers used the strawberries as a seasonal promotional offer at €1.99 per pack. With the purchase price unchanged, the rule would have required a retail price of around €2.19 in the Senate's example. However, retailers wanted to remain below the two-euro threshold, which was regarded as conducive to sales. According to the Senate, they therefore increased the bargaining pressure on their suppliers. For the case described, the Senate reports a ten percent reduction in the purchase price paid to producers (see Sénat 2019, pp. 25–26).

Fresh strawberries are subject to particular market conditions. The produce can be stored only for a limited time, and weather-related harvest peaks can create a large supply at short notice that must be sold quickly. This limits producers' ability to wait for better selling terms.

The reported problems were subsequently also addressed in legislation. With the Law of 30 March 2023, France generally exempted fresh fruit and vegetables, as well as bananas, from the additional ten percent uplift. The Senate expressly justified the exemption by reference to **negative consequences for these products** that had by then been documented. In particular, the Senate report referred to tougher purchasing negotiations aimed at maintaining low retail prices and to industry reports of declining producer margins. The legislative amendment thus responded to experiences that ran counter to the hoped-for relief for agriculture (see Sénat 2023, pp. 33 and 94; Assemblée nationale 2024, p. 14).

The reported price reduction and the subsequent exemption illustrate a potential perverse incentive and the limits of the regulatory approach: additional financial headroom in retailing does not guarantee better payments to producers. Under certain market conditions, a rule intended to support agriculture may instead put additional pressure on producers' selling prices.

In addition, an earlier DCE report (2026) provides a systematic cross-country comparison of regulatory intensity and producer price levels. It examines seven EU Member States (Germany, the Netherlands, Belgium, France, Slovakia, Hungary and Spain) with regulatory regimes of varying scope, comparing these with the respective producer prices for raw milk, pork and wheat. Across all three product groups, there is no consistent pattern whereby more heavily regulated countries achieve higher producer prices. Even countries with comparatively extensive regulation, including France, Slovakia and Hungary, do not systematically show higher producer prices than countries with more moderate regulation.

The cross-country comparison thus supports the argument developed here: greater regulatory intensity is not visibly associated with a systematic improvement in producer prices. The European comparison likewise therefore provides no indication that more extensive regulation generates a reliable cascade effect benefiting agricultural producers.

Stricter regulation thus does not resolve the structural problem of the cascade effect. It may improve the economic situation of the firm directly protected or change the distribution within a particular business relationship. However, it creates no new mechanism through which the resulting benefit is reliably passed on through several separate business relationships as far as agriculture. The French example and the European cross-country comparison also provide no empirical indication that greater regulatory intensity generates such a systematic cascade effect.

Greater regulatory intensity therefore creates no reliable pass-through mechanism and does not make a systematic cascade effect more plausible. If the aim is specifically to improve the economic situation of agricultural producers, regulatory measures should be assessed on the basis of their direct and demonstrable effects on these producers, rather than resting on the assumption that economic benefits will be passed on to them from downstream stages through several business relationships.

5. Conclusions and Economic Policy Implications

This report examines whether economic benefits at downstream stages of the food supply chain are regularly passed on to upstream stages and thus ultimately also benefit agricultural producers. The analysis reaches a clear conclusion: a general or systematic cascade effect is not plausible from an economic perspective.

The structure of price formation itself argues against such a mechanism. Prices and terms at the individual stages of the food supply chain arise in separate business relationships and under different supply, demand and competitive conditions. An economic benefit for a firm, for example through higher revenues, lower costs or a more favourable regulatory framework, therefore initially changes that firm's own economic situation. Greater financial headroom does not automatically result in a higher purchase price for upstream suppliers.

For a benefit actually to be passed on, the respective supplier must instead be able to secure a higher price or more favourable terms in the next business relationship. The bargaining positions and outside options of both parties are particularly important. These conditions may differ considerably depending on the product, market structure, transportability, perishability or prevailing market and reference prices. The fact that a firm could pay more therefore does not mean that it actually has to pay more.

Pass-through across several stages as far as agriculture requires even more demanding conditions. The relevant market and competitive conditions would have to permit pass-through in every individual business relationship. Even if individual intermediate stages shared in an economic benefit, this would not ensure that it was passed on as far as agriculture. Each further instance of only partial pass-through would diminish the original benefit; if no pass-through occurred, the cascade would end there. Agricultural producers' often weak market position in particular presents a major hurdle at the crucial final transmission step. Even if a benefit reached agriculture, there would be no guarantee that it would remain there permanently: where market conditions permit, producers' own input suppliers could also capture part of it through higher prices or changes in terms.

Nor do the empirical findings support the notion of a systematic cascade effect. Prices and mark-ups at the agricultural, manufacturing and retail stages have not consistently developed in parallel over extended periods. Individual supply chains, such as dairy or meat, also exhibit price developments that sometimes diverge over periods of years. The Monopolkommission accordingly concludes that there is no apparent evidence that strengthening downstream stages regularly benefits agriculture. These findings do not in themselves constitute a causal test of an individual regulatory instrument. However, they also provide no indication of the general pass-through mechanism presupposed by the cascade hypothesis, which is in any event highly unlikely for the reasons outlined above, and thus give rise to further substantial doubts as to its existence.

The analysis of existing UTP regulation illustrates that a rule can improve the economic position of the supplier directly protected without simultaneously generating a benefit for firms further upstream. The listing fee example makes this clear: the prohibition protects the manufacturer against corresponding payment demands from retailers. However, this does not in itself create an economic incentive to pay its suppliers higher prices. The manufacturer's purchasing terms continue to be determined by competitive

conditions and bargaining positions at the upstream market stage. The direct effect of regulation must therefore be clearly distinguished from an assumed indirect cascade effect.

Stricter regulation does not resolve this structural problem either. It may increase the economic benefit at the directly regulated stage but creates no additional mechanism for passing it on. The French SRP+10 example illustrates this limitation particularly clearly: although the regulation was expressly intended to create additional financial headroom that would ultimately also benefit agricultural producers, no corresponding reliable pass-through effect could be identified. In addition, across raw milk, pork and wheat, the comparison of seven EU Member States reveals no consistent pattern whereby greater regulatory intensity is associated with higher producer prices.

From an economic policy perspective, it follows that a cascade effect cannot serve as a sound justification for regulating downstream business relationships. Despite competition concerns and the associated interference with constitutionally protected freedoms, a provision may appear politically desirable for other reasons and effectively benefit the directly protected (industrial) suppliers. However, if the aim is specifically to improve the economic situation of agricultural producers, measures should target their economic situation and competitive position as directly as possible. The Monopolkommission likewise identifies opportunities for action particularly on the cost side of agriculture and recommends a move towards more cost-efficient production structures and the promotion of innovative technologies. At the same time, it recommends that the scope of the UTP rules should in principle be concentrated on supply relationships involving agricultural producers; for other business relationships in the food supply chain, it generally considers the existing protection afforded by competition law sufficient.

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