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Retail Mergers and Acquisitions, and Specialty Crop Producers: Evidence from California

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Abstract: Relatively little is known about the economic impact of mergers and acquisitions in the food retail industry on upstream agricultural producers. We study the potential impact of the 2014 merger between Safeway and Albertsons on California specialty crop growers. There is a consensus among the 19 growers that we interviewed that merger events are unfavorable since they lead to uncertainty, lower prices, lost revenue, and higher transaction costs. State-level analysis of USDA crop price data provides support for these contentions.

Keywords: mergers and acquisitions; food retail; agricultural production; bargaining power; food prices; economic impacts; merger analysis

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1. Introduction

Market structure and market concentration are common topics in economic analyses related to business and policy. Most often, studies are focused on the impact of seller power in markets with limited competition. As such, much of the literature has focused on the price–concentration relationship, yielding a consensus in food retailing that increased concentration is associated with higher food prices. This phenomenon is typically attributed to the application of market power [1]. However, there are other potential economic impacts throughout the food supply chain. Our study explores the implications of retail mergers and acquisitions (M&A) on the specialty crop production sector by investigating the upstream impacts of the 2014 acquisition of Safeway by Albertsons. Understanding the direct impact of M&A to the upstream supply chain is the first step in creating more comprehensive M&A regulations that account for the welfare of producers and other upstream agents, in addition to that of consumers. The issue is timely, as market consolidation throughout food industries continues to increase rapidly, as we discuss in: 'Background and Literature Review'.

Additionally, the COVID-19 pandemic has motivated an improved understanding of marketing channels and selling conditions for agricultural producers to better prepare the food supply chain for future shocks and disruptions. In the past year, COVID-19 has placed stress on the food supply chain. Consumer preferences have quickly fluctuated, and grocery stores have had to adapt ready-to-eat food spaces and add precautionary equipment such as Plexiglas barriers. Between the heightened need for food at home and the increased operational expenses, there has been an increase in costs for every segment of the supply chain [2]. Seasonal employment, which is common throughout agricultural markets, often relies on migrant workers. The absence of these employees due to illness and travel restrictions has had serious implications on both food safety due to the health status of the workers, and debilitated production processes because of the loss of labor availability [3]. Impacts such as complete shutdowns, labor scarcity, and shipment delays have threatened farmers' abilities to deliver the necessary volume of food [4].

Price spreads are commonly used to gauge market conditions. Examining farm-to-retail (FTR) price spread data collected by [5], we see that the price spread increased considerably in the years leading up to 2019. Figure 1 shows the steady increase in the price spreads of fruit and vegetables in the last two decades, up to and including the merger of interest. Some of this increase could likely be attributed to higher operating expenses throughout the supply chain, a trend that was accelerated during the COVID-19 pandemic [6,7]. However, longer-term trends show a widening gap between farm and retail prices for fruits and vegetables, which may also reflect market power as applied by wholesalers and retailers. In the years immediately leading up to the 2014 merger, the FTR spread trended flat for both fruits and vegetables, though it remained much higher than it was in the 1990s. Attributing the increase in price spread in 2014 to a change in the farm supply side or the retail demand side or both is necessary to accurately assess its relevance to the presence of market power expansion [8].

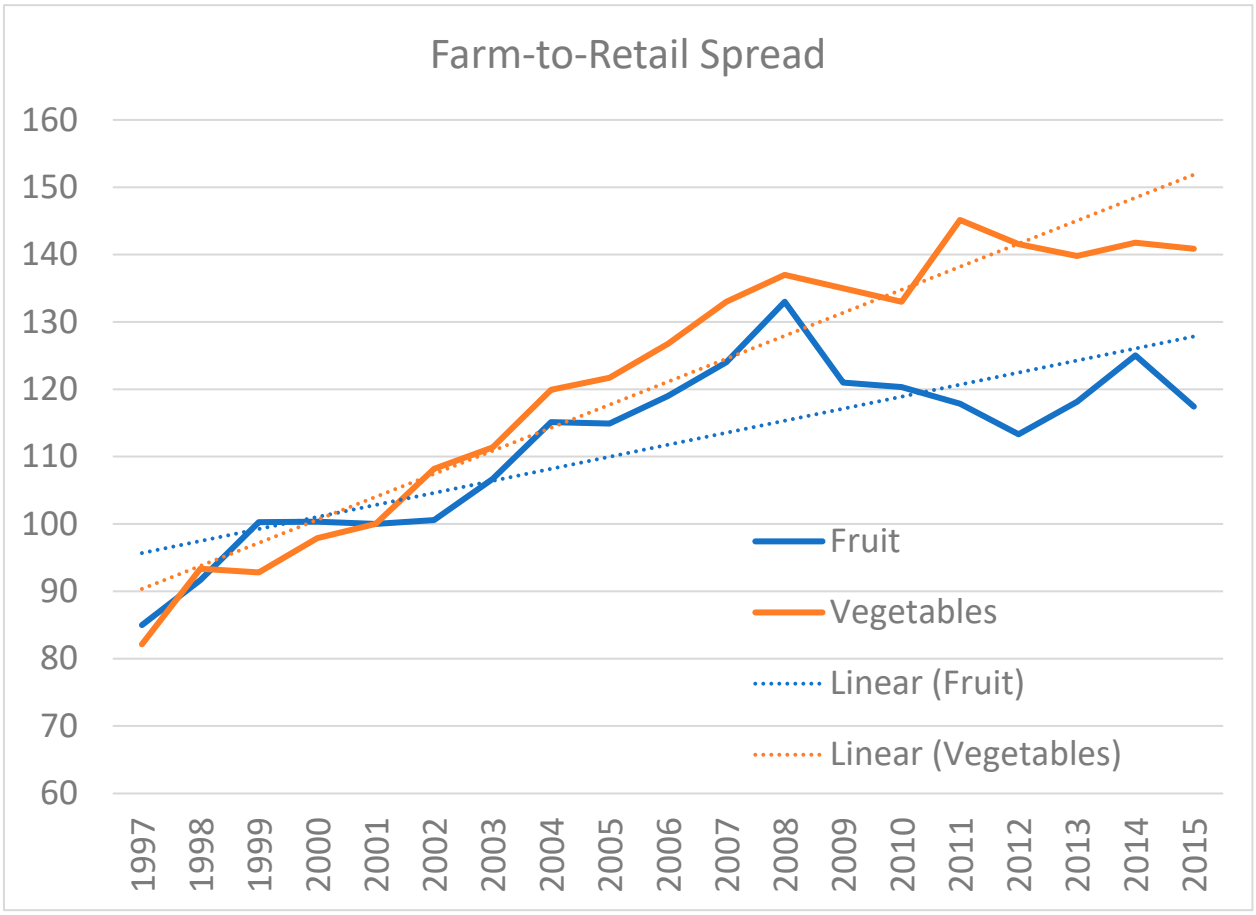

Figure 1. Farm-to-retail price spreads in the United States with linear trends, 1997–2016. Source: USDA Economic Research Service [5].

The farm share of the retail dollar also helps in illustrating the relationship between buyers and sellers. The farm share can help ascertain whether changes in the FTR spread is due to increases in the value added to foods, via processing, packaging, and advertising as examples, or to market power. When both the FTR spread and the farm share increase over the same period, this suggests that value-added processes are driving higher FTR spreads. If the farm share falls while the FTR spread rises, it might suggest that market power drives the farm price down, the retail price up, or both. If changes in consumer preferences can be eliminated as an impacting factor, market power can be identified as the leading cause of declining farm prices [9].

The farm share for fruits and vegetables over time yields mixed evidence. The farm share for vegetables trends downward, decreasing 10% in 1997–2015. Ex ante, we can foresee that vegetable producers may be more impacted by the merger. However, while the farm share has trended up for fruit products, increasing 27% in the same period, the coefficient of variation for the farm share is twice as volatile for fruit when compared to vegetables. Since growers are adversely affected by reduced price and increased price volatility, there is evidence that the merger negatively impacts both fruit and vegetable suppliers alike [10].

Our study was carried out in two parts. We qualitatively analyze 19 interviews with specialty crop producers in California on the topic of the 2014 Albertsons–Safeway merger and overall retail M&A activity. The Albertsons–Safeway merger is one of the largest in grocery history, as the resulting Albertsons parent company came out of the merger as the fourth largest grocery company in the U.S in 2016, with total annual sales of nearly USD 59 billion [11]. These findings are supplemented with quantitative analysis of crop prices reported to the USDA across all states in the relevant time periods. Survey results were used to understand and identify areas of consistence and divergence among growers with respect to the impact of M&A activity on their operations. We analyze USDA crop price data to directionally investigate and validate the qualitative findings. While our study is unable to identify causal effects, we uncover clear implications of mergers for upstream producers and motivate future work on the topic.

While the perceived impacts of M&A considerably varied among the interviewed producers, the consensus was that M&A activity among buyers, retailers in this case, leads to adverse outcomes. When buyer power is concentrated to a single or only a few organizations, farm prices decrease, and transactional costs increase, becoming ungovernable in some cases. In the case of the 2014 Albertsons–Safeway merger, these effects are evident in both quantitative data and the accounts of those involved. Without a proper understanding of the economic impacts of M&A activity, the oversight and regulation of these events may fail to consider all potential harm. Our findings suggest that suppliers receive lower prices and at times, lose large accounts within the retail marketing channel.

- Background and Literature Review:

The food supply chain and all of US agriculture have been transformed by consolidation in recent decades [12]. This is particularly pronounced among retailers [13]. In this section, we discuss the literature on the implications of asymmetric transactions, particularly those in which the buyer controls the balance of power. We focus specifically on agricultural producers, who are often thought to be price takers [14]. The effects of buying power, specifically within the food supply chain, can have implications for prices received, income volatility, entry and exit, and more for producers.

Monopsonies and oligopsonies are a strong area of focus within the agrifood sector, because buyer power, in comparison to seller power, is more likely to be present in agricultural systems [15]. Various stages and industrial segments of the specialty crop supply chain have effects on the food prices as value is added. More recent work [16] has identified market power concentration at multiple stages, including retail stage, as a cause of fluctuations in prices for suppliers. Being the initial player in this upstream supply chain and having little control over their ability to preserve their short-term goods, farmers are forced to take a passive role in the designation of vegetable prices. The incidence of farm-level food waste during the early stage of the COVID-19 pandemic further highlighted the relevance of monopsony and oligopoly power. Many specialty crop producers sell to a small number of buyers, meaning that they are often motivated to remain selling to large retailers postmerger, regardless of the change in circumstances.

Research on farm prices indicates a linkage between prices received by growers and ranchers and the availability of local buyers. The distinctive characteristics of agricultural products, being bulky and perishable, result in obvious challenges regarding mobility and the need for proximal production facilities [17]. Geographical factors, such as a significant decrease in transportation costs for growers located closer to processing or packing facilities,

limit the flexibility of processors that the growers can work with. This increases the power of the processing plants, as growers are forced to choose between higher transportation costs or the favorable proximity of a buyer. Growers located in a region with a singular buyer on average received a payment of 6% less per pound of broilers than that of growers who were in an area with four or more buyers [18]. Finally, a study of agricultural prices received for 117 countries revealed extensive evidence of monopsony power as a driver of price variation [19].

Limited evidence exists for positive impacts resulting from M&A activity for upstream players. One benefit identified in the existing literature is the implications of technological innovation and efficiency improvements [20]. The seed industry is one of the centers of innovation within the food industry due to its direct correlation to food security and socioeconomic issues [21]. Seed biotechnology is recognized by some as having the power and potential to heavily improve the food circumstances that we face on a global scale. The severity and relevance of this topic attracts input from a multidimensional array of stakeholders. The seed industry is a notable example of a highly concentrated market because it has been historically dominated by The Big 6: BASF, Down Chemical, Bayer, Monsanto, DuPont, and Syngenta [22].

While the advantages and disadvantages of consolidated market power in agribusiness and the food supply chain are of a polemic nature, most economic theory points to adverse pricing effects on farmers regardless of the potential for innovation that mergers may invite. The food market especially is an indispensable and yet highly uncertain market. Specialty crops are even more susceptible to volatility from external factors due to the cyclical nature of their growing patterns. Agreements between suppliers and buyers of specialty crops, even when a contract is involved, are typically on an annual basis. The fact that a buyer purchases from a specific supplier one year does not guarantee that they will purchase from that supplier the following year. The use of contracts to exercise buyer power has been addressed by several scholars. Motivators for contracting, as identified in the contracting literature, include incentive alignment, risk sharing, market power, and efficiency gains [23]. Contracts, which allow for participants to take advantage of asymmetric information, create risks for whichever party is less informed. Once farmers have gained the experience and knowledge to advocate and negotiate for fair terms, the risk is lower [24]. There are three mechanisms that allow for contracts to expand market power. These are restricting entry, limiting price competition, and discriminatory pricing [15].

In looking at the behavioral impact of M&A activity, it is evident that consolidation causes retailers to reduce prices given to farmers and increase prices imposed on consumers. Evidence that shows the correlation of concentration to an increase in prices to consumers is so obvious that it was directly denounced by the American Antitrust Institute [25]. Even in the case of merger remedies, a common policy tool utilized by the Federal Trade Commission (FTC), there is little proof of their ability to restore balance to market competition [26]. This heightened level of power allows for retailers to largely influence the standard logistics, tracking technologies, and bargaining strategies. Walmart's sway in the market was so powerful that it entirely shifted the industries' distribution process from relying on wholesalers and direct deliveries from producers to regional distribution centers (RDCs) and vertical integration, allowing for them to directly control everything from procurement to transportation and the sale of the product [27].

The 2014 acquisition of Safeway by Albertsons is especially significant due to the two organizations' market power at the time. As of 2001, five grocery chains accounted for 40% of grocery retail sales in the United States. These were Kroger, Albertsons, Walmart, Safeway, and Ahold USA [28]. By 2015, the top retailers' control over the market had increased to 41–52% of sales in the United States [27]. According to the FTC, the acquisition was predicted to lead to a highly competitive situation and increased price implications for consumers, causing the FTC to require the retail chains to sell 168 stores as a prerequisite of the merger [29]. The operational impacts of the merger had severe repercussions for all

suppliers that the two organizations purchased from, especially those that had an existing relationship with Safeway.

2. Materials and Methods

To gain clarity and insight into the connotations associated with M&A activity, we interviewed 19 specialty crop producers. While much of the accumulated empirical evidence lacks consensus on the effects of retail consolidation on farmers, there is an abundance of anecdotal testimonies that confirm M&A activity can have serious negative implications [30]. Our discussions with specialty crop growers further support this finding. We developed a set of nine questions for each interviewee. These are available in Appendix A. In the interest of accommodating the schedules of participants, interviewees were given the option to submit written answers, conduct the interview over the phone, or both. Our project was approved for research on human subjects by the Cal Poly Institutional Review Board, protocol number 2020-089.

Criteria set regarding participants ensured that their experience was relevant to this study. To identify potential participants, we partnered with the Western Growers Association (WGA), the trade association that represents over 600 specialty crop producers in California. Respondents comprised growers based in California that produced an extensive range of products, represented the various growing regions of the state, and were in business at the time of the 2014 acquisition. Interviews were conducted with every producer who responded to our inquiry. Approximately 5% of the available contacts to the research team via WGA completed the interview. All factors were important in ensuring that we were encompassing a wide range of perspectives, and that each participant had had ample experience regarding M&A activity of retail chains.

One of our goals is to test for evidence of findings drawn from our interviews using publicly available data. We were unable to observe farm-level microdata; therefore, we relied on publicly available data. The USDA National Agricultural Statistics Service (NASS) maintains a database of farm sector indicators organized by state, commodity, and year [31]. Given that we only observed prices and not farm costs, revenues, and profits, we investigated if the 2014 merger was associated with lower prices received and increased price volatility. Our analysis is descriptive and directional, and is unable to attribute causality to merger activity or retailer behavior. The purpose of this section is to corroborate the main findings of the previous section and to motivate future research on the topic. The specialty crops included in the USDA database that are produced by the interviewed growers include apples, asparagus, avocados, broccoli, cauliflower, celery, dates, grapes, kiwi, pears, bell peppers, chili peppers, blueberries, and strawberries.

For all commodities included in both the USDA database and the interviews, we combined annual average prices received with annual production data, measured in hundredweight (cwt). We used the production data to weight prices received by state and year, then created weighted prices received for each commodity. We then calculated production-weighted average prices received across all commodities by state and year. This allowed for us to examine variation in prices received for 2000–2020, a period that includes the 2014 Safeway–Albertsons merger, while minimizing the impact of price changes for minimally produced or niche crops within states. We used data for the 28 U.S. states that produced at least one of the commodities of interest according to the NASS data. Any states not included in analysis do not sell any of the commodities discussed in the interviews. The average state in our usable dataset produced slightly fewer than three of the included commodities per year.

We created a series of variables to measure price changes and volatility in our data. The Safeway–Albertsons merger was finalized in late 2014, and the two companies formally became one in January 2015 [32]. We calculated two variables to measure the discrete change in farm prices received at the time of the merger, 2013–2015 and 2014–2016, which are the percent changes in the weighted-average prices received between from 2013 to 2015 and 2014 to 2016, respectively. Throughout our discussion, we favor the variable measuring

changes from 2014 to 2016. We argue that this more accurately compares prices premerger to postmerger, as the merger was implemented in stores throughout 2015. The 2013 to 2015 comparison is included as an alternative to assess the robustness of the findings with respect to changes in prices received.

To measure variation throughout our analysis, we relied on the coefficient of variation (CV), calculated as the sample standard deviation divided by the sample mean. Thus, higher values imply more volatility. CV 2000–2010 and CV 2011–2020 are the CVs of average prices received, calculated for 2000–2010 and 2011–2020, respectively. The first period was exclusively premerger, while the second may reflect volatility in prices received resulting from the merger. Variable % Change *CV* is the percentage change between these two CV variables. Total Commodities is the number of commodities of interest grown by state during our period of study. Avg CV is the average commodity-level CV of prices received for 2013–2020. Total Stores is the number of supermarkets affected by the merger by state. We calculated these by searching for store locations within states using the banners involved in the merger. Lastly, Stores/1000 is the number of merger stores divided by the 2014 state population in 1000s via the U.S. Census [33]. This is a numerical representation of household access to merger stores.

Table 1 provides summary statistics for all continuous variables. Our measures of price changes and volatility exhibited substantial variation in our dataset. The price change variables ranged from moderate deflation to dramatic inflation, and CV variables ranged from almost no variation to heavy volatility. On average, prices increased more in the 2014–2016 period than in the 2013–2015 period. Overall volatility in prices received increased by an average of 36% more in the decade including the merger than those in the preceding decade. Of the 28 states, 15 sampled for our study featured no stores involved in the merger at all, which facilitated the use of a dummy variable for merger and nonmerger states, which we revisit below.

Table 1. Summary statistics for all variables used.

	Definition	Mean	St Dev	CV	Min	Max
2013–2015	% change in prices received, 2013–2015	0.07	0.21	2.87	−0.22	0.9
2014–2016	% change in prices received, 2014–2016	0.24	0.63	2.61	−0.25	3.25
CV 2000–2010	Coefficient of variation for annual prices received for the years 2000–2010	0.45	0.38	0.84	0.06	1.39
CV 2011–2020	Coefficient of variation for annual prices received for the years 2011–2020	0.40	0.27	0.69	0.02	1.07
% Change CV	% change in CV, 2000–2010 through 2011–2020	0.36	1.13	3.15	−0.84	2.47
Total Commodities	Number of studied agricultural commodities produced, by state	2.68	2.76	1.03	1	14
Avg CV	Average commodity-level CV of prices received for the years 2013–2020	0.23	0.11	0.48	0.03	0.46
Total Stores	Total merger stores, by state	51.96	145.26	2.8	0	729
Stores/1000	Total stores divided by population, in 1000s	0.01	0.01	1.83	0	0.04

Source: authors' calculations using USDA-NASS [31] and census data [33], 2000–2020.

3. Results

3.1. Evidence from Interviews with Producers

Throughout the discussion of the findings, our relatively small sample size (N = 19) means that our findings are exploratory in nature and need to be evaluated using larger datasets. While several respondents noted the potential advantages to crop producers that

M&As can bring about, almost every participant was in alignment that M&As often bring significant negative disadvantages to farmers. Of the respondents, 21% claimed that M&As had benefited them, but they were also aware that the business they had gained through the consolidation had negative effects on other farmers.

Several of the responses explained that the impact to the producer was highly contingent upon the existing relationship with one or both retailers. For example, when one of the two retail parties was not a customer, the merger created a new opportunity for expansion. Conversely, this situation creates an opportunity for loss if the retailers decide to consolidate the number of suppliers they purchase from. If the supplier had an existing relationship with both retailers, it often has a negative effect, causing a reduction in price received or account size. In the case of no existing relationship, it creates an even higher barrier to sell to the new larger buyer.

The responses indicated that producers that had experienced growth from M&A activity had allocated much of their revenue share (>60%) to the retail/grocery marketing channel. No matter the scenario, mergers can create new business expansion for some—but overall limits the number of suppliers retailers buy from which results in an overwhelming loss of business for many farmers.

As indicated in Table 2, responses regarding perspectives on the 2014 Safeway–Albertsons merger indicated that many suppliers were either directly hurt by the acquisition or were aware of others that had been negatively impacted. Leading up to Albertsons acquiring Safeway, both chains bought multiple smaller retailers. Suppliers that were selling to the smaller chains involved in the acquisition often lost business, even up to 40% of their retail program. While the merger created uncertainty for most, it did allow for several suppliers to grow their business due to the new ability to separately market or sell to retail divisions. Some respondents noted that Safeway's priority was finding lower-priced suppliers; for example, farmers located in the Santa Maria area, whose prices are lower than those of Salinas Valley suppliers on average, were more closely affected. Collected data support this claim. Responses from growers located in Santa Maria were neutral regarding receiving lower prices following the 2014 acquisition, while responses from growers located in the Salinas Valley indicated a negative impact regarding prices received following the acquisition. Due to the small sample size, there were insufficient data to explore geographical factors. Additional regional data would allow for further understanding the role that location plays in the impact to farmers.

Table 2. Summary of grower shipper responses collected in 2021.

Share of Respondents	M&A Activity as a Whole	Albertsons Acquisition of Safeway	Prices Received Following the Acquisition
Indicated Negative Impact	89%	32%	58%
Indicated Neutral/No Impact	5%	58%	37%
Indicated Positive Impact	21%	11%	0%

Note: Shares based on 19 interviews conducted with grower shippers. Columns do not add up to 1 because respondents were allowed to share holistic experiences, which included a variety of connotations. For example, respondents may have indicated that M&A activity yields both positive and negative impacts.

Table 3 breaks down the factors or impacts of M&A activity identified by respondents as evident and significant. The results show that a majority of respondents noted negative impacts or decreases in prices received from the Albertsons/Safeway chain following the 2014 acquisition. Several respondents listed rapid cost increases to farmers as a more harmful factor than actual drops in price received for a product. Looking at the ratio of change in costs to suppliers to price received from buyers to calculate profit margins for farmers would be a clear next step in future research.

Table 3. Summary of grower shipper responses on MA impacts.

Share of Respondents	Lower Prices Received	Greater Uncertainty	Stricter Buyer Requirements	Other Factors
Indicated as a Factor	41%	24%	53%	82%
Indicated as Most Important Factor	22%	6%	33%	39%

Note: Shares reported based on 19 interviews conducted with grower shippers. Values in the first row do not add up to one because respondents were allowed to list as many factors as were relevant.

While lower prices received was an area of interest for this research, there are other harmful factors that are necessary to observe to holistically understand the influence of M&A activity. Greater uncertainty and stringent requirements set by buyers can be equally damaging to a grower. Over half of the respondents indicated stricter requirements as a noteworthy factor, with 33% of respondents indicating it as the most important one. A majority of respondents listed an array of factors outside of the ones referred to in the table above, expressing the need for a comprehensive range of supporting data to fully understand the ramifications of M&A activity.

3.2. Evidence from USDA Farm Price Data

As shown in Table 1, our measures of price changes and volatility exhibit substantial variation in our dataset. The price change variables ranged from moderate deflation to dramatic inflation, and CV variables ranged from almost no variation to heavy volatility. On average, prices increased more in the 2014–2016 period than in the 2013–2015 period. Across states, overall volatility in prices received increased by an average of 36% between the decade preceding the merger and the decade involving the merger (% Change CV). Of the 28 states sampled for our study, 15 featured no stores involved in the merger at all, which facilitated the use of a dummy variable for merger and nonmerger states, which we revisit below.

Table 4 shows correlations calculated among these variables and using all 28 states. In many cases, the signs of the correlation coefficients conform to our expectations, as drawn from the interviews with growers. Correlations between 2014–2016, and both Total Stores and Stores/1000 are negative, meaning that average prices received for the specialty crops of interest fell between the last full calendar year premerger and the first full operational year of the merger. Many food categories experienced deflation in 2016, but this decrease in average prices received runs counter to national price indexes for this time period. The Bureau of Labor Statistics Producer Price Index (PPI) [34] series measures prices received within the supply chain, upstream from customers. Between 2014 and 2016, the Fresh Fruits and Melons PPI increased by 11%, and the Fresh Vegetables, no Potatoes PPI increased by 9%. Nationwide farm prices for fruits and vegetables, therefore, increased during our study period.

We also calculated several correlations that suggest an association between the merger and price volatility. The correlation between Stores/1000 and % Change CV is positive, meaning that higher store counts per capita are associated with a greater increase in price volatility, comparing the decade premerger with the decade in which the merger occurred. The correlation between Stores/1000 and Avg CV is also positive, meaning that prices received for commodities included in our study were more volatile, on average, in states with a greater presence of stores affected by the merger.

Table 4. Correlation coefficients for all continuous variables.

	2013–2015	2014–2016	CV 2000–2010	CV 2011–2020	% Change CV	Total Commodities	Avg CV	Total Stores	Stores/1000
2013–2015	1.00								
2014–2016	−0.02	1.00							
CV 2000–2010	0.11	0.13	1.00						
CV 2011–2020	0.16	0.47	0.41	1.00					
% Change CV	−0.01	0.07	−0.53	0.35	1.00				
Total Commodities	0.25	−0.13	0.19	0.00	−0.17	1.00			
Avg CV	0.20	0.44	0.09	0.39	0.23	0.41	1.00		
Total Stores	0.16	−0.04	0.11	−0.11	−0.05	0.85	0.27	1.00	
Stores/1000	0.17	−0.02	−0.07	0.02	0.35	0.40	0.29	0.56	1.00

Source: authors' calculations using USDA and census data, 2000–2020.

Although historical price spread and farm share data indicate important differences between fruits and vegetables, we do not have enough commodity–state combinations in our data to calculate correlations separately for fruits and vegetables. Instead, we calculated averages across states for 2013–2015, 2014–2016, and Avg CV for fruits and vegetables, and separately for states with and without merger stores. The averages are visualized in Figure 2. The findings in this respect are mixed. Vegetable prices saw significantly stronger price increases as measured by both 2013–2015 and 2014–2016, which may suggest that the merger played a role in depressing prices received for growers. However, volatility was also much higher for nonmerger states, as evidenced by Avg CV. Fruit price increases were dramatically higher in nonmerger states, compared to those affected by the merger, between 2014 and 2016. However, this finding is another case in which the period during which we observe the price increases affects our findings significantly, as the case is reversed for 2013–2015. Average volatility was slightly higher for fruit prices in merger states.

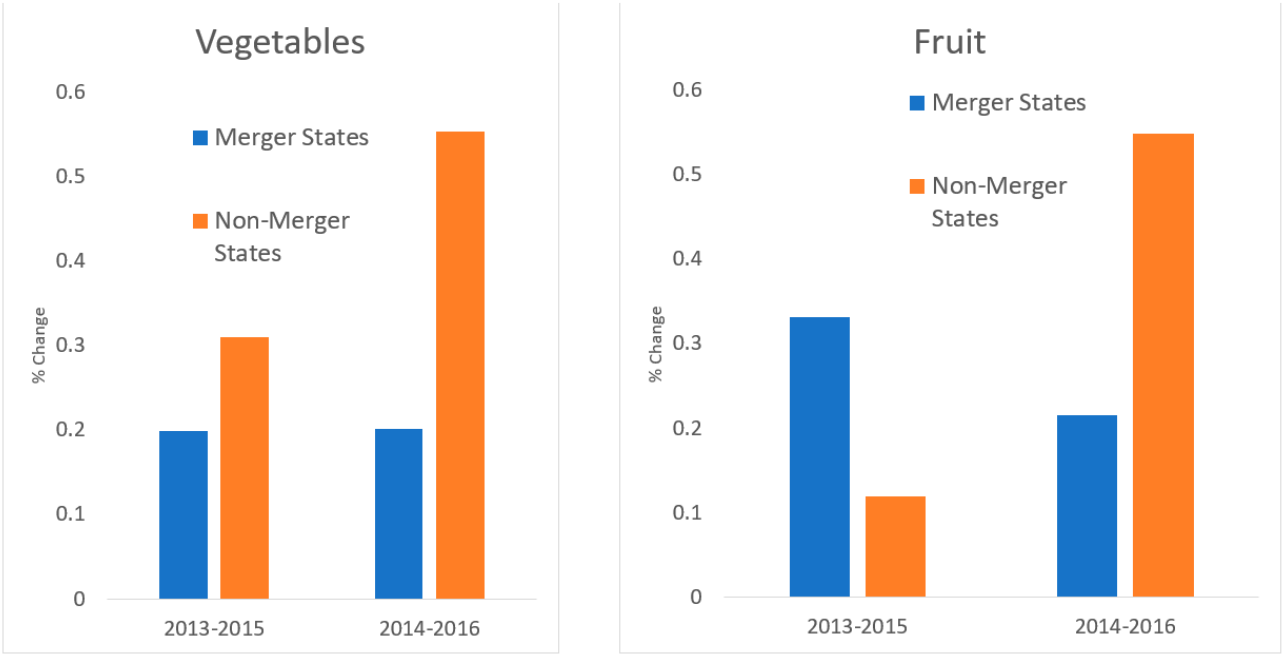

Figure 2. Averages for selected price variables, calculated separately for fruits and vegetables. Source: authors' calculations using USDA and census data, 2000–2020.

4. Discussion

Regarding operational transitions resulting from the consolidation, farmers that had existing relationships with Safeway noted significant changes. The merger had obvious impacts to processes and protocols that suppliers needed to follow. Safeway transitioned

from having a national buying office that serviced all divisions to the divided structure of Albertsons, in which each division handled their own purchasing, creating a disbursement of people that each supplier needed to work with to sell multiple types of crops to the same organization. There was an entirely new way of doing business with the same organization. Some felt as though processes were streamlined and normalized after the merger, specifically when looking at the transition of working with the Albertsons chain before and after. Several respondents are still experiencing impacts from the merger. These respondents noted misalignment among the divisions which caused complications in building relationships with the organizations.

We investigated the differences in growers that produced fruits versus vegetables. Because many of the respondents produced both fruit and vegetable crops, there were no distinct discrepancies between the responses captured. Expanding the survey to encompass growers that specialized in either sector would provide clarity into the premise addressed earlier in this paper, that vegetable producers are more impacted from M&A activity in the form of an increase of farm-to-retail price spreads.

When approaching the survey responses from a comprehensive perspective, it is evident that most farmers have negative associations with M&As because they limit the farmers' choice and give unequal power to the buyer. The suppliers that were able to speak to the impacts of the Albertsons and Safeway acquisition felt that it had caused either some level of uncertainty with demand prices received or operational decentralization. The few that indicated that they had seen positive effects acknowledged that any business gained meant business lost for another. It is likely that M&A activity imposes harmful factors beyond a decrease in prices received, such as fluctuations in buying requirements and added costs to the farmers.

Our work with USDA price data is unable to identify impacts owing specifically to the Safeway–Albertsons merger. However, results based on that analysis broadly corroborate the modal findings of the interviews with producers. Moreover, they suggest the possibility that, on average, the merger was associated with lower price received and greater price uncertainty. Both outcomes adversely affect specialty crop growers and are consistent with the generalizations drawn from our interviews with growers in California. The findings motivate further study of this phenomenon, using farm-level indicators and controlling for external factors that could also drive price changes, including costs, demand changes, and marketing channels.

5. Conclusions

This study explores the impacts of a major supermarket merger on upstream specialty crop producers. We undertook a two-part analysis to investigate the issue, focusing on the 2014 merger between Albertsons and Safeway. Our qualitative analysis based on 19 interviews with specialty crop producers revealed that growers typically view M&A activity among buyers unfavorably. Mergers regularly result in uncertainty, lower prices, decreased revenues, lower profitability, higher transaction costs, and more restrictions and requirements required of growers and shippers. Several respondents indicated that the impacts resulting from M&A events can last for years or even indefinitely.

We also analyzed USDA NASS data on farm sector indicators, specifically average prices received. Our work in this respect is exploratory, and we were unable to establish causal impacts of the Safeway–Albertsons merger. We calculated and analyzed production-weighted average prices received across commodities for 28 U.S. states. Results indicated that states featuring supermarkets involved in the merger in many cases saw lower prices received and higher price volatility than those distinct from the merger. Both findings were in line with expectations on the basis of our interviews with growers.

Our study is subject to multiple limitations and, as a result, we are unable to establish causality with any of our findings. The sample size of interviewed growers was relatively small, and they are all located in California. USDA state-level data are not granular enough to measure indicators for individual farms nor to identify impacts owing directly to the

merger in question. Our qualitative and quantitative approaches both cannot speak to crop-specific impacts. Lastly, we are unable to measure impacts separately by farm size or type.

Market concentration in food retail garners significant attention in the academic literature, trade association publications, and the popular press, particularly when M&A events are announced. To our knowledge and understanding, much of the interest in market concentration and M&A events centers on food prices and impacts on consumers. Our study is intended to highlight and investigate the potential economic impacts on the upstream production sector, and one of our major objectives is to motivate and inform future research on this topic, which has received limited scholarly attention, to date.

Future research on this topic could investigate a broader set of M&A events in food retail and wholesaling to develop generalized facts about upstream economic impacts. Farm-level data would facilitate research on the impacts of M&A activity on farm revenues, profits, and prices received. Larger and more granular data would also allow for the testing of impacts that may vary geographically or by agricultural commodity.

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Appendix A. Interview Questions

(1) What are the agricultural commodities that you produce and/or ship?
(2) What are the primary marketing channels for your commodities? We are primarily interested in grocery, food services, institutional sales, and direct-to-consumer. If you utilize additional marketing channels, please feel free to describe them.
(3) What are the approximate revenue shares of each marketing channel for your operation? If the revenue shares vary importantly by commodity, please share that information if you are able.
(4) Do you have a general opinion on the nature of retail mergers and acquisitions and how they affect your operations?

(5) Can you speak at all about operations during the time of the merger between Safeway and Albertsons in 2014? Were you aware of any other merger activity pertaining to the buyers of your commodities between the years 2010 and 2020? If so, which events?
(6) Have you seen any important or significant changes in the buyers of your commodities between 2010 and 2020? Have any of your major accounts changed hands? Please do not identify any company names.
(7) Did the prices you receive for your commodities, particularly those sold to the grocery channel, change discernibly following any mergers of which you were aware? Please comment specifically on the Safeway/Albertsons merger of 2014 if applicable. If yes, did you receive prices that were more or less favorable?
(8) Did you perceive a change in your transaction costs, particularly for sales to the grocery channel, following any mergers of which you were aware? Please comment specifically on the Safeway/Albertsons merger of 2014 if applicable. If yes, did transactions become simpler or more complex? Did the time associated with transactions increase or decrease? Any information in this regard is useful.
(9) Did your buyers, particularly those in the grocery channel, change their demands substantively following any mergers of which you were aware? Please comment specifically on the Safeway/Albertsons merger of 2014 if applicable. If yes, did total quantities demanded change? Did the commodity mix demanded change? Were increased requirements placed on your production process?

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