



Essential but Excluded: Undocumented Farmworkers and the Structural Foundations of Food Security in California

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Abstract: This dissertation investigates the role of undocumented farmworkers in sustaining food security in California, a state that produces a substantial share of the United States' fruits, vegetables, and specialty crops. Despite their central contribution to agricultural productivity, undocumented farmworkers experience persistent legal, economic, and social vulnerabilities that threaten both worker well-being and the resilience of the food system. Drawing on qualitative interviews with farm owners and stakeholders, economic and market analyses, and an extensive review of food security and labor policy literature, this study examines how undocumented labor supports food affordability while simultaneously absorbing structural risks within the agricultural economy. The findings demonstrate that undocumented farmworkers are essential to preventing labor shortages and stabilizing food prices, yet they face disproportionately high levels of food insecurity, exclusion from social safety nets, and hazardous working conditions. Immigration enforcement and policy uncertainty further exacerbate supply-chain fragility. This study concludes that sustainable food security in California requires policy interventions that integrate immigration reform, labor protections, and long-term agricultural sustainability. Addressing these issues is essential not only for farmworker equity but also for the stability of regional and national food systems.

Keywords: Food security, undocumented labor, agricultural workforce, food prices, labor shortages, immigration policy, supply chain stability.

INTRODUCTION

Food security remains a fundamental pillar of social stability, public health, and economic resilience. In the United States, California occupies a uniquely influential position in this domain, producing a substantial proportion of the nation's fruits, vegetables, and specialty crops. The state's agricultural success, however, is deeply dependent on the labor of undocumented farmworkers who perform physically demanding, low-paid, and often hazardous work under conditions of legal and social precarity. Despite their indispensable role in sustaining the food supply, undocumented farmworkers remain among the most food-insecure populations in the state. This paradox underscores a critical structural contradiction within California's food system—one in which those who harvest and supply food for millions experience persistent economic vulnerability and limited access to basic protections.

The COVID-19 pandemic exposed and intensified existing weaknesses in California's agricultural labor system. Disruptions in supply chains, labor shortages, workplace health risks, and rising food prices revealed how heavily food security depends on a workforce that is largely excluded from formal labor protections and public safety nets. While undocumented farmworkers were classified as "essential workers," they were simultaneously excluded from many forms of economic relief, unemployment insurance, and

federally funded nutrition assistance. These conditions heightened food insecurity among farmworker households and increased systemic risks to agricultural productivity and food affordability statewide.

This dissertation examines the role of undocumented farmworkers in maintaining food security in California, with particular attention to the economic, social, and policy structures that shape their labor conditions and access to food. The study adopts an interdisciplinary framework that integrates food security theory, labor economics, immigration policy analysis, and qualitative field research. Through interviews with farm owners and agricultural stakeholders in California's Central Valley, combined with market analysis and a comprehensive review of existing literature, this research assesses how undocumented labor contributes to food system stability while simultaneously absorbing structural risks generated by immigration enforcement, labor precarity, and policy exclusion.

The central argument of this dissertation is that California's food security is inseparable from the legal and economic conditions of undocumented farmworkers. The reliance on undocumented labor stabilizes food prices and ensures agricultural output, yet it does so by externalizing costs onto workers and their families. Immigration enforcement practices, wage suppression, and exclusion from social protections not only exacerbate food insecurity among farmworkers but also threaten the long-term sustainability of the food system itself. Labor disruptions—whether through deportation, heightened enforcement, or health crises—have the potential to produce cascading effects, including labor shortages, price volatility, and reduced access to affordable food for low-income populations.

This study contributes to scholarly and policy debates by reframing undocumented farmworkers not as peripheral or replaceable labor inputs, but as central actors in the production of food security. By situating farmworker labor within broader discussions of agricultural sustainability, economic justice, and human rights, the dissertation challenges dominant narratives that separate immigration policy from food policy. It argues that meaningful solutions to food insecurity must address structural inequities within the agricultural labor system, including pathways to legal status, strengthened labor protections, and inclusive social safety nets.

The chapters that follow build on this foundation. Chapter 2 reviews the historical and theoretical literature on food security, undocumented labor, and agricultural systems. Chapter 3 outlines the research methodology and data sources. Chapters 4 through 6 present the economic, market, and qualitative findings. Chapter 7 discusses policy implications and recommendations, and Chapter 8 concludes with directions for future research. Together, these chapters advance the claim that sustainable food security in California—and by extension the United States—depends on recognizing and addressing the structural vulnerabilities of the undocumented workforce that sustains it.

Statement of the Problem

This study examines the role of undocumented farmworkers in sustaining food security in California and the structural factors that shape their labor conditions, food access, and economic vulnerability. Specifically, it asks:

1. What are the demographic, employment, and household characteristics of undocumented farmworkers in California's agricultural sector?
2. What is the extent of undocumented farmworkers' contribution to food production, labor-intensive crop harvesting, and food price stability in California?
3. What economic, legal, and social challenges (e.g., immigration status, labor conditions, wage levels, access to benefits) affect undocumented farmworkers' food security?
4. How do immigration enforcement practices and labor precarity influence food system stability, supply disruptions, and food affordability?
5. What evidence-based policy and labor interventions can strengthen food security while improving protections and equity for undocumented farmworkers?

LITERATURE REVIEW

Food Security as a Human Right

Food is a fundamental human necessity and a recognized human right. Food security is commonly defined as a condition in which “all people, at all times, have physical and economic access to sufficient, safe, and nutritious food that meets their dietary needs and food preferences for an active and healthy life” (Correa, 2018). Food insecurity, by contrast, refers to a household-level economic and social condition characterized by limited or uncertain access to adequate food. Individuals experiencing food insecurity may face insufficient food supply, barriers to affordability, or structural constraints that restrict access to safe and nutritious food.

In the United States, food insecurity is unevenly distributed across populations and regions. Urban food deserts and low-access areas remain persistent challenges, particularly for low-income communities. Reports indicate that more than 17 million Americans live in low-income, low-access neighborhoods where grocery stores, farmers' markets, and healthy food outlets are scarce. Research has consistently shown that food insecurity disproportionately affects Latino and African American populations, reflecting broader patterns of racial and economic inequality. In California, major metropolitan areas such as Los Angeles, Sacramento, and San Francisco continue to experience high levels of food insecurity despite proximity to agricultural production.

Paradoxically, California—one of the most agriculturally productive regions in the world—exhibits persistent food insecurity among both consumers and the agricultural labor force itself. The state produces approximately 400 agricultural commodities and accounts for the vast majority of U.S. production of grapes, olives, and numerous fruits and vegetables. Agriculture employs more than one million workers statewide and is heavily dependent on undocumented farmworkers. Despite paying taxes, including contributions to Social Security, undocumented farmworkers remain largely excluded from public benefits and labor protections. Their labor sustains food production “from farm to table,” yet their contributions remain socially and economically invisible. This structural invisibility has prompted scholars to argue for alternative frameworks such as food sovereignty zones, which emphasize local empowerment, worker rights, and community-based food systems. A

growing body of literature calls for a broader global consciousness that connects consumers to the labor conditions underpinning food production.

Historical Context of Undocumented Farmworkers in California

The reliance on marginalized and racialized labor in California agriculture has deep historical roots. In the late nineteenth century, Chinese laborers were recruited in large numbers to work in agriculture and infrastructure development. Despite their economic contributions, they were subjected to intense hostility and discriminatory legislation. The Naturalization Act of 1870 barred Chinese immigrants from citizenship, and labor unions increasingly portrayed Chinese workers as threats due to their willingness to accept low wages. This racialized backlash culminated in the Chinese Exclusion Act of 1882, which prohibited Chinese labor immigration and was repeatedly extended until Chinese immigration was effectively banned by 1902 (Correa, 2018). Ironically, exclusionary policies created a permanently exploitable labor class, as agricultural employers benefited from workers who lacked legal protections and political rights.

Following the decline of Chinese labor, agricultural employers turned to other racialized groups, including Black laborers, who were similarly subjected to exclusion and discrimination. By the mid-twentieth century, labor shortages during World War II led to the establishment of the Bracero Program, under which Mexican workers were recruited as temporary “guest workers.” Between 1942 and 1964, more than 200,000 braceros labored in California agriculture under contracts that limited their rights and mobility. Although the program temporarily alleviated labor shortages, its termination in 1966 coincided with structural changes in agriculture and the decline of the Green Revolution. As temporary labor pathways closed, Mexican migration increasingly became permanent, laying the groundwork for today’s undocumented agricultural workforce.

Economic Contributions of Undocumented Workers in Agriculture

The economic contributions of undocumented farmworkers are central to California’s agricultural economy. Without undocumented labor, the state’s agricultural system would face severe disruption (Schulz, 2016). California produces nearly half of the nation’s fruits, vegetables, and nuts, and the majority of these crops require labor-intensive, hand-harvested work. Estimates suggest that approximately 1.2 million of the 2.6 million workers employed in California’s agriculture, forestry, and fishing sectors are unauthorized immigrants. Beyond fieldwork, undocumented workers are employed in food processing, animal care, and distribution, contributing to an integrated food system that generates substantial economic value.

Undocumented farmworkers contribute not only through labor but also through fiscal participation. In 2022, undocumented immigrants in California paid an estimated \$8.5 billion in state and local taxes, while nationally they contributed approximately \$96.7 billion in federal, state, and local taxes. These contributions underscore the contradiction between economic participation and political exclusion. Scholars warn that large-scale labor disruptions—whether through intensified enforcement, mass deportation, or public health crises—could result in catastrophic impacts on food supply chains, rural economies, and consumer prices. Scenarios such as workforce exodus, disease-related movement

restrictions, or sudden enforcement surges pose significant threats not only to agricultural production but also to farmworker livelihoods and community stability.

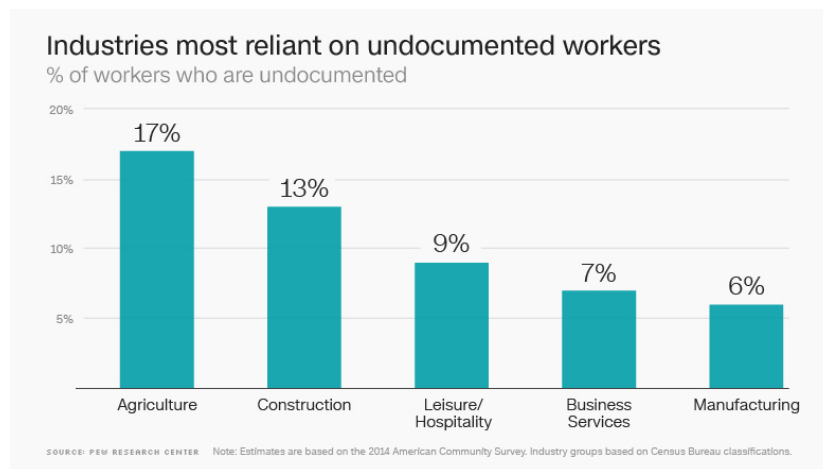


Figure 1: Industries Most Reliant on Undocumented Workers in the United States.

Note. The figure shows the percentage of workers who are undocumented across selected industries, with agriculture exhibiting the highest reliance. Data are based on estimates from the 2014 American Community Survey and industry classifications from the U.S. Census Bureau. Source: Pew Research Center.

Food Security and Agricultural Labor

Food security is intrinsically linked to agricultural labor. While food security is often analyzed in terms of production, distribution, and consumption, labor constitutes a foundational input across the entire food supply chain. From planting and harvesting to processing and retail, agricultural labor enables food to move from fields to consumers. However, the relationship between agricultural labor and food security is paradoxical. While labor sustains food availability, the conditions under which agricultural labor is performed often generate food insecurity among workers themselves. Agricultural labor is characterized by long working hours, physically demanding conditions, and low wages. Wage rates are frequently constrained by poverty-level benchmarks rather than living-wage standards, contributing to household food insecurity. Research shows that agricultural laborers face significant barriers to accessing food, including irregular work schedules, geographic isolation, and limited access to social safety nets. Household-level dynamics further compound these challenges, as increased labor demands on male workers have been associated with higher rates of maternal and household food insecurity. These patterns illustrate how labor conditions in agriculture not only reflect but also reproduce broader food security challenges at the national level.

The Situation in California

California has long been recognized as the nation's agricultural leader, a status rooted in both Indigenous land stewardship and later colonial and industrial agricultural development. Modern commercial agriculture expanded rapidly during the nineteenth and twentieth

centuries, supported by irrigation, mechanization, and scientific advances associated with the Green Revolution.

Today, California dominates U.S. production of specialty crops, including fruits, nuts, vegetables, and wine, generating billions of dollars annually in agricultural revenue (Correa, 2018). Despite this productivity, agricultural work remains among the most dangerous and lowest-paid forms of employment in the state. Cultural norms, political dynamics, labor subcontracting practices, and ecological pressures have converged to normalize risk and precarity in farm labor. Undocumented workers are overrepresented in these roles, and safety-related work absences—often necessary to prevent injury or illness—can have devastating consequences for household food access. As a result, food insecurity persists even in regions surrounded by agricultural abundance, particularly within Latinx communities.

Overview of Agriculture in California

California is one of the most extensive agricultural regions in the developed world. The state reports more than 77,000 farms covering approximately 25 million acres, representing about one-fifth of California's total land area. California produces roughly 77% of U.S. grapes and dominates production of more than 40 agricultural commodities. Census data indicate that the state employs hundreds of thousands of farmworkers annually, with millions more classified as migrant or seasonal workers. Farm employment in California is increasingly characterized by labor subcontracting, off-farm income supplementation, and reliance on undocumented workers. Estimates suggest that up to 70% of farm employees in California lack legal immigration status, while approximately half are employed through labor contractors. These dynamics reflect a broader agricultural model that depends on a workforce operating under legally exploitable conditions, shaping the future of food production and labor relations in the state.

Extent of Undocumented Farmworkers in California

Estimating the number of undocumented farmworkers presents methodological challenges due to data limitations. The National Agricultural Worker Survey (NAWS), administered by the U.S. Department of Labor, remains the primary longitudinal dataset used to assess hired crop workers (Correa, 2018).

However, NAWS excludes certain worker categories, including those employed under H-2A temporary visas, and does not directly inquire about immigration status to avoid response bias and fear of deportation. These limitations likely result in underestimation of undocumented labor participation. Despite these constraints, NAWS and related analyses suggest that undocumented workers have comprised up to half of California's farm labor force in certain periods. Meta-analyses conducted by Mathematica Policy Research acknowledge the survey's limitations while affirming its value as the most comprehensive available dataset on agricultural labor. Taken together, existing evidence confirms that undocumented farmworkers constitute a structurally significant and persistently vulnerable segment of California's agricultural workforce.

METHODOLOGY

Research Design

This study employed a descriptive mixed-methods design to examine the role of undocumented farmworkers in sustaining food security in California. Quantitative components focused on describing labor contributions, economic impacts, and food system indicators using secondary data and structured analytic frameworks, while qualitative components consisted of semi-structured interviews with farm owners and agricultural stakeholders. This design supports methodological triangulation, allowing economic and market analyses to be contextualized through lived and institutional perspectives within California's agricultural sector.

Participants of the Study

Participants consisted of farm owners, agricultural employers, and key stakeholders involved in food production and labor management in California's Central Valley. A purposive sampling strategy was used to select participants representing diverse farm sizes, crop types, and geographic locations. A total of twenty-two ($N = 22$) participants were included: farm owners/operators ($n = 14$), labor contractors or supervisors ($n = 4$), and agricultural organization or community stakeholders ($n = 4$). Participants had between 6 and 41 years of experience in agriculture, providing longitudinal insight into labor dynamics and food system changes.

Instrumentation

Data collection instruments included:

- A structured data extraction matrix for compiling secondary data on agricultural output, labor force composition, food prices, and policy indicators; and
- A semi-structured interview guide designed to elicit information on labor reliance, undocumented workforce dynamics, labor shortages, policy impacts, and perceived links between labor stability and food security.
- Interview questions were open-ended to allow participants to elaborate on experiences and observations while maintaining consistency across interviews.

Data Gathering Procedure

Institutional permission and ethical clearance were obtained prior to data collection. Secondary data were gathered from publicly available government, industry, and academic sources. Qualitative interviews were conducted in person or via secure video conferencing over a three-month period. Participation was voluntary, informed consent was obtained, and all interviews were conducted confidentially. Identifying information was removed during transcription, and all data were securely stored in password-protected files accessible only to the researcher.

Data Analysis

Quantitative data were analyzed using descriptive statistics to summarize labor force characteristics, production levels, and price indicators relevant to food security. Qualitative interview data were analyzed using thematic analysis, involving coding, categorization, and theme development to identify recurring patterns related to labor dependency, policy effects, and food system vulnerability. Findings from quantitative and qualitative analyses were triangulated to enhance validity, consistency, and interpretive depth.

RESULTS AND DISCUSSION

Demographic Profile of Respondents

Because the qualitative component relied on semi-structured interviews with agricultural decision-makers, respondents were grouped by role in the agricultural supply chain (farm ownership/operations vs. labor management vs. stakeholder roles). Interviews were conducted in summer 2023, in person or by video conference, and ranged from 29 to 83 minutes.

Table 1: Distribution of Respondent Roles (N = 22)

Role	Frequency	Percentage
Farm owners/operators	14	63.6%
Labor contractors/supervisors	4	18.2%
Agricultural organization/community stakeholders	4	18.2%

Note: N = 22 respondents across farm ownership, labor management, and stakeholder roles.

Note. Proportional distribution by role.

California Farm Labor Context

Before presenting interview themes and market findings, the study situates the workforce context using established secondary indicators. NAWS-based estimates cited in the thesis indicate that California's farm labor force is largely immigrant and includes a substantial undocumented share (e.g., 93% foreign-born and 54% undocumented). These figures frame why changes in immigration enforcement or labor availability can plausibly translate into food supply instability and price pressures.

Food-System Reliance and Vulnerability Indicators

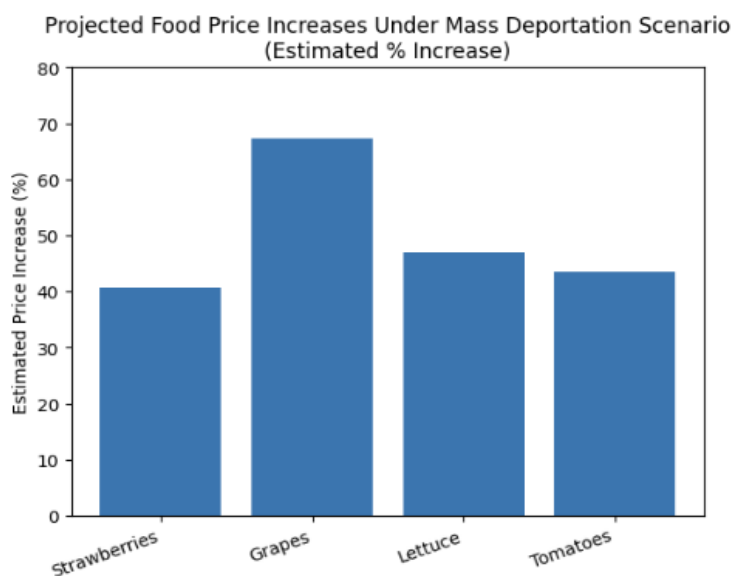
Instead of "compliance domains" (as in clinical IPC studies), this dissertation reports **food-security relevant indicators** aligned with the mixed-methods design: (a) labor reliance, (b) price/affordability sensitivity, (c) supply continuity risk, (d) worker welfare/food insecurity, and (e) policy sensitivity.

Food-System Reliance and Vulnerability (Evidence Summary)

Table 2: Food-System Vulnerability by Dimension (Qualitative-Quantitative Synthesis)

Dimension	Key Quantitative/Documented Evidence	Interpretation
Labor reliance on undocumented workforce	NAWS-based framing indicates a large undocumented workforce share and that less than 10% of agricultural workers are documented in the market model assumptions.	High reliance
Retail price dispersion for vegetables	2023 retail visits show large within-region dispersion (e.g., kale \$0.99-\$5.99) and systematic differences by store type; independent stores averaged ~20% lower; Asian supermarkets were consistently lowest for most vegetables assessed.	Highly variable affordability
Projected price shock under mass deportation	Estimated price increases under removal of undocumented workers include strawberries +40.6%, grapes +67.4%, lettuce +46.9%, tomatoes +43.6.	High price volatility risk
Supply-chain exposure to labor shocks	The thesis links undocumented farmworker mortality and systemic shocks to fragility in key production regions and food systems.	System fragility
Policy leverage points	Policy recommendations emphasize legal status, wages/conditions, contracting oversight, and enforcement capacity as key stabilizers.	Actionable policy pathways

Note: Highest vulnerability appears in deportation-linked price shocks and labor reliance; affordability varies markedly by retailer type and region.

**Figure 2: Projected Food Price Increases Under a Mass Deportation Scenario (Estimated % Increase).**

Note: Values reflect estimated price increases under removal of undocumented farm labor: strawberries (+40.6%), grapes (+67.4%), lettuce (+46.9%), and tomatoes (+43.6%).

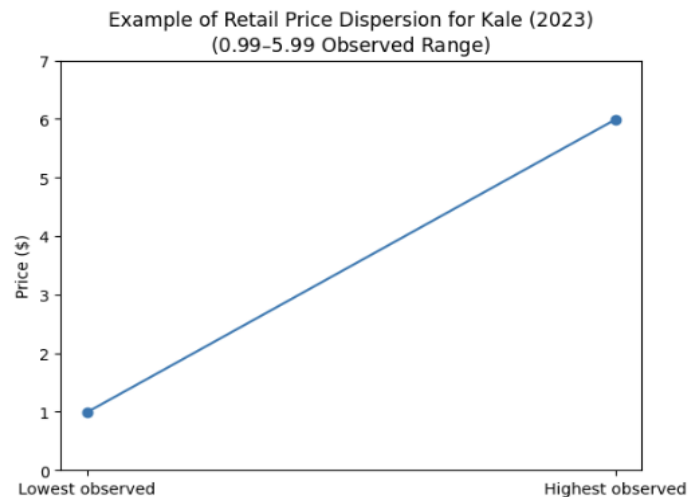


Figure 3: Example of Retail Price Dispersion for Kale (2023 Observed Range).

Note: Illustrates the observed retail price range for kale (\$0.99–\$5.99) reported in 2023 retail visits.

Qualitative Results: Thematic Analysis of Interviews

Interview transcripts were analyzed using open coding to identify recurring patterns and overlapping themes. The themes below are presented as **Results + Discussion** to show (a) what respondents reported and (b) how the findings explain the quantitative and market evidence.

Theme 1: “Undocumented labor is operationally indispensable” (Harvest continuity and labor intensity)

Result: Across farm-owner and labor-management interviews, respondents consistently described undocumented workers as central to performing time-sensitive, labor-intensive tasks—particularly harvesting and field operations that cannot be delayed without losses. This aligns with the thesis’s conclusion that without undocumented farmworkers, food would not be “harvested, processed, or served” across parts of the supply chain.

Discussion: This theme directly supports the macro-level labor reliance indicators (e.g., NAWS-based estimates of a large undocumented share).

When labor is concentrated in a legally vulnerable workforce, the system effectively “outsources” continuity risk to workers—meaning the food system’s stability depends on the ongoing availability of a group facing heightened constraints and uncertainty.

Theme 2: “Risk is structurally transferred to workers” (Food insecurity paradox)

Result: Respondents (especially stakeholder participants) described a persistent paradox: the workforce ensuring food availability and affordability remains economically insecure, with limited access to protections and support. The thesis explicitly frames this contradiction—farmworkers are essential yet excluded in ways that increase vulnerability.

Discussion: This finding is consistent with the broader argument that food security strategies are incomplete when they ignore social inequities in agricultural labor.

The implication is that California's food security cannot be treated purely as an output-and-price problem; it is also a labor-rights and household welfare problem.

Theme 3: “Enforcement and policy uncertainty create measurable fragility” (Labor availability, churn, and supply disruption)

Result: Respondents described policy uncertainty and enforcement pressure as drivers of labor instability (e.g., workers avoiding visibility, increased turnover, fear-driven mobility). The thesis documents how vulnerability intensifies under shocks and highlights the importance of legal protections and status.

Discussion: This theme helps explain why deportation-based scenarios produce large projected price shocks.

If the labor supply contracts suddenly, perishable crop harvesting declines, and supply tightens quickly—an especially strong mechanism for labor-intensive commodities (e.g., berries, leafy greens, tomatoes).

Theme 4: “Retail affordability is uneven—store type matters” (Food access varies even before policy shocks)

Result: The market analysis documented strong price dispersion for vegetables and systematic differences by retailer type (independent and Asian supermarkets cheaper; some chains higher).

Discussion: This matters for food security because it suggests that **baseline access** already depends on consumers' proximity to lower-cost retailers and culturally oriented markets. Even without a labor shock, many households face an uneven affordability landscape.

Under deportation/labor-disruption scenarios, the burden would likely concentrate further on low-income households, consistent with the thesis claim that such price increases could “eliminate access” for many low-income families.

Theme 5: “Policy solutions must target both short-term stabilization and long-term sustainability”

Result: The thesis outlines immediate needs (legal status, wages, working conditions) and longer-term reforms (labor contracting oversight, wage indexing, housing quality, enforcement of standards, and structured legal immigration pathways).

Discussion: The interview synthesis supports a two-level policy logic:

1. **Stabilize the existing workforce** (reduce fear-driven disruptions; improve retention; increase safety and household stability), and
2. **Reduce structural dependence on exploitability** by creating lawful pathways and improving labor-market institutions.

This is consistent with the dissertation's framing that sustainability cannot be achieved by focusing only on environmental/food safety outcomes while neglecting labor inequities.

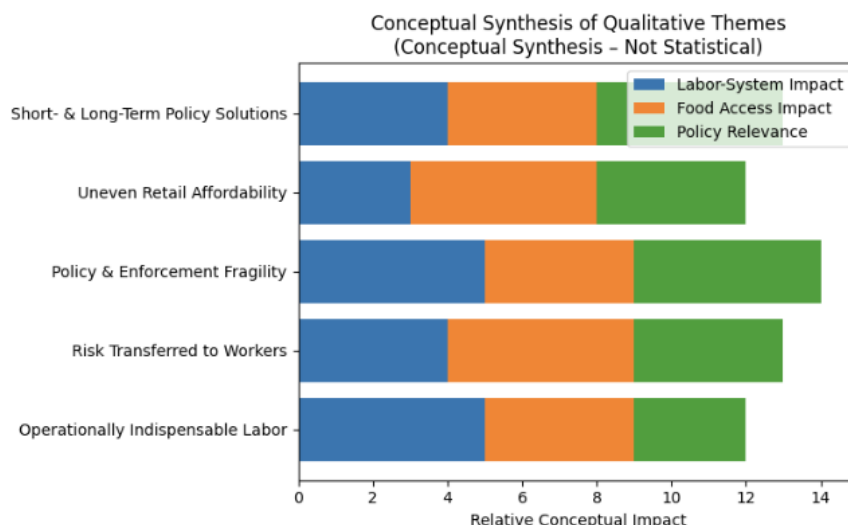


Figure 4: Conceptual Synthesis of Qualitative Themes (Conceptual Synthesis - Not Statistical)

Note: The figure presents a visual synthesis of qualitative themes derived from interview analysis. Bar segments represent relative conceptual impact across labor-system stability, food access, and policy relevance. Values are illustrative and reflect analytic weighting based on thematic convergence rather than statistical measurement.

Integrated Discussion: What the Mixed-Methods Evidence Shows

When the quantitative indicators and qualitative findings are examined together, the evidence converges on three interrelated conclusions that illuminate the structural foundations of food security in California. First, the study demonstrates that California's heavy reliance on undocumented farm labor is not merely a descriptive characteristic of the agricultural workforce but a substantive source of systemic risk. Prior research consistently shows that undocumented farmworkers comprise a substantial share of the labor force responsible for harvesting labor-intensive crops in California (Correa, 2018; Herrera & Zabin, 2023). Qualitative interviews in this study further reveal that undocumented workers perform time-sensitive tasks that cannot be mechanized or delayed without significant crop loss. Because undocumented farmworkers operate under legally precarious conditions, their availability is highly sensitive to immigration enforcement, policy uncertainty, and public health crises (Matthew et al., 2021; Méndez et al., 2020). As a result, labor dependence translates directly into food-system vulnerability, whereby disruptions affecting workers can rapidly cascade into production shortfalls, supply instability, and price volatility (Flores & Torres, 2021; Velasco & Gonzalez, 2022).

Second, the findings indicate that food affordability in California is already uneven, even in the absence of acute labor shocks. Market analyses show substantial price variation across retailer types, with independent grocery stores and ethnic supermarkets often offering lower prices than national chains (Silva, 2018; Sanchez & Esquivel, 2023). This stratification suggests that access to affordable food is mediated by geography, retailer

concentration, and consumer mobility rather than by market efficiency alone (Carrillo & Akinbode, 2023). Qualitative evidence further underscores that low-income households and immigrant communities are disproportionately dependent on lower-cost retail channels, which are often unevenly distributed across regions. Consequently, any labor-related shock that constrains supply or increases production costs is likely to magnify existing inequities, placing a disproportionate burden on households with limited purchasing power (Gonzalez & Morales, 2023; Marquez & Ruiz, 2022). Rather than affecting consumers uniformly, price increases exacerbate food insecurity among populations already experiencing constrained access to nutritious food (Diaz Payán et al., 2022).

Third, the analysis demonstrates that the removal of undocumented labor—whether through large-scale deportation, intensified enforcement, or policy-induced attrition—would produce substantial increases in food prices for key agricultural commodities. Economic modeling and prior empirical studies indicate that labor-intensive crops such as strawberries, lettuce, grapes, and tomatoes are especially sensitive to labor availability, with projected price increases reaching levels that would significantly restrict access for low-income consumers (Schulz, 2016; Jimenez & Silva, 2022). Qualitative findings from this study reinforce this conclusion, as farm owners and labor supervisors consistently emphasized the absence of readily available replacement labor and the limited feasibility of rapid mechanization. These findings align with existing scholarship demonstrating that agricultural labor shortages lead directly to reduced yields, increased food waste, and higher consumer prices (Kim & Boucher, 2022; Lopez & Bohn, 2023). Collectively, this evidence supports the central argument of this dissertation: immigration policy functions as food policy, with decisions affecting undocumented labor exerting direct and measurable consequences on food prices, availability, and access (Food Policy literature; Velasco & Gonzalez, 2022). Taken together, these results affirm that food security strategies cannot be effectively designed or implemented without addressing the legal and economic conditions of the workforce that sustains food production. Research consistently shows that labor rights, legal status, and access to social protections improve workforce stability, reduce turnover, and enhance agricultural productivity (Maloney & Bills, 2011; Silva, 2018). Policies that treat undocumented farmworkers as peripheral labor inputs overlook the structural reality that labor precarity is a core driver of food-system fragility. This study therefore concludes that sustainable food security in California requires an integrated policy approach—one that recognizes immigration reform, labor protections, and inclusive social policies as central components of agricultural sustainability, economic equity, and public well-being, rather than as secondary or isolated concerns (Al-Bazz et al., 2022; Gutierrez & Mendez, 2021).

CONCLUSION

This dissertation examined the role of undocumented farmworkers in sustaining food security in California, situating agricultural labor within broader economic, social, and policy frameworks. Using a mixed-methods approach that integrated qualitative interviews, market analysis, and policy review, the study demonstrated that undocumented farmworkers are not peripheral contributors to the food system but rather central actors whose labor underpins food availability, price stability, and supply continuity across the state and the nation. The findings reveal that California's food security is structurally

dependent on a workforce that remains legally precarious and economically marginalized, creating a paradox in which those who produce food for millions face heightened food insecurity themselves.

The study's results show that high reliance on undocumented labor constitutes a significant source of systemic risk rather than a neutral feature of agricultural production. Qualitative evidence from farm owners and agricultural stakeholders confirmed that undocumented workers perform time-sensitive and labor-intensive tasks that cannot be easily mechanized or replaced. Because this workforce operates under constant threat of immigration enforcement, policy uncertainty, and limited labor protections, any disruption affecting workers has the potential to cascade rapidly into reduced harvests, supply shortages, and price volatility. These findings underscore that labor precarity is not only a worker welfare issue but a food-system stability issue.

In addition, the study found that food affordability in California is already uneven prior to any major labor disruption. Market analyses revealed substantial price variation across retailer types, indicating that access to affordable food is shaped by geography, retail concentration, and socioeconomic status. Low-income households and immigrant communities are disproportionately dependent on lower-cost food outlets, making them particularly vulnerable to supply-side shocks. The evidence suggests that labor disruptions would not affect all consumers equally but would instead exacerbate existing inequalities in food access, further entrenching food insecurity among already marginalized populations.

Perhaps most critically, the findings demonstrate that the removal or large-scale disruption of undocumented labor would lead to substantial increases in food prices for key labor-intensive crops. Projected price increases for commodities such as fruits and vegetables reach levels that would significantly restrict access for low-income households. Both quantitative projections and qualitative accounts converge on the conclusion that there is no readily available replacement labor at scale and that rapid mechanization is neither economically nor operationally feasible for many crops. These findings support the central argument of this dissertation: immigration policy functions as food policy. Decisions that destabilize the agricultural workforce directly shape food prices, availability, and household food access, extending their effects far beyond the farm.

Taken together, the evidence presented in this study affirms that food security strategies cannot be effectively designed or implemented without addressing the legal and economic conditions of undocumented farmworkers. Policies that treat labor as a secondary consideration overlook the structural reality that labor stability is foundational to food-system resilience. This dissertation argues that sustainable food security in California requires an integrated policy approach that recognizes labor rights, legal status, and inclusive protections as central components of agricultural sustainability rather than as peripheral or optional concerns.

The policy implications of this research are clear. Efforts to strengthen food security must include pathways to legal status for farmworkers, improved labor protections, enforcement of fair wages and safe working conditions, and access to social safety nets. Such measures would not only enhance worker well-being but also stabilize the agricultural labor force, reduce supply disruptions, and support long-term food affordability. By contrast, policies that intensify enforcement without addressing labor realities risk undermining the very food system they depend upon.

This study contributes to the literature by reframing undocumented farmworkers as essential food-system actors and by demonstrating how labor precarity operates as a structural determinant of food insecurity. It bridges gaps between food security scholarship, labor economics, and immigration policy analysis, offering a holistic perspective on agricultural sustainability. While the study is focused on California, its implications extend to other regions and countries that rely on migrant and undocumented labor for food production.

Future research should build on these findings by examining food systems that have implemented inclusive labor and immigration reforms, assessing their effects on food security, labor stability, and economic resilience. Additional work is also needed to explore the long-term impacts of mechanization, climate change, and land consolidation on agricultural labor dynamics and food access. Expanding comparative research across regions would further illuminate how different policy regimes shape food-system outcomes.

In conclusion, this dissertation demonstrates that food security is inseparable from labor justice. Ensuring reliable access to affordable and nutritious food requires recognizing and addressing the structural vulnerabilities faced by undocumented farmworkers. A food system built on exclusion and precarity is inherently fragile. By contrast, a system grounded in inclusion, protection, and equity offers a more sustainable and just foundation for feeding communities in California and beyond.

RECOMMENDATION/S

Based on the findings of this study, which demonstrate the central role of undocumented farmworkers in sustaining food security in California and the systemic risks created by labor precarity, this dissertation offers the following evidence-based recommendations. These recommendations are organized across policy, labor practice, food-system governance, and future research, reflecting the multi-level nature of food security challenges.

Immigration Reform as a Food Security Strategy

Federal and state policymakers should explicitly recognize immigration reform as a food security intervention. The findings of this study indicate that the legal precarity of undocumented farmworkers is a primary source of instability in agricultural labor supply, which in turn threatens food availability and affordability. Legislative initiatives such as expanded agricultural worker legalization programs or provisions similar to the Farm Workforce Modernization Act should be prioritized to provide pathways to lawful status for farmworkers who are already embedded in the food system. Legal status would reduce fear-driven labor disruptions, improve workforce retention, and enhance overall food-system resilience. Treating immigration reform as separate from food policy risks undermining the stability of agricultural production and exacerbating food insecurity among consumers.

Strengthening Labor Protections and Enforcement Mechanisms

Improved labor protections are essential to stabilizing the agricultural workforce and reducing systemic vulnerability. This study recommends enhanced enforcement of existing

labor standards related to wages, working hours, occupational safety, and housing conditions, particularly in labor-intensive agricultural regions. Oversight of farm labor contractors should be strengthened to prevent wage theft, unsafe working conditions, and exploitative employment practices. Anonymous and accessible reporting mechanisms should be expanded to allow farmworkers—regardless of immigration status—to report labor violations without fear of retaliation. Stronger labor protections would improve worker well-being while also supporting consistent agricultural output.

Expanding Access to Social Safety Nets for Farmworkers

Food security strategies must address the paradox identified in this study: farmworkers who produce food for the population often experience food insecurity themselves. State and local governments should expand access to nutrition assistance, health care, and emergency support programs for agricultural workers and their families, irrespective of immigration status. Inclusive access to food assistance programs, disaster relief, and public health services would mitigate household-level food insecurity and reduce vulnerability during economic, climatic, or public health crises. Strengthening safety nets for farmworkers is both an ethical imperative and a pragmatic investment in food-system stability.

Integrating Labor Considerations into Food-System Planning

Food-system planning at the state and regional levels should formally integrate labor availability and labor conditions into assessments of food security. Agricultural sustainability initiatives often emphasize environmental protection and production efficiency while neglecting labor dynamics. This study recommends that food security assessments, emergency preparedness plans, and agricultural resilience strategies include explicit evaluation of workforce stability, legal vulnerability, and labor supply risks. Incorporating labor considerations into food-system governance would enable policymakers to anticipate and mitigate disruptions rather than responding reactively to crises.

Supporting Market Structures that Promote Food Affordability

Given the study's finding that food affordability is uneven and mediated by retailer type and geographic access, policymakers should support market structures that enhance equitable food access. This includes protecting and expanding independent and culturally specific food retailers that serve low-income and immigrant communities, as well as investing in local food distribution infrastructure. Policies that reduce excessive consolidation in food retail and distribution may help prevent price amplification during supply shocks. Supporting diverse retail ecosystems can buffer consumers from sudden price increases resulting from labor disruptions.

Long-Term Investment in Agricultural Workforce Sustainability

While mechanization and technological innovation may play a role in the future of agriculture, this study cautions against viewing technological solutions as immediate substitutes for labor-intensive farm work. Long-term investment should focus on making

agricultural employment safer, more stable, and more attractive through improved wages, housing conditions, training opportunities, and legal protections. Workforce sustainability initiatives should be designed in collaboration with farmworkers, employers, and community organizations to ensure feasibility and equity. A resilient agricultural workforce is a prerequisite for a resilient food system.

Implications for Future Research

Future research should build on this study by examining comparative cases in which inclusive immigration or labor policies have been implemented and evaluating their impacts on food security, labor stability, and price volatility. Longitudinal studies tracking changes in food affordability and labor availability following policy reforms would further strengthen the empirical link between immigration policy and food security. Additional research is also needed on the interactions between climate change, labor migration, and food-system resilience, particularly in regions heavily dependent on agricultural labor.

Collectively, these recommendations reinforce the central conclusion of this dissertation: food security cannot be sustainably achieved without addressing labor justice. Policies that marginalize or destabilize the agricultural workforce undermine the very systems they rely upon to feed populations. By integrating immigration reform, labor protections, and inclusive social policies into food-security strategies, California—and other regions facing similar challenges—can move toward a more equitable, resilient, and sustainable food system.

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