

Contents

| | |
|---|-------------|
| Summary | viii |
| Chapter 1: Introduction | 1 |
| <i>Abigail M. Okrent, Michelle J. Saksena, and Karen S. Hamrick</i> | |
| Trends and Themes Surrounding FAFH | 2 |
| Data and Definitional Nuances of FAFH | 7 |
| Conclusion | 13 |
| References | 15 |
| Chapter 2: A Brief History of Food Away From Home in the United States | 18 |
| <i>Anne Effland</i> | |
| Colonial Era Through the 19th Century | 18 |
| The Turn of the 20th Century | 19 |
| The Changing Eating Culture | 20 |
| The Rise of National Franchise Chain Restaurants | 21 |
| Conclusion | 22 |
| References | 22 |
| Chapter 3: A Retrospective of Food-Away-From-Home Expenditures From 1987 to 2017 | 23 |
| <i>Howard Elitzak and Abigail M. Okrent</i> | |
| USDA’s Food Expenditure Series | 23 |
| FAFH Over Time | 24 |
| Factors Affecting Spending on FAFH | 28 |
| Conclusion | 32 |
| References | 33 |
| Chapter 4: Food Away From Home During the Great Recession | 35 |
| <i>Clare Cho and Jessica Todd</i> | |
| Data | 36 |
| Total Food Expenditures for all Households | 37 |
| Differences Across Household Types | 40 |
| Conclusion | 50 |
| References | 51 |
| Appendix: Categories by Uniform Commercial Codes | 53 |
| Chapter 5: Demographics of Food-Away-From-Home Frequency | 57 |
| <i>Michelle J. Saksena</i> | |
| Data | 57 |
| Age | 58 |
| Race and Gender | 59 |
| Socioeconomic Status: Income, Education, Employment, and Food Assistance Receipt | 61 |
| Marital and Parental Status | 64 |
| National School Lunch Program | 66 |
| Discussion | 67 |
| References | 67 |
| Appendix: Tables | 69 |

Contents—continued

| | |
|---|------------|
| Chapter 6: Evolution of the Food-Away-From-Home Industry: Recent and Emerging Trends | 75 |
| <i>Patrick W. McLaughlin and Christopher Dicken</i> | |
| Data | 76 |
| Market Size and Structure From 2000 to 2015 | 78 |
| Food-Away-From-Home Sales | 91 |
| Conclusion | 94 |
| References | 95 |
| Chapter 7: Impacts on Nutrient Intakes From Increased Food-Away-From-Home Consumption | 96 |
| <i>Joanne Guthrie, Bing-Hwan Lin, and Travis A. Smith</i> | |
| Data and Methods | 96 |
| 30-Year Rise in Food Prepared Away From Home Briefly Reversed in 2007-10 and Then Rebounded | 98 |
| Nutrient Differences Between FAH and FAFH | 101 |
| Conclusion and Discussion | 105 |
| References | 106 |
| Chapter 8: How Food Environment and Proximity to Restaurants Affect Nutritional Quality | 109 |
| <i>Ilya Rahkovsky, Young Jo, and Lisa Mancino</i> | |
| Food Environments, Diet Quality, and Health | 109 |
| Data | 111 |
| Descriptive Statistics | 112 |
| Demographic Characteristics | 114 |
| Food Environment | 116 |
| Diet Quality | 118 |
| Rural-Urban Divide | 118 |
| Conclusion | 121 |
| References | 122 |
| Chapter 9: What Role Does Food Away From Home Play in the Diets of Food Assistance Recipients? | 125 |
| <i>Charlotte Tuttle, Katherine Ralston, and Lisa Mancino</i> | |
| Previous Related Research | 126 |
| Data and Methodology | 128 |
| 2010 Healthy Eating Index Scores for Food Away From Home Versus Food at Home | 129 |
| Households Without Children | 129 |
| HEI-2010 for FAFH in Households With Children | 132 |
| SNAP Households With Working Members | 132 |
| The Relationship Between Nutrition Awareness and Attitudes and HEI | 132 |
| HEI-2010 for FAFH at School Versus Other FAFH | 138 |
| Conclusion | 138 |
| References | 140 |

Contents—continued

| | |
|---|------------|
| Chapter 10: Menu Labeling | 142 |
| <i>Hayden Stewart, Tobenna D. Anekwe, and Jeffrey Hyman</i> | |
| Years of Debate Culminated in Passage of Menu-Labeling Regulations. | 143 |
| Will Menu Labeling Lead to Changes in Consumer and Restaurant Industry Behavior? | 146 |
| Conclusion | 155 |
| References | 156 |
| Glossary | 160 |



America's Eating Habits: Food Away From Home

By Michelle J. Saksena, Abigail M. Okrent, Tobenna D. Anekwe, Clare Cho, Christopher Dicken, Anne Effland, Howard Elitzak, Joanne Guthrie, Karen S. Hamrick, Jeffrey Hyman, Young Jo, Biing-Hwan Lin, Lisa Mancino, Patrick W. McLaughlin, Ilya Rahkovsky, Katherine Ralston, Travis A. Smith, Hayden Stewart, Jessica Todd, and Charlotte Tuttle

Edited by Michelle J. Saksena, Abigail M. Okrent, and Karen S. Hamrick

What Is the Issue?

Over the past several decades, Americans have grown to rely on the convenience of foods prepared outside of the home. Unfortunately, food away from home (FAFH) often contains fewer fruits and vegetables and have more calories, fat, and sodium than food prepared at home (FAH), and consuming FAFH is associated with obesity. Recently passed labeling legislation aims to help consumers make healthier FAFH choices and to encourage FAFH suppliers to produce more healthful options. To explore Americans' eating away from home behavior, this report presents research on three broad FAFH topics: (1) food choices and availability; (2) nutrition and diet quality; and (3) food policies, including menu labeling and food assistance programs.

What Did the Study Find?

Food choices and availability of FAFH. Over the past 30 years, FAFH's share of U.S. households' food budgets and total food spending grew steadily. FAFH options also became more widely available as growing numbers and types of businesses—including grocery stores—served prepared foods. Apart from the Great Recession (2007-09), these trends continued uninterrupted from 1987 to 2017, but the changes were not uniform across socioeconomic groups or business types.

- Spending on FAFH surpassed spending on FAH for the first time in 2010, increasing its share of total food spending from 44 percent (30 years prior) in 1987 to 50.2 percent in 2010.
- Higher income households spent more on FAFH and bought it more frequently than lower income households. Households with incomes greater than 300 percent of the Federal poverty guidelines obtained FAFH on 5.5 occasions per week, while households whose incomes were less than or equal to Federal poverty guidelines obtained FAFH on 4.2 occasions per week.
- For households with an elderly individual (over 64 years old), the share of household food spending on FAFH was 8 percent lower than for other households. Also, Americans who were 35–44 years old consumed FAFH more often than other Americans.

ERS is a primary source of economic research and analysis from the U.S. Department of Agriculture, providing timely information on economic and policy issues related to agriculture, food, the environment, and rural America.

- In 2000–15, quick-service restaurants (QSRs), also referred to as fast-food and limited-service restaurants, drove the industry’s growth both in sales and number of outlets. The fastest-growing segment of the QSRs was fast casuals—e.g., Chipotle Mexican Grill and Panera Bread—which combines counter service with the perceived ambiance and product quality of full-service restaurants (FSRs).
- Much of the growth in foodservice establishments occurred in urban U.S. counties, consistent with patterns of urban and rural migration. As rural populations declined, FSRs in rural areas were particularly hard hit, leaving QSRs to dominate.
- Spending on FAFH declined during the Great Recession, by \$47 billion (18 percent) in real dollars from 2006 to 2010, and rebounded thereafter.
- During the Great Recession, households replaced spending at FSRs with unprepared foods purchased at retail stores (like grocery stores), but households’ share of spending for QSRs stayed constant. In 2014, household expenditures on FAFH had yet to rebound to pre-Recession levels.
- Despite the downturn in household spending on FAFH during the Great Recession, the number of chain QSRs grew, and consumers spent a greater share of their FAFH dollars at these restaurants.

Nutritional composition and diet quality. The nutritional composition of FAFH across all income levels and all FAFH types (except school foods) was consistently lower quality and more caloric than that of FAH. Though FAFH is known to have lower diet quality, access to FAFH did not seem to affect FAFH consumption and did not correlate with diminished overall diet quality.

- FAFH’s share of total average daily energy intake increased from 17 percent in 1977–78 to 34 percent in 2011–12, and consumption of QSR foods was the largest source of this growth.
- On the whole, FAFH contained more saturated fats and sodium, and less calcium, iron, and fiber than FAH—however, the nutritional composition of FAFH varied across outlet types. For example, in 2009–12, the fat content of school lunches (a type of FAFH) was almost identical to that of FAH (33 percent) while the fat content of QSR foods averaged 39 percent.
- Although frequent QSR customers purchased less vegetables, fish, and nuts, their overall diet quality was no worse than that of QSR nonconsumers.

Policies that affect FAFH. FAFH consumption is influenced by public policy mainly on two fronts. First, current food assistance programs with in-kind food benefits affect food choices and diet quality of participating low-income households. For example, new requirements that improve nutrition of school meals directly affect children’s diet quality. Second, new menu labeling regulations may help consumers make more informed food choices at restaurants.

- The average household Healthy Eating Index (HEI-2010) for FAFH was lower than for FAH, regardless of SNAP participation or income.
- School meals provided by the National School Lunch Program and School Breakfast Program contained higher levels of calcium than both FAH and other sources of FAFH and adhered better to USDA’s *Dietary Guidelines for Americans* than other sources of FAFH.

How Was the Study Conducted?

This report uses a variety of data sources and techniques to examine FAFH trends. The analysis was done primarily using descriptive statistics (e.g., means, differences, and correlations) and literature review. The main data sources were the National Health and Nutrition Examination Survey (NHANES), USDA ERS’s Food Expenditure Series, the National Household Food Acquisition and Purchase Survey (FoodAPS), the Consumer Expenditure Survey, U.S. Census Bureau’s Monthly Retail Trade and Foodservices series, NPD ReCount, and Euromonitor Passport. These data sources include self-reported information and measurable individual characteristics collected by household survey, establishment information, and proprietary industry data.

America's Eating Habits: Food Away From Home

Chapter 1: Introduction

Abigail M. Okrent, Michelle J. Saksena, and Karen S. Hamrick

This chapter gives a comprehensive summary of this report's findings about FAFH choices and availability, nutrient intake from FAFH, associations between FAFH and diet quality, and associations between FAFH and sociodemographic characteristics. It shows the potential drivers of trends in demand and supply of FAFH and describes current policies that may affect these outcomes. This chapter also discusses the limitations and advantages of the various data sources used in each chapter.

In 2014, fewer than 60 percent of suppers served at home were actually cooked at home, down from 75 percent in 1984 (Ferdman, 2015). The decreasing time spent on meal preparation and cooking reflects the primacy of food away from home (FAFH) in Americans' routines. Americans aged 18 and over spent 65 minutes in meal preparation and cleanup in 1965 (Cutler et al., 2003), but by 2014, prep and cleanup time had fallen to 37 minutes per day (Hamrick and McClelland, 2016). This trend of cooking less and consuming more FAFH is not expected to subside for at least as long as Millennial consumers¹—who have a greater preference for prepared foods and more disposable income than older age groups do—continue to enter the workforce (Kuhns and Saksena, 2017).

Using data from the Economic Census, table 1.1 shows the number of retail establishments and their sales (food and beverage stores, and other retail stores) and foodservice industries for two types of products—"on-premise foods" and "off-premise foods"—between 1977 and 2012.² The food retail landscape has changed in the past 30 years, both in terms of access to different types of food stores and selection of foods they offer. For example, in 1977, there were about 5.9 food stores, of any kind, for every 1,000 Americans, and 25 percent of these stores sold food for on-premise consumption.³ At that time, food offerings were more clearly delineated by food store outlet type. Most on-premise food purchases were at foodservice establishments, while the majority of off-premise foods were purchased in retail establishments like grocery stores. By 2012, the number of foodservice establishments had increased by 77 percent, while the number of retail establishments declined between 25 to 50 percent. Even though the number of retail establishments decreased, nearly 40 percent of them offered food for on-premise consumption, a fivefold increase.

Because FAFH composes about 33 percent of daily calorie consumption for the average American and is associated with overall poor diet quality, policymakers, health practitioners, and researchers have suggested several policies to curb the purchase and consumption of prepared foods, especially

¹The "Millennial" generation comprises those born between 1981 and 1996.

²It is important to note that foods are classified by the retailer, and thus the on-premise consumption category may not capture all prepared and ready-to-eat food sold from grocery and other food retail stores. Nonetheless, on-premise foods generally refer to meals and snacks that are prepared at the outlet and meant to be consumed there (essentially, FAFH) while off-premise foods are those intended to be consumed away from where they were purchased (FAH).

³Foodservice establishments are commercial brick-and-mortar operations whose primary business model is to sell food for onsite consumption.

foods from foodservice establishments. Most of these policy ideas center on encouraging consumers to make healthier food choices at foodservice establishments and incentivizing prepared food suppliers to offer healthier alternatives. Potential policies include restricting quick-service⁴ television advertising from targeting children, serving smaller entree portion sizes, standardizing serving-size information, zoning to limit access to restaurant foods, requiring menu labels, reformulating school lunches, and providing subconscious cues in school cafeterias to guide children to healthier foods. Many of these policies have been tried in local jurisdictions and even nationally, but it is too soon to tell if they can improve diet quality.

This report provides a comprehensive, in-depth look at FAFH's growing role in Americans' diets with a view to informing the affected sectors and policies. Several specific questions are addressed:

1. What kinds of foods are considered "food away from home" (FAFH)?
2. How does FAFH availability affect Americans' food choice behaviors, energy intake, and diet quality?
3. What groups by age, income, and other demographic criteria are most likely to purchase FAFH?
4. How has the availability of FAFH changed over time?
5. To what degree is FAFH correlated with lower diet quality?
6. What is the potential for current and proposed policies to affect the healthfulness of FAFH purchases and consumption?

Trends and Themes Surrounding FAFH

To explore Americans' eating away from home behavior, this report presents research on three broad FAFH topics: (1) food choices and availability; (2) nutrition and diet quality; and (3) food policies. Food choices and availability are discussed in chapters 2-6 and analyze FAFH expenditures, purchase frequency, location, and access. Nutrition and diet quality are discussed in chapters 7 and 8 and analyze the nutrient composition of FAFH over time and correlation between diet quality FAFH frequency. Chapters 9 and 10 discuss policies related to FAFH, including food assistance programs and menu labeling.

Chapter 2 sets the stage for the current state of FAFH, chronicling the evolution of the FAFH landscape over time. Beginning in the mid- to late-19th century, the precursors to modern FAFH were street vendors, lunch wagons, diners, soda fountains, luncheonettes, and cafeterias. By the 1920s and '30s, technological innovation in food processing, the invention of the automobile, and increases in women's labor force participation (which generated more household disposable income) increased demand for FAFH consumption. To keep up with increasing demand, restaurants adopted more permanent structures with seating for families. Chain restaurants designed to accommodate automobile-based customers proliferated across the Nation, offering low-cost, fast, and predictable food. All of these factors led to long-term growth in availability and demand for FAFH.

⁴Throughout the report the terms fast food, limited service and quick service are used interchangeably to denote restaurants that offer counter service, but do not have wait staff that continually tend to customers. Within this outlet type, fast-casual restaurants offer mainly just counter service, but servers do bring food to individual tables. Full-service and sit-down denote restaurants where wait staff continually serve seated customers throughout their meal.

Table 1.1

Comparison of prices, sales, and number of establishments for select industries selling foods¹

| Industry ² | Price index (100=1982- 84) ³ | Number of establishments per 1,000 persons | | | Nominal per capita sales | | | Real per capita sales | | |
|------------------------------|---|---|--|--------------------------------|--------------------------|-----------------------------------|---------------------|-----------------------|-----------------------------------|---------------------|
| | | Total | Selling on-premise meals and snacks | Selling off-premise food | Total | On-premise meals and snacks | Off-premise food | Total | On-premise meals and snacks | Off-premise food |
| 1977 | | | | | | | | | | |
| Total retail and foodservice | 65.7 | 5.92 | 1.55 | 1.23 | 3,177 | 249 | 624 | 48.34 | 3.78 | 9.50 |
| Food and beverage stores | 66.8 | 0.94 | 0.13 | 0.83 | 749 | 2 | 595 | 11.21 | 0.04 | 8.91 |
| Other retail stores | 66.8 | 3.90 | 0.34 | 0.38 | 2,181 | 23 | 28 | 32.65 | 0.34 | 0.42 |
| Eating and drinking places | 62.6 | 1.08 | 1.08 | 0.03 | 247 | 224 | 1 | 3.95 | 3.57 | 0.01 |
| 2012 | | | | | | | | | | |
| Total retail and foodservice | 234.2 | 5.29 | 2.31 | 1.23 | 15,070 | 1,490 | 2,063 | 64.34 | 6.36 | 8.81 |
| Food and beverage stores | 231.8 | 0.47 | 0.18 | 0.42 | 1,975 | 42 | 1,305 | 8.52 | 0.18 | 5.63 |
| Other retail stores | 231.8 | 2.91 | 0.28 | 0.73 | 11,464 | 57 | 752 | 49.46 | 0.25 | 3.25 |
| Eating and drinking places | 238.0 | 1.91 | 1.85 | 0.08 | 1,631 | 1,390 | 5 | 6.86 | 5.84 | 0.02 |
| Percentage change | | | | | | | | | | |
| Total retail and foodservice | 256.4 | -10.66 | 49.59 | -0.03 | 374.32 | 499.27 | 230.29 | 33.09 | 68.15 | -7.32 |
| Food and beverage stores | 247.0 | -49.94 | 41.76 | -48.82 | 163.62 | 1648.51 | 119.11 | -24.02 | 403.94 | -36.85 |
| Other retail stores | 247.0 | -25.35 | -18.36 | 93.59 | 425.60 | 154.25 | 2563.57 | 51.49 | -26.72 | 667.67 |
| Eating and drinking places | 280.2 | 76.60 | 71.79 | 164.15 | 560.31 | 521.89 | 635.24 | 73.69 | 63.58 | 93.40 |

¹Industries that sell food that are excluded from the present analysis include recreational places (e.g., movie theaters, museums, sporting events, performances), hotels and motels, civic and social organizations, transportation (e.g., airlines and trains), and food furnished as an ancillary activity (e.g., inpatient meals at hospitals). According to USDA/ERS's Food Expenditure Series, these sales were on average 11-12 percent of total food sales between 1977 and 2012.

²For the 1977 Economic Census, the relevant Standard Industry Classification (SIC) industry codes used in this analysis are: G (Retail Trade), 54 (Food Stores), 592 (Liquor Stores), and 58 (Eating and Drinking Places). For the 2012 Economic Census, the relevant North American Industry Classification System (NAICS) industry codes used in this analysis are: 44-45 (Retail Trade), 445 (Food and Beverage Stores), and 722 (Food Services and Drinking Places).

³The price index for total retail and foodservice is derived as a weighted average of food-at-home (FAH) and food-away-from-home (FAFH) Consumer Price Indices (CPI), with nominal per capita sales for each outlet type as weights.

Source: U.S. Department of Commerce, U.S. Census Bureau, 1977 Economic Census (1979); U.S. Department of Commerce, U.S. Census Bureau, 2012 Economic Census (2016); Consumer Price Indices (CPI) for FAH and FAFH (Bureau of Labor Statistics, 2017); and U.S. Department of Commerce, U.S. Census Bureau, Census population estimates (2000, 2016)

Over the past century, changes in work and in attitudes toward family, children, and leisure time shaped food preferences and eating routines. Rising incomes, more two-earner households, and improved affordability and access to fast-food establishments may have all contributed to growing FAFH demand. As households became increasingly more time constrained—as a result of greater educational attainment and increases in women’s participation in the labor force—it raised the opportunity cost of their time, making time-intensive meal preparation less attractive. As a result, FAFH-preparation times have declined while FAFH-consumption rates have increased over time. Tastes and preferences are also shaped by sociodemographic characteristics, including race, ethnicity, education, and household composition (i.e., marital/partnered status of household manager, age and gender of household manager, number of household members, and number of children). Chapter 3 discusses how these factors may have influenced observed macroeconomic growth in FAFH expenditures.

As several chapters note, the Great Recession (December 2007 to June 2009) marked a departure from the long-term growth trend in consumer spending on FAFH. As unemployment climbed, households had more time for leisure and household activities like meal preparation and less disposable income to purchase FAFH (Beatty and Senauer, 2012). Chapter 3 shows that, unlike in previous economic downturns since 1987, long-term growth in FAFH spending reversed during the Great Recession and only began to rebound in 2011. The decline in total FAFH spending during this period largely manifested in decreased spending at full-service restaurants, while spending at quick-service restaurants grew, albeit at a slower rate than before the Great Recession. By 2010, the share of food spending by both businesses and households that purchased FAFH surpassed the FAH share for the first time.

Economic downturns likely affect demand for FAFH by constricting consumers’ budgets and relaxing time constraints, but their responses are also shaped by differences in income, household structure and composition, education, race, and ethnicity, which are all found to influence American tastes and preferences. Chapter 4 examines food expenditure patterns of households by different sociodemographic groups before and after the Great Recession, particularly emphasizing substitution among prepared foods purchased at full- and quick-service restaurants and at retail stores. During the Great Recession, as the share of household food expenditures allocated to FAFH declined, the share of spending on prepared and unprepared FAH ingredients increased, and these trends continued through 2014 for most household types, suggesting a general shift toward more home-cooked meals.⁵ Overall, changes in spending allocations across FAFH categories between 2005 and 2014 were relatively small, with the largest change from 1 year to the next being less than 1 percentage point for all categories, whereas spending patterns differed quite substantially across household types.

Prices of FAFH have generally outpaced those of FAH as shown in table 1.1 (247-percent increase for food and beverage stores versus a 280-percent increase for eating and drinking places since 1982-84). Thus, inflation may partially explain some of the observed growth in nominal FAFH spending and household expenditures discussed in chapters 2 and 3, but data also show that Americans consume meals and snacks from FAFH establishments with increasing regularity. In 1977-78, 16 percent of meals and snacks were obtained at restaurants, schools, vending machines, mobile vendors, or through donations, and this share increased to 24 percent in 1995 (Lin et al., 1999). Meals from restaurant

⁵While the 2008 commodity price spike occurred during the Great Recession, prices of FAH spiked, but prices of FAFH did not follow this trend. This finding suggests that American consumers would have substituted out of FAH and into FAFH because these products are generally found to be net substitutes (Okrent and Alston, 2012; Huffman, 2011). However, the opposite occurs because income declines during the Great Recession dominated the substitution effects.

purchases alone constituted 23 percent of meals purchased in 2004, though that share dropped significantly during the recession and eventually stabilized to 20 percent of meals in 2012, according to data from the NPD group (Business Wire, 2004; Sloan, 2016).

As examined in chapter 5, socioeconomic factors may affect not only how much consumers spend on FAFH, but also how often they consume it (measured as number of meals, number of eating occasions, etc.). In some cases, these trends in FAFH expenditures and the frequency of consumption may not exactly parallel each other. For example, higher income consumers may spend more on FAFH because they are more willing and able to spend for high quality than are lower income consumers. However, greater spending by higher income groups on FAFH does not necessarily translate into a greater number of FAFH meals. The same logic can be applied for differences between expenditures and frequency among groups with different races/ethnicities, household composition (with or without children), and education.

Chapter 5's analysis supports several key results in the literature that are discussed in chapter 4, including the finding that FAFH consumption increases with income, education, and employment status and decreases with the number of children. In addition, younger adults tend to consume FAFH more frequently than others: the peak years for FAFH are 35-44 years old, which may be due to higher labor force participation and higher income in that age range.

As chapter 2 notes, food choices evolved to increasingly favor FAFH, and the supply and availability of FAFH grew to meet this demand. Related to this, chapter 6 shows how supply of FAFH grew both in terms of sales and number of establishments, with changes in the composition and structure of restaurants. In particular, roughly 57 percent of all FAFH establishments in 2015 were quick-service restaurants, 66 percent of which were chains, which was the fastest growing subsegment of the past 15 years, growing even during the Great Recession. Full-service restaurants were particularly hard hit by the Great Recession, with the number of establishments declining 5 percent after peaking in 2009.

While spending at full-service restaurants decreased during the Great Recession, spending at quick-service restaurants grew, albeit at a slower rate than pre-recession. Chapter 6 details that although full-service restaurants consistently made up the largest share of FAFH spending, from 2000 to 2015, quick-service restaurants drove much of the growth in spending on FAFH. The fastest growth of the quick-service segment is largely driven by fast-casual restaurants, a hybrid of quick- and full-service restaurants, which grew at twice the rate of traditional quick-service restaurants between 2000 and 2015. Fast casuals offer the convenience and prices of quick-service restaurants with the perceived high-quality food and ambiance of full-service restaurants. As Americans continued to migrate from rural areas to cities in 2000-15, full-service restaurants were particularly affected, leaving the FAFH landscape in rural areas dominated by quick-service restaurants, which may have implications for healthfulness of purchases and consumption.

Although healthy FAFH is available, Americans tend to select items that have more calories, fat, and saturated fat than home-produced foods (Lin and Guthrie, 2012). Chapter 7 examines the nutrient and energy intake from foods obtained from restaurants, schools, and places other than home in 1977-78 and 2011-12. The share of calories obtained from FAFH rose from 18 percent in 1977-78 to 34 percent in 2005-06, with consumption of quick-service foods being the largest source of this growth. The share of calories obtained away from home briefly dipped to 29 percent in 2009-10, paralleling the decline in FAFH expenditures and sales between 2007 and 2010 described in chapters 3, 4, and 6. However, on a percentage basis, consumption at full-service restaurants

declined more than at quick-service restaurants, indicating some economizing within FAFH options, which is also consistent with expenditure and sales patterns.

Post-Great Recession, by 2011-12, chapter 7 notes that FAFH consumption had risen again to comprise 34 percent of calories, essentially double the share of intake from 1977-78, and quick service grew to 15.8 percent of calories. Lower income individuals consumed more FAFH over time, but less than higher income individuals did, which parallels observations on FAFH expenditure patterns in chapter 4. Over time, the energy intake of children and youth from FAFH—particularly from quick service—grew in parallel to that of adults, but at the same time, the role of school foods diminished for all children and youth and diminished more for those of higher income households. FAFH is still found to have more total fat, saturated fat, and sodium than FAH, and FAFH contains less fiber, iron, and calcium (with the exception of school foods, which have more calcium and iron than FAH).

A related concern to the nutrient composition of FAFH is whether greater access to FAFH establishments influences diet quality (i.e., adherence to USDA's Dietary Guidelines for Americans). To understand whether the increased presence of FAFH establishments can potentially affect food choices and diet quality, chapter 8 investigates the associations among restaurant density, consumers' proximity to quick- and full-service restaurants, and diet quality of five types of consumers by frequency of purchase—nonconsumers (i.e., people who did not purchase from either quick- or full-service restaurants), frequent quick-service consumers, frequent quick- and full-service consumers, occasional quick-service consumers, and occasional quick- and full-service consumers. This analysis finds that frequent quick-service consumers live close to quick-service restaurants, but compared with nonconsumers, do not tend to live in areas with high concentrations of restaurants, which may imply that quick-service consumers respond more to the proximity of restaurants than to the density of restaurants around their home. Additionally, although frequent quick-service purchasers purchased less vegetables, fish, and nuts, their overall diet quality was no worse than that of nonconsumers. This finding suggests that increases in quick-service density and proximity are not associated with reductions in diet quality. In addition, restaurant density in rural areas is substantially less than in urban areas, but rural consumers purchase only slightly fewer restaurant meals.

Several policies have been proposed to help consumers choose healthier FAFH and incentivize FAFH suppliers to provide healthier food options. One such option is restricting marketing of unhealthy foods to children for quick-service foods, and some studies have found that bans on television advertising targeting unhealthy foods to children have meaningful effects on calorie intake and obesity (Chou et al., 2008; Dhar and Baylis, 2011). However, some have argued that the U.S. Constitution might not permit any such regulations to be applied in the United States because of the First Amendment protection of free commercial speech, which imposes limits on what the Government can do to restrict marketing otherwise (Ippolito, 2011). Limiting access to restaurant foods is another potential policy intervention. But such restrictions have not been consistently found to affect obesity (Sturm and Hattori, 2015; Currie et al., 2010).

Current programs that provide food assistance to combat food insecurity and support low-income families in making food choices consistent with USDA's Dietary Guidelines may also influence FAFH purchasing and acquisition decisions directly and indirectly. The National School Lunch Program (NSLP) and School Breakfast Program (SBP) directly affect FAFH purchases by providing free or low-cost meals to children in schools. (For more details, see U.S. Department of Agriculture, Food and Nutrition Service, 2016.) The foods served in these programs must meet certain Federal

meal standards (MacEwan and Okrent, 2017). Indirectly but significantly, the Supplemental Nutrition Assistance Program (SNAP) can affect FAFH spending by providing benefits that can be used only for FAFH spending. Most studies indicate that an extra dollar of SNAP benefits is much more likely to be spent on FAFH than is an extra food dollar of cash. The share of that extra SNAP dollar spent on food, referred to as the marginal propensity to spend (MPS) on food from SNAP benefits, has been estimated to be \$0.17 to \$0.53 while the MPS for cash is estimated to be \$0.05-\$0.10. The extra dollar in SNAP benefits would all be spent on FAFH as required, but it frees up household cash to be spent on other things, and the MPS measure takes that total effect into account (Tuttle, 2016; MacEwan and Okrent, 2017). For example, Kim (2016) examined SNAP recipients' nonfood expenditure response to the increase in benefits attributable to American Recovery and Reinvestment Act (ARRA) and found an increase in nonfood expenditures attributable to the increase in benefits.

Chapter 9 examines diet quality of children participating in the NSLP and SBP, and the diet quality and FAFH frequency of households participating in SNAP. Chapter 9 finds that school meals provided a higher Healthy Eating Index (HEI) for children than other sources of FAFH, consistent with other studies finding participation in NSLP enhances participants' nutrient consumption.⁶ Because SNAP participants are more likely than higher income groups to participate in school meals, the higher diet quality of school meals is likely part of the reason that the HEI for FAFH is almost as high for SNAP households with children as for SNAP households without children, while for SNAP nonparticipants, the HEI for FAFH is lower for households with children compared to those without children.

Menu labeling at restaurants is another policy option that may engender more healthful eating away from home by Americans. Debate over mandatory menu labeling grew during the 2000s as it became clear that eating out was associated with less healthful food choices (e.g., Variyam, 2005). Chapter 10 describes how representatives in the public health, nutrition, and foodservice sectors have collaborated with policymakers to craft a menu labeling rule, which requires restaurant chains with 20 or more establishments to make calorie information publicly available. This rule was developed at the Federal level in response to the often confusing and contradictory menu labeling laws in local jurisdictions that had been difficult to implement for restaurants in multiple jurisdictions.

Chapter 10 shows that the current evidence on how menu labeling would affect food choices and calorie intake is quite mixed, with some studies finding no effect and others finding a reduction of up to 177 calories per order or purchase. One study found that, on average, providing point-of-purchase calorie information in chain restaurants reduced body mass index (BMI) by 1.5 percent and lowered the risk of obesity by 12 percent in jurisdictions with such laws (Restrepo, 2017). Similarly, the response of the foodservice industry to menu labeling regulations in local jurisdictions is mixed, with some restaurants increasing the number of low-calorie offerings on the menu and some not.

Data and Definitional Nuances of FAFH

This report uses several datasets to conduct analysis on FAFH, and the datasets differ in defining FAFH and types of foodservice establishments. As a consequence, there are variations in the results depending on the datasets used. Generally, FAFH is defined as being obtained, although not exclu-

⁶Constructed by USDA's Center of Nutrition Policy and Promotion and the National Cancer Institute, the HEI is a measure that determines diet quality. For a more indepth explanation, see chapter 8.

sively, from restaurants, cafeterias, food trucks, and vending machines. In contrast, foods prepared within the home and obtained from retail establishments like grocery stores, warehouse clubs, supercenters, and mail order are commonly referred to as food at home (FAH). Prepared foods, however, have increasingly become a greater share of foods sold at retail stores as well, and they could also be considered FAFH, given how closely they resemble food purchased at foodservice establishments. Table 1.2 summarizes the data used and the corresponding terms used in defining FAFH in this report.

Most data sources base the distinction between FAH and FAFH on the type of outlet where food is purchased. FAFH establishments include restaurants, schools, vending machines, and mobile food vendors, and FAH establishments are retail stores like grocery stores, warehouse clubs, roadside stands, and mail order and home delivery.

These definitions are used in some publicly available data used in this report, including:

1. Household food expenditure data from the Consumer Expenditure Series (CES);
2. Prices paid by consumers in the Consumer Price Indexes (CPIs);
3. Store counts in the Quarterly Employment and Compensation Survey; and
4. Sales in the Monthly Retail Trade and Foodservices report and the Economic Census.

Except for the CES, which is collected from households, all of these data are collected from food-service establishments. Foodservice data classify establishments by the North American Industry Classification System (NAICS). FAFH establishments under NAICS include full-service restaurants (wait staff), limited-service restaurants (counter service), and “other FAFH” (caterers, mobile food vendors, vending machine operators, food contractors). (See chapter 6 for more details.) The CES classifies FAFH as full- and limited-service restaurants, vending machines, and caterers. (See chapter 4 for more details.)

Proprietary data sources are also used in this report. The NPD ReCount data collects store location data and organizes these data by outlet type and restaurant brand. The Euromonitor data reports sales for branded restaurants and menu type (Italian, Mexican, etc.). The NPD ReCount outlet classification system is similar to NAICS, except that it calls restaurants with counter service “quick-service” rather than “limited-service.” Analysis detailed in chapter 6 further breaks down limited- or quick-service outlet types—based on brand in the NPD ReCount and Euromonitor data—into a smaller subset called “fast casuals.” (See chapter 6 for more details.)

Individuals and households not only purchase foods at different retail and foodservice establishments, but they can also obtain foods as gifts, donations, or grow them at home. The following datasets define FAFH based on where food is *acquired*: 2012-13 Food Acquisition and Purchases Survey (FoodAPS), 1977-78 National Food Consumption Survey (NFCS), 1989-91 and 1994-96 Continuing Survey of Food Intakes by Individuals (CSFII), 2001-12 Continuous National Health and Nutrition Examination Surveys (NHANES), and the American Time Use Survey (ATUS). In addition to places where food is *purchased*, food can be *acquired* as donations from food banks and commodity food programs, grown in a garden, given as a gift, and in other ways that do not require a purchase.

Table 1.2

Data sources and food-away-from-home definitions

| Chapter | Data source | Description | FAFH definition | Food outlet types | FAFH measure |
|---------|---|---|---|---|---|
| 1 | Economic Census ¹ | Store-level sales data by NAICS code and product line | Where food is purchased (NAICS) and where food is intended to be consumed (on- and off-premise consumption) | Food stores, other retail stores and eating and drinking places | Number of establishments and sales |
| 3 | Annual ERS Food Expenditure Series ² | Store-level sales data (i.e., 5-year Economic Census and annual Census survey data) augmented with the value of food produced at home and donated and the value of food furnished to employed civilians, military and individuals at institutions (e.g., prisons, hospitals, nursing homes and so on) | Where food is intended to be consumed | Retail stores; limited-service restaurants; full-service restaurants; drinking places; hotels and motels; retail stores; recreational places; schools and colleges; other FAFH (food furnished as part of another service) | Expenditures and expenditure shares of food |
| 4 | 2005-14 Consumer Expenditure Series (CES) ² | Two-week household food expenditure diary for stratified sample of individuals with sample weights to extrapolate to population | Where food is purchased | FAH (prepared food, microwavable food, edible ingredients, unprepared ingredients, non-alcoholic drinks, and other purchased at retail stores); limited-service restaurants, full-service restaurants; other FAFH (vending machines, caterers, schools) | Expenditures and expenditure shares of food |
| | 2005-14 Monthly Consumer Price Indexes (CPI) ² | Monthly national market basket of prices for prices paid by consumers for FAFH | Where food is purchased | FAH; full-service restaurants, limited-service restaurants, other FAFH | |
| 5 | 2012-13 Food Acquisition and Purchase Survey (FoodAPS) | One-week household food expenditure diary for stratified sample of individuals with sample weights to extrapolate to population | Where food is obtained | FAH; FAFH; schools | Number of food trips per week |
| 6 | 2000-15 NPD ReCount | Exact location and brand of restaurants | Where food is purchased | Chain and independent quick-service and full-service restaurants (includes fast-casual chains) and restaurant brands | Density of establishments and sales |
| | 2006-14 Euromonitor | Sales at highest selling branded restaurants and type of menu | Where foods is purchased | Restaurant brands and menu types (hamburger, subs/deli/other sandwich; pizza/Italian; Mexican; other menu type) | |

Continued—

Table 1.2

Data sources and food-away-from-home definitions—continued

| Chapter | Data source | Description | FAFH definition | Food outlet types | FAFH measure |
|---------|--|---|-------------------------|--|---|
| 6 | 2001-15 Quarterly Census of Employment and Wages | Number of establishments | Where food is purchased | Mobile food vendors | Density of establishments and sales |
| | 2001-15 Monthly Retail Trade and Foodservice Series ² | Monthly sales | Where food is purchased | Full- and limited-service restaurants | |
| 7 | 1977-78 National Food Consumption Survey (NFCS) | One day dietary recall quantities and nutrient intake for stratified sample of individuals with sample weights to extrapolate to population | Where food is obtained | FAH; wait-staff restaurants; fast-food restaurants; school/day care; other FAFH (vending machines, common coffee pot, mobile vendor) | Energy intake (calories) and nutrient density, measured as percent calories from fat, saturated fat; nutrient intake per 1,000 calories for other nutrients |
| | 1989-91 and 1994-98 Continuing Survey of Food Intakes by Individuals (CSFII) | | | | |
| | 2003-2012 Continuous National Health and Nutrition Examination Surveys (NHANES) ¹ | | | | |
| 8 | 2012-13 FoodAPS | One week household food expenditure diary for stratified sample of individuals with sample weights to extrapolate to population | Where food is obtained | Fast-food and full-service restaurants | Frequency and diet quality |
| 9 | 2012-13 FoodAPS | One week household food expenditure diary for stratified sample of individuals with sample weights to extrapolate to population | Where food is obtained | FAH; FAFH | Diet quality |

¹Data are available for other years but not used in the analyses presented in this report.

²Prior years of NHANES collect dietary recall data on where the food was consumed rather than where it was prepared.

Notes: FAFH = food away from home. FAH = food (prepared) at home.

Source: Various chapters within the report.

Among the aforementioned datasets, the NFCS, CFSII, and NHANES are 24-hour dietary recall surveys, which record quantities of foods consumed by individuals by outlet type (e.g., grocery stores, full-service restaurant, fast-food restaurant) and other sources (e.g., public donation, office coffee fund). These data are converted to nutrient intakes (fat, calories, sodium, etc.) and cup equivalents, which allow an interested user to assess the overall diet quality of the individual. (See chapter 7 for more details.) The FoodAPS is a week-long household diary that records, by acquisition source, the quantities, prices, and expenditures of foods acquired by all household members. The FoodAPS data also include nutrition intake data derived from the food acquisitions, which are used in chapters 8 and 9 to assess diet quality. The ATUS is a 24-hour time use diary in which individuals report the time they spent eating and drinking out (at either full- or quick-service restaurants) or elsewhere and the time spent in food preparation and cleanup.

FoodAPS is similar to the CES except that it collects food acquisitions from all sources, including home gardens and government commodity donation programs, besides the typical food establishments. Also, FoodAPS differs from CES because it oversamples low-income and SNAP-participating households. These data generally classify FAFH establishments similarly to NAICS (i.e., full service, limited service), but with some additional nomenclature to account for nonpurchase acquisitions. This generally affects what is contained in the “other FAFH” category across the chapters.

FoodAPS differs from NFCS, NHANES, and CFSII in another key way: FoodAPS collects data on food acquisitions, and the others collect data on actual food consumption. This data difference could cause differences in measured quantities because many FAFH portion sizes (especially for restaurant foods) are often large and individuals may not always consume whole portions. Hence, reported quantities in the food acquisition diaries are likely to be higher than the dietary recall data. Also, FoodAPS contains nutritional intake information for the entire household while NHANES, NFCS and CFSII are based on individual intake. For measuring nutrient and energy intake for distinct groups like children or food assistance participants, individual intake information (as used in chapter 7) would be more useful than household information.

Rather than defining FAH and FAFH by where they are *acquired*, as is typical, a few data sources, such as the Economic Census, define these terms based on where food is intended to be *consumed*. In this context, FAFH is food meant for on-premise consumption—meals and snacks prepared and consumed at any type of establishment except for home—and FAH being food meant for off-premise consumption—ingredients to meals and snacks purchased at any establishment and prepared at home. Foods are defined by type of product because foods that are more similar in form are categorized as the same, regardless of where they are acquired.

The Economic Census data, discussed in the introduction, presents estimates of sales by NAICS industry and specifies whether food is meant for on- or off-premise consumption. Likewise, the Food Expenditure Series—an ERS data product that produces annual and monthly national-level estimates of the value of the food system—uses the same classification as the Economic Census to define FAFH. The Food Expenditure Series additionally disaggregates FAFH by outlet type. (See chapter 3 for more details.)

The Food Expenditure Series differs from other expenditure datasets like FoodAPS and CES by what is included in sales. FAFH in the Food Expenditure Series is total household and business expenditures, whereas other expenditure datasets capture only household spending. This difference is particularly relevant to measures of foodservice spending because approximately 10 percent of foodservice sales were expensed meals by businesses and government in 2012 (Census Bureau,

2016c). The effect of excluding business purchases from FAFH is apparent when inspecting the magnitude of and variation in the FAFH shares of the food budget by dataset. For example, in chapter 3, which utilizes the Food Expenditure Series, FAFH accounts for more than 50 percent of the food budget in 2016 while, in chapter 4, which uses CES data, FAFH accounts for only 44 percent of the food budget that same year. Additionally, with the inclusion of business expenditures in the Food Expenditure Series, chapter 3 shows that FAFH expenditures by all purchasers started to rebound in 2010. In contrast, based on the CES data which only captures household purchases, chapter 4 observes that the rebound in household FAFH spending started later in 2013. Like CES, FoodAPS (which is discussed in chapters 5, 8, and 9) captures household spending only, and average household spending on FAFH is similar between datasets (Clay et al. 2016).

By using multiple datasets, with various advantages and disadvantages stemming from their data collection methods, the report aims to give a comprehensive overview of FAFH and its implications for Americans' nutrition and health. For example, chapter 3 uses the annual ERS Food Expenditure Series, which captures sales from all purchasers and provides a macroeconomic look at FAFH spending, whereas chapter 4 uses the CES and CPI, which capture spending only at the household level (see table 1.2).

Although CES covers a narrower survey pool than the Food Expenditure Series, the advantage of CES is that food purchasing behavior can be further broken down by sociodemographic group and by income level—an option that is unavailable in the Food Expenditure Series. This more refined breakdown is crucial for tracking nutrition and health issues for which trends often differ by socioeconomic groups. These measures (Food Expenditure Series and CES), however, may overstate the role of FAFH because expenditure trends reflect not only changes in quantities purchased but also changes in prices. Because prices of FAFH have outpaced FAFH, the observed upward trends in FAFH spending shares may have been exaggerated.

The remaining chapters examine FAFH characteristics using measures that are independent of price. Chapter 5 measures FAFH using number of trips to FAFH establishments, and similarly, chapter 8 categorizes households by how often they frequent FAFH establishments. Measuring FAFH by frequency, however, does not capture the actual quantities consumed on each outing. Chapter 6 uses the number of restaurants in each U.S. county to approximate FAFH supply. Similar to the limits to the measures of FAFH spending, there are limits to supply measures because no data are collected on how much each store sells. This limitation makes it difficult to discern whether the placement of FAFH locations decisions are driven by supply or demand. Chapters 7 and 8 analyze FAFH in terms of nutrient composition and diet quality, which are useful for gauging the effects of FAFH in the overall diet.

Given that consumer food choices are driven by multiple influences—foods' contribution to diet and health outcomes as well as their price, locations, and other environmental and socioeconomic factors—all of the measures used in this report reveal useful aspects of FAFH's evolving role in American consumers' lifestyles, food budgets, diet, and health.

Conclusion

Over the past several decades, foods prepared outside of the home have become increasingly integral to the American diet. Many researchers are interested in the implications of increased FAFH consumption for health outcomes and for how food markets will adapt to accommodate changing tastes and preferences for FAFH. This report compiles research that investigates current trends in food-away-from-home (FAFH) choices and availability, nutrient intake from FAFH, and FAFH's associations with diet quality.

This report finds that, although FAFH consumption has generally increased in the past several decades, this trend was temporarily curbed during the Great Recession as Americans shifted a greater share of household resources toward prepared and unprepared food-at-home (FAH) ingredients. This countertrend toward more FAH purchases continued through 2014 for most household types.

Evidence shows consistent purchasing patterns across sociodemographic groups. For example, higher income households spent more on FAFH and had more FAFH purchase occasions. In addition, households with an elderly individual spent a smaller share of their food budget on FAFH. The older a household head was, the less frequently that household head purchased FAFH. Households with children spent a smaller share of their food budget on FAFH and had fewer purchase occasions of FAFH than their childless counterparts.

As overall demand for FAFH has grown, so has the supply, albeit heterogeneously by segment. Since 2000, the fastest growing segment of FAFH has been chain quick-service restaurants, which expanded even during the Great Recession. Within the quick-service segment, fast-casual restaurants, which are a hybrid between quick- and full-service restaurants, show the speediest growth—twice the rate of traditional quick-service restaurants. Similar to what was observed in the last century, much of the recent growth in FAFH establishments has occurred in urban U.S. counties, consistent with patterns of urban and rural migration.

Average American energy intake from FAFH consumption has doubled from 17 percent in 1977-78 to 34 percent in 2013-14. FAFH generally contains more saturated fats and sodium, and less calcium, iron, and fiber than FAH does. Related to the concern about FAFH's nutritional value is the question of whether greater access to FAFH establishments influences diet quality (i.e., adherence to *USDA's Dietary Guidelines*). Although frequent quick-service consumers purchased less vegetables, fish, and nuts, their overall diet quality was no worse than that of FAFH nonconsumers, which suggests that quick-service density and proximity to consumers are not associated with poor diet.

Because FAFH constitutes a substantial part of the typical American diet and is associated with poor nutrient intake and overall poor diet quality, policymakers, health practitioners, and researchers have suggested policy solutions to curb the purchase of prepared foods from both foodservice and retail establishments. In one policy area, the U.S. Department of Health and Human Services' Food and Drug Administration (FDA) created menu label regulations that require chain restaurants with 20 or more locations to make calorie information publically available. This may help consumers make healthier choices and may also encourage restaurants to provide healthier options. However, a review of the literature on restaurant menu labeling and its effects on calorie consumption turns up mixed evidence.

Current food assistance programs that support low-income families in making choices consistent with *USDA's Dietary Guidelines* may also influence FAFH purchasing decisions. The benefits bolster these families' budgets, allowing them to purchase more food (both FAH and FAFH), as well as other goods. Additionally, new requirements for school breakfasts and lunches improve the nutrition of school meals, directly affecting children's diets. Evidence from the analysis in this report shows FAFH's average nutritional quality was consistently lower than that of FAH, and this finding held true for households across all income levels including households that participate in SNAP. This suggests that FAFH choices are heavily driven by consumer preferences. Alternatively, the National School Lunch Program is shown to improve nutrient consumption for participating households.

Several questions still remain to be answered. For example, figuring prominently in many of the chapters, the Great Recession marks a time during which household FAFH expenditures and sales declined; the number of FAFH establishments decreased; and the nutritional quality of FAFH relative to FAH seemed to improve. Full-service restaurants lost more business than quick-service did, and households appeared to replace full- and quick-service options with prepared FAH from grocery stores and other retail stores. Although some of the report's analysis found that FAFH consumption rebounded to pre-recession levels, this finding was not consistent with other analyses. Data from NPD Group shows that, in 2016, because of the increased interest in cooking among young adults, home cooking appeared to stabilize after decades of decline (NPD Group, 2016). Also, although sales of on-premise foods at all retail and foodservice establishments somewhat rebounded after the Great Recession, sales for the full-service segment did not, and the number of meals purchased by households at restaurants had yet to rebound by 2014 (NPD Group, 2014).

Full-service restaurants may also be slow to rebound after the Great Recession as a result of evolving demographics of the labor force. Baby Boomers,⁷ who are core consumers of full-service restaurants are entering retirement and facing reduced income and are increasingly being replaced by Millennials in the labor force who prefer the high-quality quick-service option of fast casuals (Klara, 2017), at least at this point in their lifecycle. The question remains of how to disentangle enduring Great Recession's effects, if they exist, on FAFH demand. It also remains to be seen how generational preferences, which continue to evolve, will affect nutrient intake, overall diet quality, and health outcomes.

⁷The "Millennial" generation comprises those born between 1981 and 1996, and the Baby Boom generation comprises those born between 1946 and 1964.

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