

ECONOMIC ANALYSIS OF DETROIT'S FOOD SYSTEM

A report commissioned by
the Detroit Food & Fitness Collaborative,
and produced by Econsult Solutions, Inc.
and Urbane Development, LLC

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**ECONOMIC ANALYSIS
OF DETROIT'S FOOD SYSTEM
2014**



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FOREWORD

HISTORICAL CONTEXT FOR AN ECONOMIC ANALYSIS OF DETROIT'S FOOD SYSTEM

Detroit is a city known for many things— automotive innovation, music that has moved generations, a rich agricultural history, and vibrant food culture. A food culture so vibrant and diverse that you can find everything from traditional Polish paczkis on Fat Tuesday to coney dogs, steamed mussels, and southern style barbecue all summer long. Detroit was also the first city in the U.S. to offer urban farming programs to help the homeless and assist city residents facing economic hardship. In the 1890s, Mayor Hazen Pingree invested \$3,000 in an urban gardening program targeting vacant lots to feed residents and increase the food supply during an economic depression. In 1970 Mayor Coleman Young started the Farm-A-Lot program that provided residents with flower and vegetable seeds, as well as the permission to plant gardens on city-owned vacant lots.¹ Though the program officially ended in 2005, many residents, schools, churches, and community groups still reclaim vacant land in this way.

Detroit was a city of 1.85M residents in 1950 with more than 130 square miles of land and infrastructure to support a booming mid-western urban center. Detroit now has a majority African American population of approximately 700,000 that suffers from high unemployment, limited access to fresh food, a broken educational system, and is home to five of the top-ten most-polluted zip codes in the state. High truck traffic, toxic facilities, limited fresh grocery retail, and extreme blight all contribute to public health and economic crisis that many urban areas face, but now has become a distinguishing characteristic of this once thriving city.

STUDYING DETROIT'S FOOD ECONOMY

Detroit has an active, but disparate food system that denies access to healthy, fresh, and sustainably grown food to many of the city's residents. This is especially evident in the prevalence of diet-related illness such as diabetes and hypertension, and a steadily increasing obesity epidemic that disproportionately affects people of color and youth. Many residents rely on government food subsidies such as SNAP and WIC, and there is an overabundance of marginal food outlets charging high prices for low quality food.

The other side of the Detroit food system boasts busy local and international food terminals, a vibrant and growing restaurant scene, and a model urban agriculture movement with more than 1500 small farms, school, backyard, and community gardens.

1. City of Detroit website, Neighborhood City Hall Services: www.ci.detroit.mi.us

So how did this system with so much activity and potential become so dysfunctional? The Detroit Food and Fitness Collaborative (DFFC) set out in 2012 to answer this very question. Many diverse stakeholders in the city agreed that a study of the local food economy that documents both opportunities and gaps was needed to help guide and inform future investments. This study examines three major areas of interest:

Baseline Data: how much economic activity is currently happening within the food system as a whole and within subsectors of the system;

Localization: current localization levels and the percentage of localization resulting in the greatest economic benefit for the city of Detroit, across the food system and within subsectors of the system. Case studies illustrate how economic impact shifts with greater localization; and

Workforce: employment opportunities currently available in the food system and additional opportunities that may be available if the localization goal is achieved.

Another important aspect of the study is the ability to leverage report findings to address the issue of food justice. In many urban and rural areas across the country, low-income and people of color are disproportionately affected by limited access to fresh, healthy food. This limited access is evidenced by an inadequate number of quality full service grocery stores, distribution bottlenecks that disrupt the flow of fresh food into the city, and insufficient capital available to support local good food businesses and the development of living wage jobs.

FOOD JUSTICE AND ACCESS TO HEALTHY FOOD

Though the challenge is great, there are multiple ways to develop a functional, efficient food system. Many organizations and individuals in the city are committed to a coordinated approach to address the challenges presented by the current food system; supporting one another by sharing ideas, resources, and working together on behalf of communities that have been left behind. This collaborative approach to a more food-just Detroit is just one of the assets that the city has on which to build.

In 2008 the Detroit Food and Fitness Collaborative led a community process where residents had an opportunity to give their perspective on food access in the city. More than 800 participants identified 11 priorities to increase healthy food access and consumption. Three of these priorities include:

1. Increase the number of jobs in the local food system by promoting the development of food related businesses;
2. Provide more information on buying, preparing and eating healthy food;
3. Ease zoning restrictions on growing food within the city limits.

As a result of this community engagement, many “alternative” food distribution efforts began, with a goal to provide residents with greater access to healthy foods in Detroit:

- Farmers markets and farm stands
- Mobile markets
- Fresh Food Share monthly buying club
- Detroit Public Schools local procurement and fresh produce pledge
- The development of healthy food hubs to address distribution and processing bottlenecks currently preventing fresh produce from reaching Detroit neighborhoods
- Community-based advocacy on federal food and agricultural policy

Many of these alternative methods are still in operation, and some have even expanded. Major grocery store chains are slowly coming back to the city but currently there are not enough grocery stores, chain or independently owned, to meet all resident’s food needs.

THE FUTURE

Although Detroit has experienced decades of economic decline, there are many assets fueling the city’s future. Strategic partnerships between private industry, nonprofits, and policy makers built on the values of equity, sustainability, and fiscal responsibility will ensure a future that vastly differs

from Detroit’s current state. Some of these assets and opportunities include:

Urban Agriculture: Detroit is a model for innovative community-based agriculture practices, with over 1,400 networked gardens and farms. In 2013, Detroit City Council passed the city’s first urban agriculture zoning ordinance, establishing the legality of a wide array of agricultural land uses within the city limits;

Eastern Market: Detroit has one of the oldest and largest public market districts in the country, and the opportunity to become a more robust regional healthy food hub linking new food initiatives to its retail and wholesale markets, food processors, and distributors;

Economic Development: The city of Detroit experiences about \$500M in retail leakage annually, as many Detroiters spend their food and other retail dollars in the suburbs (Detroit Economic Growth Corporation). This untapped buying power represents an opportunity for business growth;

Engaged Philanthropic Community: Detroit has the interest of major philanthropic institutions from Michigan and around the country willing to invest funding and thought leadership to the food movement, recognizing that this issue is rooted in economic and social justice;

Under-Utilized Assets and Infrastructure: Vacant land and buildings, direct access to fresh water, a busy international border crossing, and committed people who are passionate about revitalizing the city are all assets that have not been fully utilized when addressing the economic and social equity concerns that dominate Detroit’s food system.

There is no doubt that Detroit's future is bright; a future where the city's food system offers opportunities for growers, entrepreneurs, workers, and eaters. A future that honors community food partners working tirelessly to create an inclusive environment where everyone has access to good food.

INTRODUCTION

CONTEXT OF THE REPORT

This report arrives at a critical time for the future of Detroit's food system. With a new mayor in office, burgeoning interest in the revitalization of the city, and an increased national and regional focus on the importance of local food, now is the time to discuss the role of efficient and equiTable food systems in Detroit's economy.

This report seeks to assess the current state of Detroit's food economy, highlighting the opportunities and challenges of the manner in which city residents and stakeholders currently interact with the food sector. The purpose is to develop a strategic approach to cultivating a food system that works for all city residents.

The report was commissioned by the Detroit Food and Fitness Collaborative, and produced by Econsult Solutions, Inc. and Urbane Development, LLC. Funding was provided by the W.K. Kellogg Foundation.² In addition, significant insight was culled for the report through discussions with civic and industry leaders, stakeholder interviews, focus groups, and a public focus group.³

OVERALL SCOPE OF THE REPORT

Food is a multi-layered and complicated topic. It touches many elements of people's individual and family lives, including entertainment, personal wellness and nutrition, and household economics. In a larger sense, food plays a significant part in overarching concepts of community and economic development. The entities, actors, and organizations involved in the supply chain that gets food from production to end user have great impacts on our collective economy, environment, and health.

This report will repeatedly address the idea of "food systems," which we will define in Chapter 2 (What is a Food System?). The idea of a food system is a holistic lens on the many processes involved in the way that food is produced, processed, distributed, displayed, sold, consumed, and discarded in our cities and their environs.

This report seeks, wherever possible, to shed light upon how such interconnected processes and policies shape and affect the lives of individuals and families in the city of Detroit.

2. See Acknowledgements for a brief description of the W.K. Kellogg Foundation, the Detroit Food and Fitness Collaborative, Econsult Solutions, Inc., and Urbane Development, LLC.

3. See Appendix C for a list of stakeholder interviews and public meetings that were conducted as part of the formation of this report.

The goal is to paint a picture not just of the policy landscape, but to create a document that helps all people understand the nuances of food and its relationship to their political, social, community, and economic lives.

Thus, we hope that the impact of this report goes above and beyond that of a traditional policy memo, with takeaways and insight for four key audiences: Detroit residents, policymakers and funders, food advocates, and industry and business leaders. We anticipate that by acknowledging how all of these audiences contribute to and benefit from a more efficient and equitable food system, they will have the resources to understand their role in making Detroit's food economy thrive.

REPORT ORGANIZATION

This report was organized in a manner that seeks to bring the most clarity to the idea of a food system and how it functions in the city of Detroit and the surrounding metropolitan area.

The report is divided into seven major sections:

1. An Overview of the Food System
2. The Food System of Detroit
3. Food Systems in Context
4. Food and Localization
5. Detroit's Localization Challenges
6. Recommendations for Detroit's Food System
7. A Vision for Detroit's Food System

These sections each seek to answer some important questions about food systems, how they play out in the city of Detroit, potential solutions for some of the issues within the food system, and how they can be resolved. The report focuses heavily on the three primary goals of intervening in Detroit's current food system: economic opportunity, environmental sustainability, and social and political equity.

QUESTIONS ADDRESSED

The analysis undertaken within the report answers the following questions about the food system in Detroit:

1. What is the current size of the food system in Detroit? What does it consist of? What employment opportunities does it presently represent?
2. What is the economic impact on the broader region of the food system in Detroit in its current form? How many jobs are supported? How much in state and local tax revenues are generated?
3. How big is the opportunity to localize activities of the food system that are currently taking place outside of Detroit? What do these localization opportunities consist of?
4. How much bigger would the food system in Detroit be if it were more localized? How much bigger would its regional economic impact be as a result?
5. What does the economic analysis suggest are the areas within the local food system that warrant the most attention? Does that reconcile with where the current level of resources and programming is focused?
6. What are the barriers that need to be addressed in order to make the local food system more equitable and more productive?
7. What should be done and by whom to make the local food system more equitable and more productive?
8. How can action steps be formulated to implement these recommendations?

Our analysis focuses heavily on economic development and the food industry, with the acknowledgement that this is where the insight of the team is the strongest. We also believe that an economic analysis of food systems is an important foundational step in understanding the current and potential impact of the food system in Detroit on other realms of policy and public life.

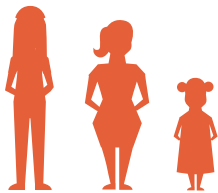
The recommendations put forth in the document go further than this economic analysis. They highlight steps for growth and resiliency of the system; steps we believe will achieve a more equitable food system and extend the benefits of growth to a wide array of the city's population.

CHAPTER ONE

AN OVERVIEW OF THE FOOD SYSTEM

WHY IS FOOD IMPORTANT?

Food is a necessity for all human beings. Though it is often associated with culture, recreation, and entertainment, food at its most basic level is an essential resource similar to air and water. As with all resources, the ways in which food ultimately reaches its end user are highly complex. What, where, and how we interact with food is impacted by the many nuances to which our society, economy, and environment are subject.



FOOD IS SOCIAL AND POLITICAL

Food is one of our most social resources, and it is rarely a solitary activity. Humans are responsible for food, from its production to consumption; it is based on relationships, knowledge, existing power structures, governance and regulatory contexts, and community agency. Access, nutrition education, and equity are key social and political concepts that affect our connections to food.



FOOD IS ECONOMIC

Food related industries are an important sector of regional and local economies. Food-related businesses and other entities employ city residents, contribute tax revenue to municipalities, and build and connect regional infrastructure. They also result in the creation of other support and ancillary industries that contribute to the local economic ecosystem of places.



FOOD IS ENVIRONMENTAL

The production, distribution, and consumption of food rely on other essential resources, such as energy and water. These processes affect the use of land, impact our natural and built environments, and result in the production of waste and other outputs that are meaningful in light of changes to our climate and natural ecosystems.

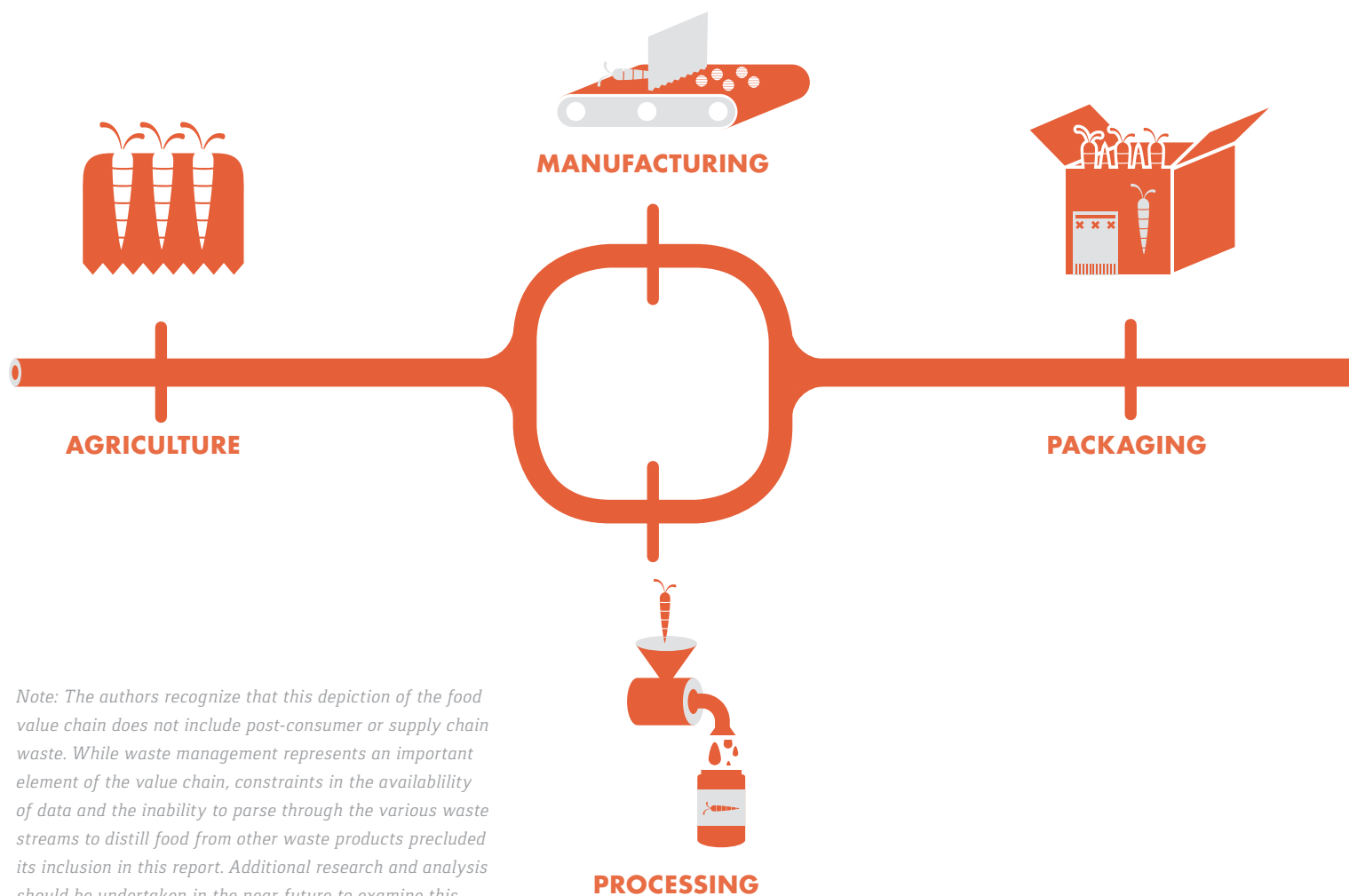
WHAT IS A FOOD SYSTEM

If food is at once social, political, economic, and environmental, how do we talk about it as one comprehensive system? "Food system" is often defined as complex, interconnected, and opaque frameworks for how food is produced

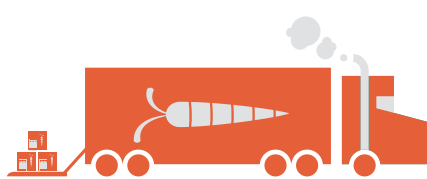
and consumed. Traditionally, academic definitions of a food system follow food items through an economic value chain, describing the various sectors of industry that touch them.

TRADITIONAL FOOD SYSTEM

Economic Value Chain



Note: The authors recognize that this depiction of the food value chain does not include post-consumer or supply chain waste. While waste management represents an important element of the value chain, constraints in the availability of data and the inability to parse through the various waste streams to distill food from other waste products precluded its inclusion in this report. Additional research and analysis should be undertaken in the near future to examine this critical part of the food system.



DISTRIBUTION



RETAIL/FOOD SERVICE



CONSUMPTION

However, food systems encompass more than economic actors and activities. Thus, a more inclusive definition is necessary to fully understand the various components of a food system. Food systems, in practice, consist of four major elements: people, processes, products, and places.



PEOPLE

All human beings must eat and all food must be cultivated or produced. When we think of the people involved in a food system, the actors that commonly come to mind are:



PROCESS

The people and entities involved in the food system all undertake activities related to the production, distribution, and consumption of food.

The actions of the various people collectively add up to a range of processes that determine how the food system functions overall. The actions that each entity undertakes may vary depending on locale. Typically, however, the processes carried out by people in the system include:

COMPREHENSIVE FOOD SYSTEM

COMPANIES

create and transport food

processing, manufacturing, cooking, packaging, selling, buying, providing, storing, aggregating, distributing, recycling, discarding, investing

INDIVIDUALS & FAMILIES

produce and consume food

preparing, cooking, buying, eating, working, growing, discarding, recycling

INSTITUTIONS

play a large role as a connector, often by serving as a conduit to get food that is produced to its end user

buying, sourcing, preparing, providing, processing, investing, discarding, recycling

ORGANIZATIONS

engage and intervene in the processes that determine the ways in which food is produced, distributed, and consumed

influencing, providing, preparing, aggregating, investing, educating

GOVERNMENT

sets the rules of how, what, when, and where we eat

regulating, providing, zoning, permitting, licensing, buying, selling, subsidizing



PRODUCT

Food comes in various forms depending on the processes that it has undergone. These forms can be categorized into five major groups:



RAW MATERIALS/ AGRICULTURAL PRODUCE

food that is grown in a farm or garden environment and altered little from the form in which it was cultivated (i.e. fruits and vegetables).



PREPARED FOODS

food that has been cooked and/or packaged in order to be sold to large quantities of people with limited turnaround/shelf life (i.e. prepared sushi, deli and buffet counter items)



VALUE ADDED PERISHABLE GOODS

food with a limited shelf life that has undergone some alteration from its original state, but is not indistinguishable from its original form (i.e. cut fruit, dairy products, juices)



SERVED FOODS

food that is prepared and eaten immediately with ingredients from the above categories (i.e. restaurant meals, home cooked food)



HEAVILY PROCESSED AND MANUFACTURED GOODS

food that has gone through extensive transformation and/or combining of many ingredients through the use of manufacturing and industrial equipment— could be perishable or shelf stable (i.e. potato chips, cereal, frozen meals, meat and fish)



PLACE

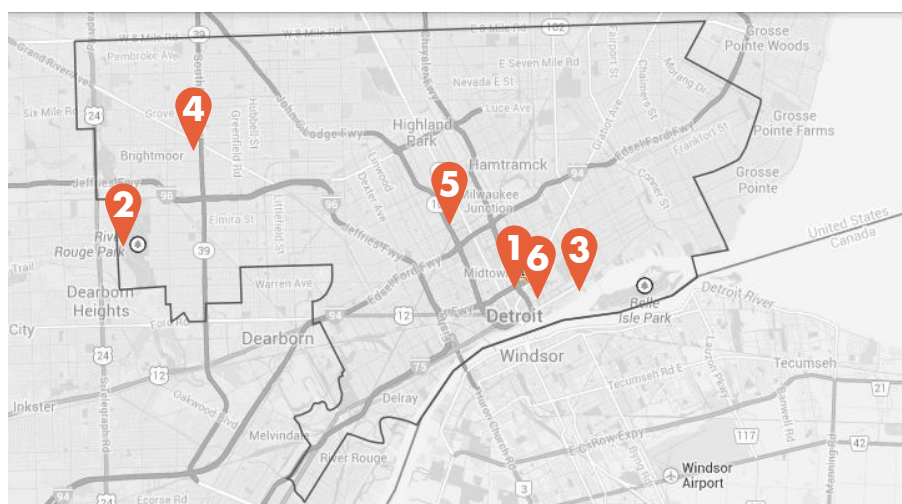
The places associated with food might seem straightforward. We shop for groceries in a supermarket and cook at home. We eat in restaurants, and occasionally pick something up at the deli. However, the geography

of food includes a vast number of physical spaces and types of locations where food is produced, distributed, and consumed. The following maps display these places and highlight key examples within the city of Detroit.



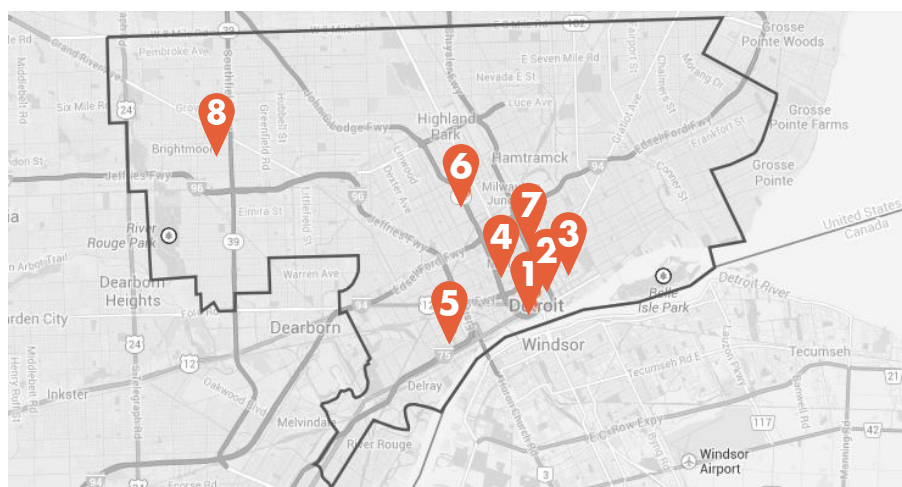
PRODUCTION

- 1 Greening of Detroit Market Garden market garden
- 2 D-Town Farm community farm
- 3 Earthworks hoop house
- 4 Northwest Detroit Farmer's Market farmer's market
- 5 CDC Farm and Fishery fishery
- 6 Berry and Sons slaughterhouse



RETAIL/RESTAURANT

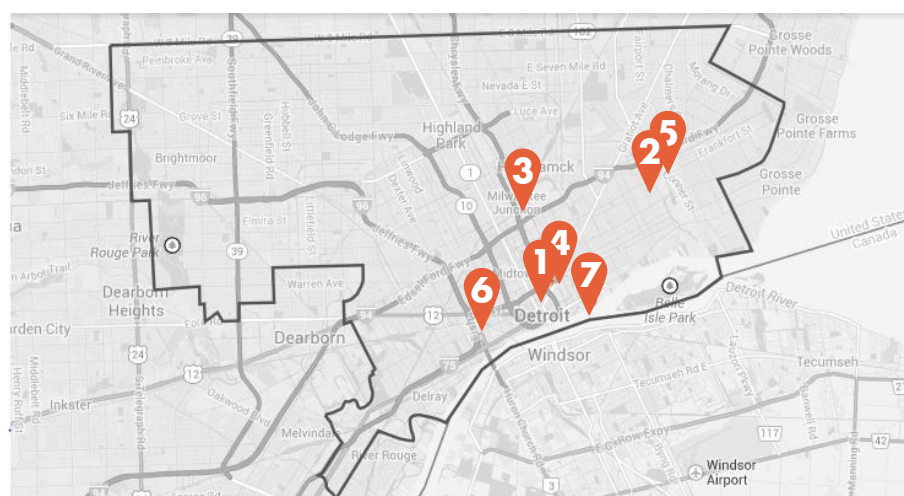
- 1 Lafayette Coney Island fast casual restaurant
- 2 Colors sit down restaurant
- 3 Russel Street Deli deli
- 4 Avalon bakery
- 5 Cafe Con Leche coffee shop
- 6 Peaches and Greens grocery store
- 7 Eastern Market public/food market
- 8 Metro Foodland supermarket





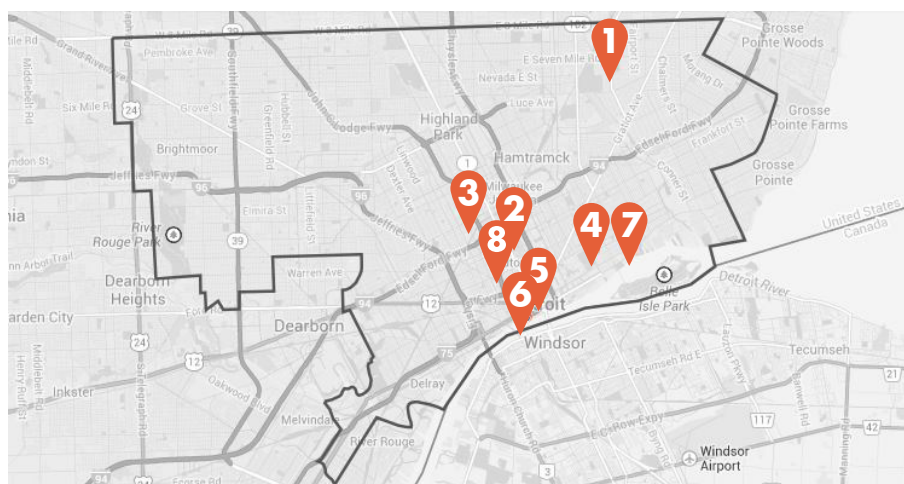
MANUFACTURING/ DISTRIBUTION

- 1 Wolverine Packing factory facility
- 2 Atlas Wholesale Food Co. Distribution facility
- 3 McClure's Pickles co-packing facility
- 4 Eastern Market aggregation point/food hub
- 5 Edibles Rex commercial kitchen
- 6 Two James distillery
- 7 Atwater Brewery brewery



USER CONSUMPTION

- 1 Osborn High School school
- 2 Wayne State University university
- 3 Henry Ford Hospital hospital
- 4 Capuchin Soup Kitchen soup kitchen/food bank
- 5 Compuware World Headquarters office
- 6 Joe Louis Arena sports stadium
- 7 Greektown Casino casino



CHAPTER TWO

THE FOOD SYSTEM OF DETROIT

BY THE NUMBERS

The purpose of this section is to describe the size and composition of the food system in Detroit in economic terms.⁴ A combination of close to 100 industries and 50 occupations were used to form the basis of the economic food system aggregate.⁵

We estimate the Detroit Food System produces \$3.68B in annual revenues, and directly employs a little over 36,000 people earning close to \$1B in wages and salaries per year.

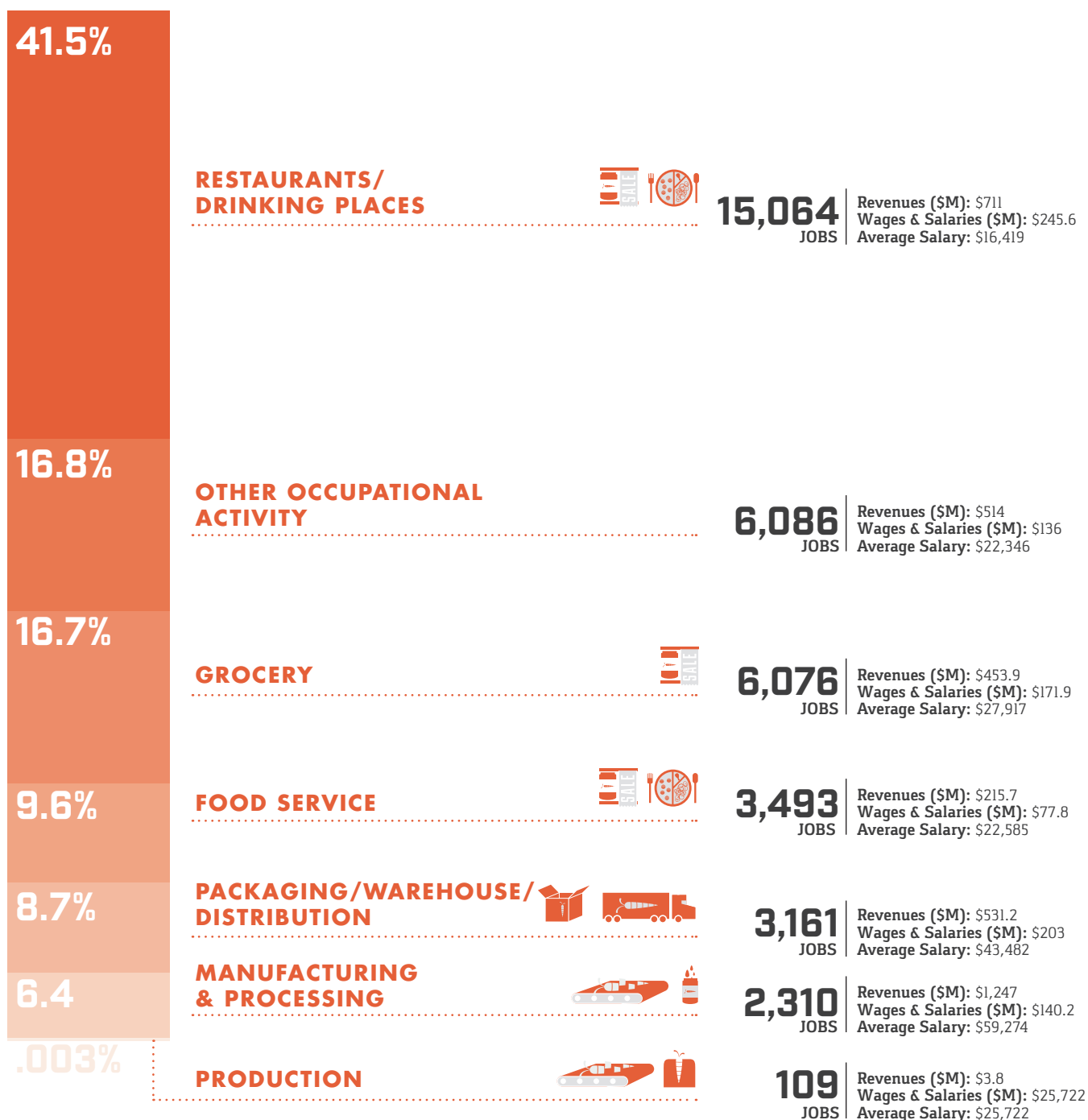
Food Manufacturing and Processing is the largest food industry category within the Detroit Food System by revenue, accounting for over a third of all food system revenues at approximately \$1.25B. Restaurant and Drinking Places leads all Detroit Food System industries in employment with over 15,000 jobs occupied, representing about 42% of the total workforce in the Detroit Food System. Not coincidentally, the Restaurant category also has the lowest average annual wages and earnings per worker in the Detroit Food System at \$16,419. The Wholesale and Distribution sector has the highest average wages at \$66,380 per worker. With the median household income for Detroit at \$27,862, the Detroit Food System in aggregate offers a diversity of employment opportunities for local residents, with many salaries well above that threshold.

4. This was accomplished by aggregating industry and occupation data from business data provided by Economic Modeling Systems International (EMSI), and checking the accuracy of the results through various primary and secondary research methods.

5. Appendix G: Industries and Occupations Considered As Part Of The Local Food System

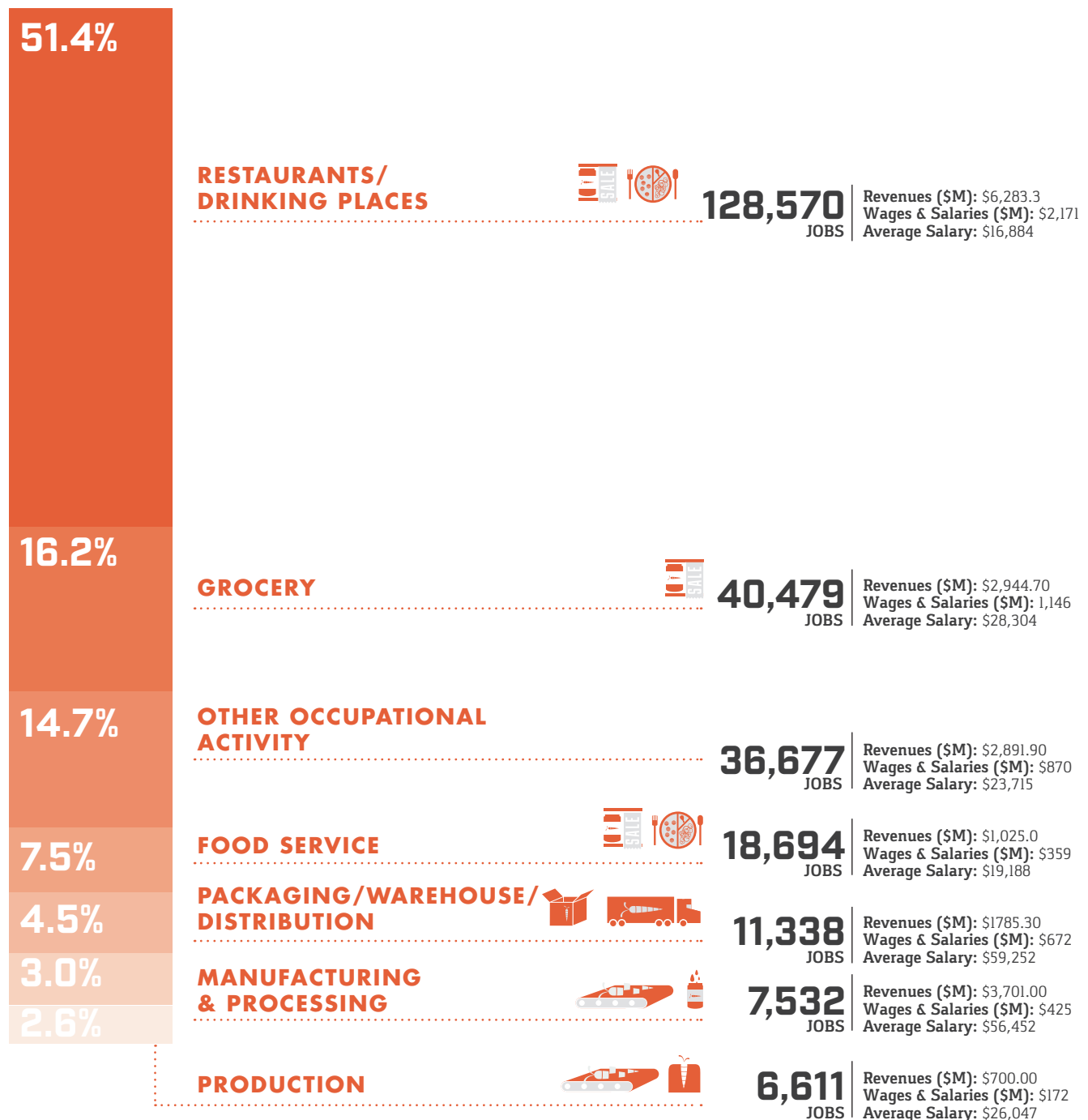
SUB-SECTORS AT A GLANCE

ECONOMIC ACTIVITY, CITY OF DETROIT



Sources: Economic Modeling Specialists International (2012), Econosult Solutions, Inc. (2013)

ECONOMIC ACTIVITY, DETROIT MSA



Sources: Economic Modeling Specialists International (2012), Econosult Solutions, Inc. (2013)

TOP 3 FOOD SYSTEM SUB-INDUSTRIES BY REVENUE DETROIT



Soft Drink
Manufacturing

Revenue: \$539.6M
Employment: 839
Wages: \$72.1M



Limited-Service
Restaurants

Revenue: \$375M
Employment: 8,174
Wages: \$129.7M



Snack Food
Manufacturing

Revenue: \$278.4M
Employment: 567
Wages: \$27.2M

Source: Econsult Solutions, Inc. (2013)

PUBLIC FOOD BENEFITS



\$233M

SNAP Benefits

\$33M

WIC Benefits

OVERALL FISCAL IMPACT OF DETROIT FOOD SYSTEM



Michigan **\$105.3M**

Detroit **\$21.9M**

Source: Initiative for a Competitive Inner City, Food Cluster Report (2011)

Source: Econsult Solutions, Inc. (2013)

ANCHOR PROCUREMENT ACTIVITY

4.5% of the total procurement activity for Wayne State University, Henry Ford Health System, and Detroit Medical Center is fulfilled by Detroit-based vendors.

Source: U3 Ventures, The Midtown Project Phase II Report (2010)

TOP 3 FOOD SYSTEM JOBS BY EMPLOYMENT DETROIT

Food Preparation
& Serving Workers
(incl. Fast Food)



4,044

Waiters and
Waitresses



3,496

Restaurant
Cooks



1,484

Source: Econsult Solutions, Inc. (2013)

JOB GROWTH

Over 10 year period (2002 to 2012) Food Service Industries grew by **6.7%** in Detroit, while All Industries declined by **11%**

Econsult Solutions, Inc. (2013)

ECONOMIC IMPACT

THREE COUNTY REGION

The economic impact of Detroit's food system extends well beyond its direct footprint of \$3.7 billion in revenues and 36,000 employees. Economic activities produce spillover impacts beyond their original industries and geographic locations. Specifically, there are two sets of multiplier effects:⁶

1. The indirect effect of vendors and suppliers ramping up in response to new economic activity, thus creating additional economic opportunities for their vendors and suppliers
2. The induced effect of employees spending a portion of their earnings within the local economy, thus generating additional economic activity and supporting additional employment.

For the purpose of this report, economic impact was measured at the three-county level consisting of Wayne, Macomb, and Oakland counties and fiscal impact was measured for the City of Detroit and the State of Michigan.

Based on this methodological approach, it is estimated that the food system in Detroit is responsible for about \$5.8 billion in annual economic impact, supporting about 59,000 jobs and about \$1.9 billion in wages and earnings per year throughout the three county region. Manufacturing has the biggest expenditure impact, as it is directly and indirectly responsible for about \$2.3 billion in annual economic impact, almost 40 percent of the total food system, and the restaurant category has the largest employment impact, as it is directly and indirectly responsible for supporting about 24,500 jobs.

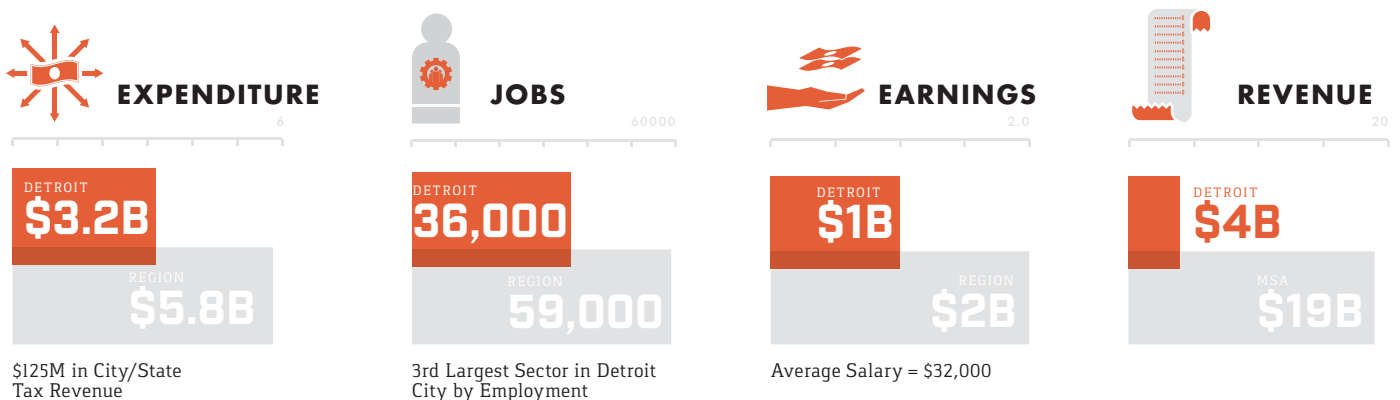
6. The composition and scale of these multiplier effects can be measured using standard input-output methodologies, as can their effect on various local and state tax bases and therefore on local and state tax revenues. For the purpose of this report, economic impact was measured at the three-county level consisting of Wayne, Macomb, and Oakland counties, and fiscal impact was measured for the City of Detroit and the State of Michigan. See Appendix for detailed explanation of economic and fiscal impact methodology

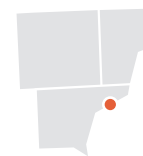
ECONOMIC IMPACT OF DETROIT'S FOOD SYSTEM

ON THE THREE COUNTY REGION, BY SECTOR, ESTIMATED, ANNUALLY

ECONOMIC IMPACT CATEGORY	ECONOMIC IMPACT WITHIN THE REGION
Direct Expenditures	\$3.2 B
Indirect and Induced Expenditures	\$2.6 B
Total Expenditures	\$5.8 B
Total Employment	59,000
Total Wages & Salaries	\$2.0 B
Average Annual Salaries	\$32,000

ECONOMIC IMPACT OF DETROIT'S FOOD SYSTEM





ECONOMIC IMPACT BY SECTOR



MANUFACTURING



30.6%
EXPENDITURE
IMPACT



11.7%
EMPLOYMENT
IMPACT



FOOD SERVICES & DRINKING PLACES



17%
EXPENDITURE
IMPACT



38.4%
EMPLOYMENT
IMPACT



WHOLESALE TRADE



11.8%
EXPENDITURE
IMPACT



5.9%
EMPLOYMENT
IMPACT



RETAIL TRADE



9.4%
EXPENDITURE
IMPACT



14.4%
EMPLOYMENT
IMPACT



REAL ESTATE & RENTAL TRADE



6.2%
EXPENDITURE
IMPACT



5.3%
EMPLOYMENT
IMPACT



ALL OTHER INDUSTRIES



25%
EXPENDITURE
IMPACT



24.2%
EMPLOYMENT
IMPACT

DETROIT IN COMPARISON

Detroit's food system is as distinct and varied as any complex social, environmental, or economic network; that said, it is important to place the system within a larger context. Analysis of the Detroit food system's size, composition, and economic output against other comparable metropolitan areas offers insight into the relative impact and efficiency of the system on Detroit.

Comparable metropolitan areas were selected due to similarities in population size, demographic and socioeconomic make-up, and historical and political contexts vis-a-vis Detroit.

Detroit's food system output place it in the middle of the pack of our comparable areas in terms of absolute size, which makes sense given the relative size of the population and area of the MSAs. Oakland and Newark are high performers relative to their size and socio-economic status due to proximity to fertile production food shed, a distribution infrastructure built for export, high incomes and wealth in surrounding municipalities, and the presence of San Francisco and New York City, respectively within the region.

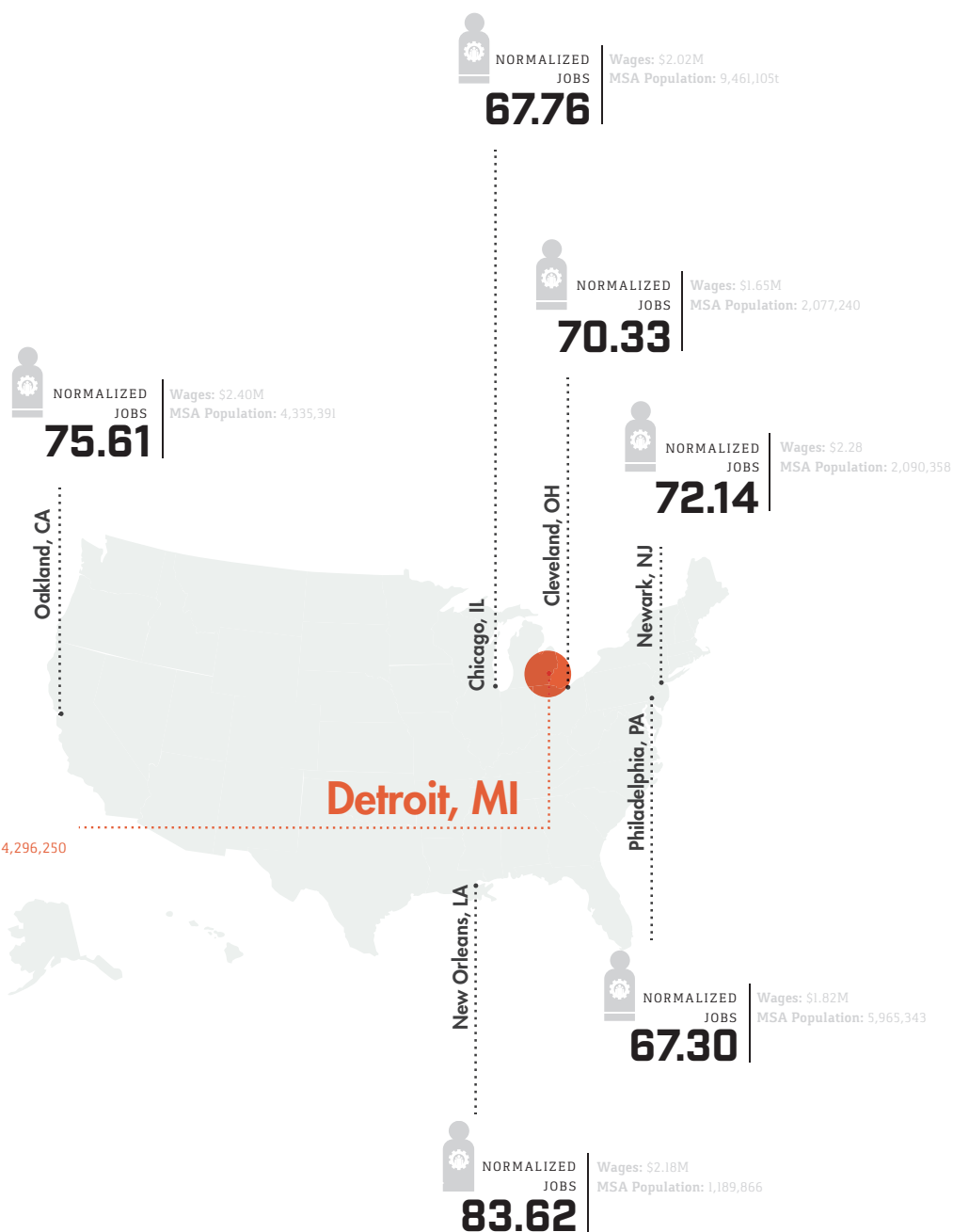
COMPARATIVE ANALYSIS BY CITY: JOBS



**NORMALIZED
JOBS**

58.17

Wages: \$1.35M
MSA Population: 4,296,250



Comparative Figures Normalized by Jobs (Per 1000 Persons)

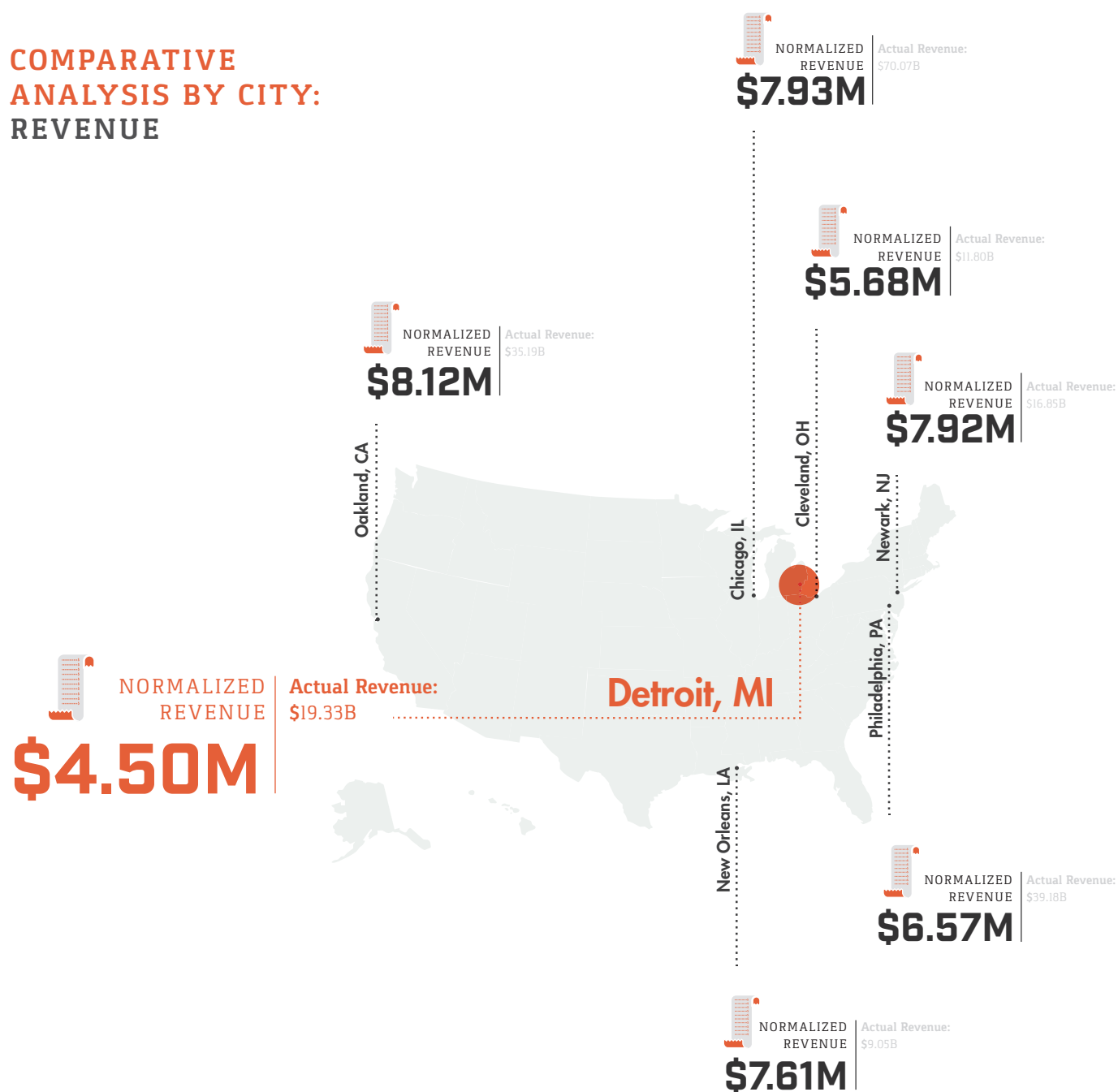
Sources: Economic Modeling Specialists International (2012), Econosult Solutions, Inc. (2013)

When normalizing for population, Detroit's system is the smallest by all measures. Cleveland, often seen as the closest analogue to Detroit, outperforms Detroit by over 26% in revenues, 22% in employee wages and earnings, and 21% in jobs per 1000 persons. New Orleans, with a MSA population 3.6 times smaller than Detroit, provides over 25 more jobs in the food system per 1000 persons, over 43% higher than Detroit. Our analysis is limited to employment and firm revenue indicators, so we can only surmise why certain systems are more robust than Detroit's. As aforementioned, Newark and Oakland have competitive advantages through their

inclusion in larger and high density metropolitan clusters. The New Orleans regional economy is tied to the various industries and uses related to the Gulf of Mexico, so it stands to reason that food-based industries would represent a relatively sizeable portion of overall economic output.

What we do know relative to size is that the Detroit food system pays less, provides fewer jobs, and garners less revenue than comparable regional food systems throughout the country.

COMPARATIVE ANALYSIS BY CITY: REVENUE



Comparative Figures Normalized by Jobs (Per 1000 Persons)

Sources: Economic Modeling Specialists International (2012), Econosult Solutions, Inc. (2013)

CHAPTER THREE

FOOD SYSTEMS

IN CONTEXT:

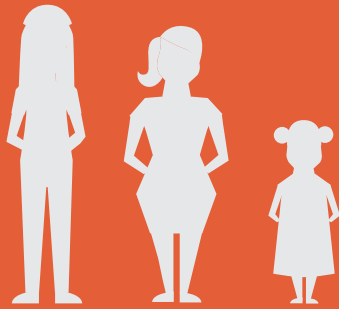
A DAY IN THE

LIFE OF DETROITERS

The previous chapters attempt to define and contextualize the Detroit food system through various quantitative and qualitative measures. Understanding the size, composition, structure, and relative impacts of the system are critical building blocks to inform future action, yet they provide an incomplete picture of the system's constitution and importance.

The hundreds of hours of research for this report yielded one critical insight above all others: to truly understand the Detroit food system, one must experience it firsthand. It must be lived. The most informative data collected came from the stories of Detroiters and their interactions with their food system.

The following pages provide a glimpse into the lives of average Detroiters as they experience the current food system. These stories in no way represent the full spectrum of experiences Detroiters have with the food system on a daily basis, nor does it capture the unique nuances embedded within each individual's view of the system. Nonetheless, the stories endeavor to show a three-dimensional view of the system through a day in the life of some Detroiters.



RITA JENKINS

Corrections Officer, Age: 44

TAMIKA BANKS

Unemployed, Age: 23

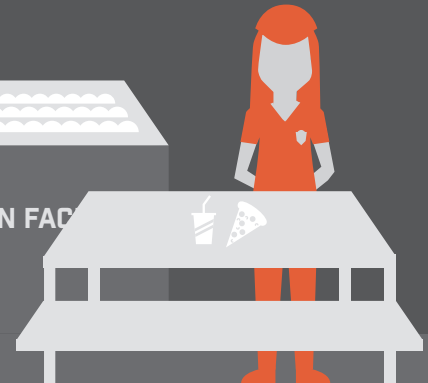
JANELLE PRICE

Student, Age: 7

RITA JENKINS, TAMIKA BANKS, AND JANELLE PRICE are a three-generation family living in a neighborhood just west of Downtown. Rita has been a corrections officer at the Wayne County Sheriff's Department for 16 years, working out of Baird Detention Facility in downtown Detroit. Rita was a single mother who raised Tamika and her brother Tyrell (who is currently in prison for armed robbery) without support from anyone.

UP AT DAWN, Rita and Janelle rush to work and school, respectively, with only enough time for microwaved frozen pastries and party store candy.

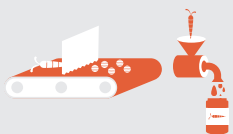
WHILE RITA IS GRABBING LUNCH AT THE JAIL CAFETERIA and Tamika is just waking up to look for a job, Janelle is swapping her free lunch for pizza and soda.



7:00AM

22%

PROCESSING AND MANUFACTURING SECTOR REQUIREMENTS ARE SATISFIED BY WAYNE COUNTY FIRMS



9:00AM

Detroit Wholesalers specializing in Packaged Frozen Foods earn **\$11.6M** in revenue and employ 55 people annually.

11:00AM

42,904

MICHIGAN STATE PRISON POPULATION IN 2011

1:00PM

Soft drink manufacturers, such as Faygo, comprise the #1 food industry in Detroit earning **\$539.6M** and employ 839 workers.

Tamika dropped out of high school when she gave birth to Janelle at 16. She received her GED last year and makes pastries and comfort food plates to supplement her public assistance. Janelle is a smart, popular kid who uses her charm to get access to things she likes. The family does not have access to a vehicle and uses public transit and other means to get around. Tamika and Janelle are overweight.



OVER ONE IN FIVE DETROITERS
LACK ACCESS TO A VEHICLE

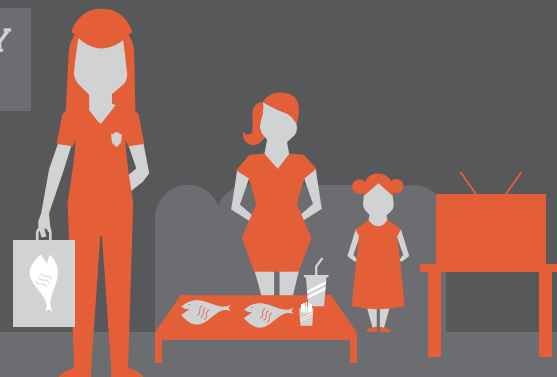
**TAMIKA FILLS OUT
A JOB APPLICATION**
at a local fast food
joint. Rita gets briefed
on food and farm
work release program
and Janelle gets in
a dirt fight in the
school garden.



**RITA GRABS DINNER
FROM THE LOCAL
FRIED FISH
RESTAURANT** and the
family eats dinner in
front of the TV. Tamika
hops to University
Foods to get ingredients
for a batch of sweet
potato pies she is
making for the big
Sunday church dinner.

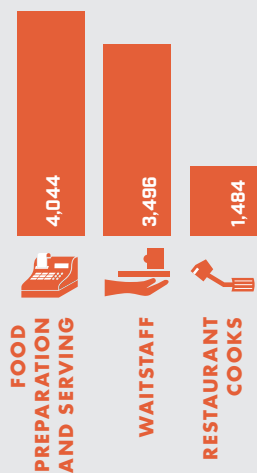


YOU BUY
WE FRY



3:00PM

**THE DETROIT FOOD
SYSTEM IS
COMPRISED OF
36,299 JOBS**



5:00PM

The unemployment
rate in the Detroit
Metro area is
8.0% as of
December 2013,
among the highest
in the nation.

Source: US Dept. of Labor,
Bureau of Labor Statistics

7:00PM



\$2.1M

REVENUE FROM FISH AND
SEAFOOD MARKETS



\$8M

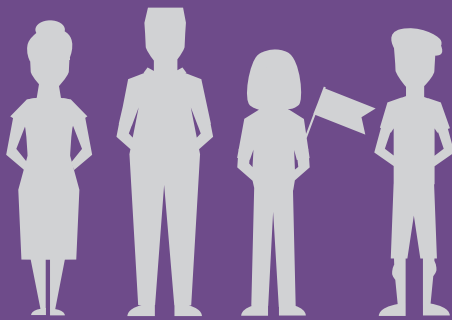
REVENUE FROM DETROIT
FISH FRY RESTAURANTS,
EBT ALONE

Source: Econsult Solutions, Inc.



Detroiters spend \$233M annually in
SNAP (Bridge Card) benefits.

Source: Initiative for a Competitive Inner City, Food
Cluster Report, 2011



YVETTE PARKER

Bookkeeper, Age: 52

STEPHEN PARKER

Hospital Administrator, Age: 54

TATIANA PARKER

College Student, Age: 19

MARCUS PARKER

High School Student, Age: 16

YVETTE AND STEPHEN PARKER LIVE IN ROSEDALE PARK WITH THEIR SON, MARCUS.

The Parkers are native Detroiters that have been married for 19 years; their oldest child, Tatiana, is a freshman at Western Michigan University and lives on campus. They bought their brick tudor home 10 years ago and have become very involved in their neighborhood.

YVETTE, STEPHEN, AND MARCUS BUZZ IN AND OUT OF THE KITCHEN, making

breakfast to go before they jump in the car to start the day.



STEPHEN PRACTICES PORTION CONTROL WITH A BOWL OF SOUP AND A CRUSTY ROLL

from Avalon Int'l Breads in Henry Ford Hospital in Midtown. Marcus grabs the last pizza rolls in the school's buffet line,

Yvette eats leftover pasta at her desk.

AVALON INT'L BREADS



7:00AM

PERISHABLE PREPARED FOOD MANUFACTURING PROVIDES



IN THE CITY OF DETROIT.

9:00AM

52.6% of Detroiters are homeowners.

11:00AM



RETAIL AND COMMERCIAL BAKERIES COMBINED FOR

\$67M

IN REVENUES AND 557 JOBS. COMMERCIAL BAKERY EMPLOYEES (\$37,156) AVERAGE ALMOST DOUBLE IN WAGES THAN THEIR RETAIL COUNTERPARTS (\$18,180)

1:00PM

Henry Ford Health System spent **\$930,621**, or 6%, of its total institutional spend on food service in 2010.

YVETTE WALKS THROUGH THE AISLES OF A LARGE, SUBURBAN SUPERMARKET to pick up groceries to supplement her Eastern Market Saturday haul. Marcus has an energy drink after track and field practice, while Stephen is on the freeway to pick him up.

SUPERMARKET



21.52%

21.52% OF DETROIT HOUSEHOLDS ARE MARRIED COUPLES (VERSUS **48.42%** FOR MICHIGAN)

Source: US Census 2010

MARCUS COOKS A HEALTHY DINNER FOR HIS DAD before they head for a night jog. Stephen sneaks out later to get ice cream. Yvette heads to community theater rehearsal with snacks from Metro Foodland, her local grocer.



3:00PM

5:00PM

7:00PM

9:00PM



26.2%

OF DETROIT HOUSEHOLDS DO NOT OWN A VEHICLE. AT \$10,723 ANNUALLY, DETROIT'S INSURANCE PREMIUMS ARE THE HIGHEST IN THE US AND MORE THAN DOUBLE THE NEXT CITY.

Source: NerdWallet.com

The Eastern Market District is one of the great food meccas in America. With **152** food businesses across 43 acres, it serves the full Detroit Food System. Low-income customers spent **\$1.23M** in EBT sales at Eastern Market alone since 2007.

Source: Eastern Market Corporation

38.1%
DETROIT OBESITY RATE

34.3%
WAYNE COUNTY OBESITY RATE

Source: State of Michigan, Dept of Health, 2009

The ice cream man is coming! Mobile Food Services only capture **\$1.2M** annually in the city, while **\$19.5M** is spent in the metro area.

Source: Econsult Solutions, Inc.



JORDAN WILKINSON

Tech Entrepreneur, Age: 23

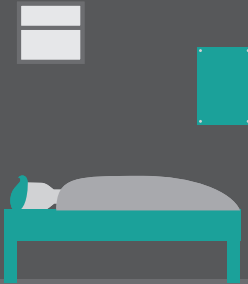
KIRA DEACON

Tech Entrepreneur, Age: 23

JORDAN WILKINSON AND KIRA DEACON

are business partners who have just launched a website and mobile application that catalogs interesting and trendy places in Detroit. They met as undergraduate students at the University of Michigan. Jordan is originally from San Francisco, while Kira grew up in Royal Oak, Michigan.

JORDAN AND KIRA ARE BOTH ASLEEP.
They don't typically wake up until 9:30.



JORDAN AND KIRA BIKE OVER TO GREAT LAKES COFFEE before heading to D:Hive to get the day started around 10:30. They are beginning to explore the Detroit food scene for their website. By lunchtime, Kira is talking to the owner of a local restaurant located in the Cass Corridor, while Jordan orders a brisket sandwich from a local another restaurant over the internet.

GREAT LAKES COFFEE

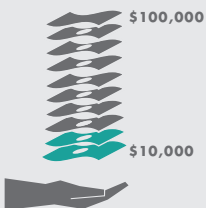


7:00AM

9:00AM

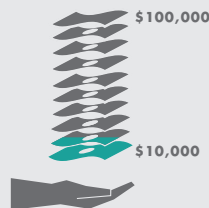
11:00AM

1:00PM



\$20,216

PER CAPITA INCOME
IN GREATER
DOWNTOWN DETROIT



\$14,862

PER CAPITA INCOME IN
THE CITY OF DETROIT

\$6.5M

REVENUES EARNED BY
DETROIT-BASED COFFEE
MANUFACTURERS



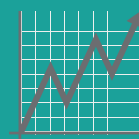
14.2%

OF THEIR
REQUIREMENTS ARE
RESOURCED LOCALLY

There are 268
baristas and
food concession
workers in the
city of Detroit.
Their average
salary is
\$20,149.



Now they share an apartment in Midtown with two graduate students at Wayne State University. They work out of D:Hive, where there are other young entrepreneurs of similar backgrounds.



DETROIT HAS 20,000 LOCAL ENTREPRENEURS WITH 20% PROJECTED GROWTH IN 10 YEARS

Source: Detroit Future City

JORDAN WALKS OVER TO WHOLE FOODS and buys a ton of snacks for his next marathon software coding session. Kira bikes through Detroit, visiting Eastern Market to check out the food trucks, as well as Cafe Con Leche and Honey Bee Market for the next website section.

AFTER A LONG DAY LEARNING ABOUT DETROIT'S HIDDEN FOOD GEMS, Jordan and Kira stop by their favorite hole-in-the-wall to pick up a couple of chicken shawarmas. They end the night on their stoop eating and talking to their next door neighbor about their website.



3:00PM

5:00PM

7:00PM

9:00PM

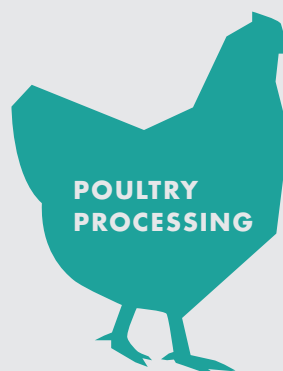
57.2%
OF SOUTHWEST
DETROIT'S
POPULATION IS
HISPANIC,
MAKING IT THE
NEIGHBORHOOD
WITH THE LARGEST
HISPANIC
POPULATION
IN DETROIT



Source: Data Driven
Detroit, May 2012

Snack food manufacturing is the #3 food industry in Detroit by revenue, accounting for **\$278.4M** while employing 567 people.

Source: Econsult Solutions, Inc.



**POULTRY
PROCESSING**

**\$23.1M IN REVENUES
\$3.3M IN WAGES**

Local chicken? Much of the poultry and meat sourced by retail firms is processed and distributed within the Eastern Market district while we sleep.

Source: Econsult Solutions, Inc.

Downtown Detroit will see over **1,000** new residential units built over the next 3 years

Source: Detroit Economic Growth Corporation, Dec. 2013

CHAPTER FOUR

FOOD AND LOCALIZATION

WHAT IS LOCALIZATION?

Localization is an economic strategy that counters the concept of "globalization."

In the context of food, it involves strategies, programs, policies, and activities that bring pieces of the food system in closer geographic proximity to a given end destination than they were previously. For example, a Detroit pie maker seeks out a local apple supplier from the state of Michigan for her next batch of apple pies, as opposed to apples from Washington state that are traditionally available in a supermarket.

The supermarket could also localize its operations by buying more products grown or manufactured closer to home. Both of these could be localized even further if the apples were produced within the city limits of Detroit.

Beyond purchasing and sourcing inputs and ingredients, the level of localization of a firm or entity in the food system can include elements such as the geographic proximity of its workforce, the entity's physical location, and its contribution to tax revenue, city services, and infrastructure.

Localization also offers the potential to reshape the food system to better reflect the local context which it inhabits. In the case of Detroit, the prevalence of small businesses, entrepreneurs, and social enterprises presents a potential sea change in the way the food system operates with social equity, cooperation, and decentralization creating an alternative path to economic resiliency within the system.

The web of factors involved in localization is complex, and this study seeks to provide a starting point for measuring Detroit's progress and future localization potential.

WHY IS LOCALIZATION IMPORTANT?

Localization is an economic strategy targeted at firms involved in the food system and the entities that regulate and influence such firms. However, as a strategy, economic localization has benefits and implications for a city that are social, political, and environmental beyond their economic impact. These include:



ENVIRONMENTAL

number of buildings constructed/
repurposed

public infrastructure

distribution channels

neighborhood character

private property values

environmental impact and fossil
fuel use

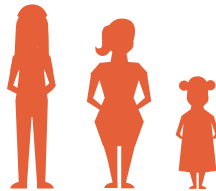
energy consumption

waste disposal and recycling

soil quality

water quality

biodiversity



SOCIAL/POLITICAL

quality of life

public health

nutrition

public safety

food security

affordability

accessibility

social networks and relationships

culture and identity

product transparency

political agency



ECONOMIC

ability to keep money in the local
community

local return on purchases

stimulation of tangential industries
and sectors

property tax revenue

incomes and wages

direct employment numbers

indirect employment numbers

leveraged investment

HOW LOCALIZED IS DETROIT'S FOOD SYSTEM?

The precise measurement of localization intensity is very difficult to know at small geographies, such as for a single municipality like Detroit. Even if a significant primary research effort were undertaken, localization proportions may be impossible to discern. Establishment-level information on the geographic location of vendors and customers is not often made publicly available.

Using available business data, localization proportions can be estimated at a single-county level.

Therefore, what follows is a calculation of the proportion of requirements within Wayne County of all food system establishments that are actually satisfied by food system establishments that are located in Wayne County.

Requirements *for* an industry represent what it needs to purchase from other industries in order to do business. Requirements *from* an industry represent what needs to be purchased from it by other industries in order for them to do business.⁷

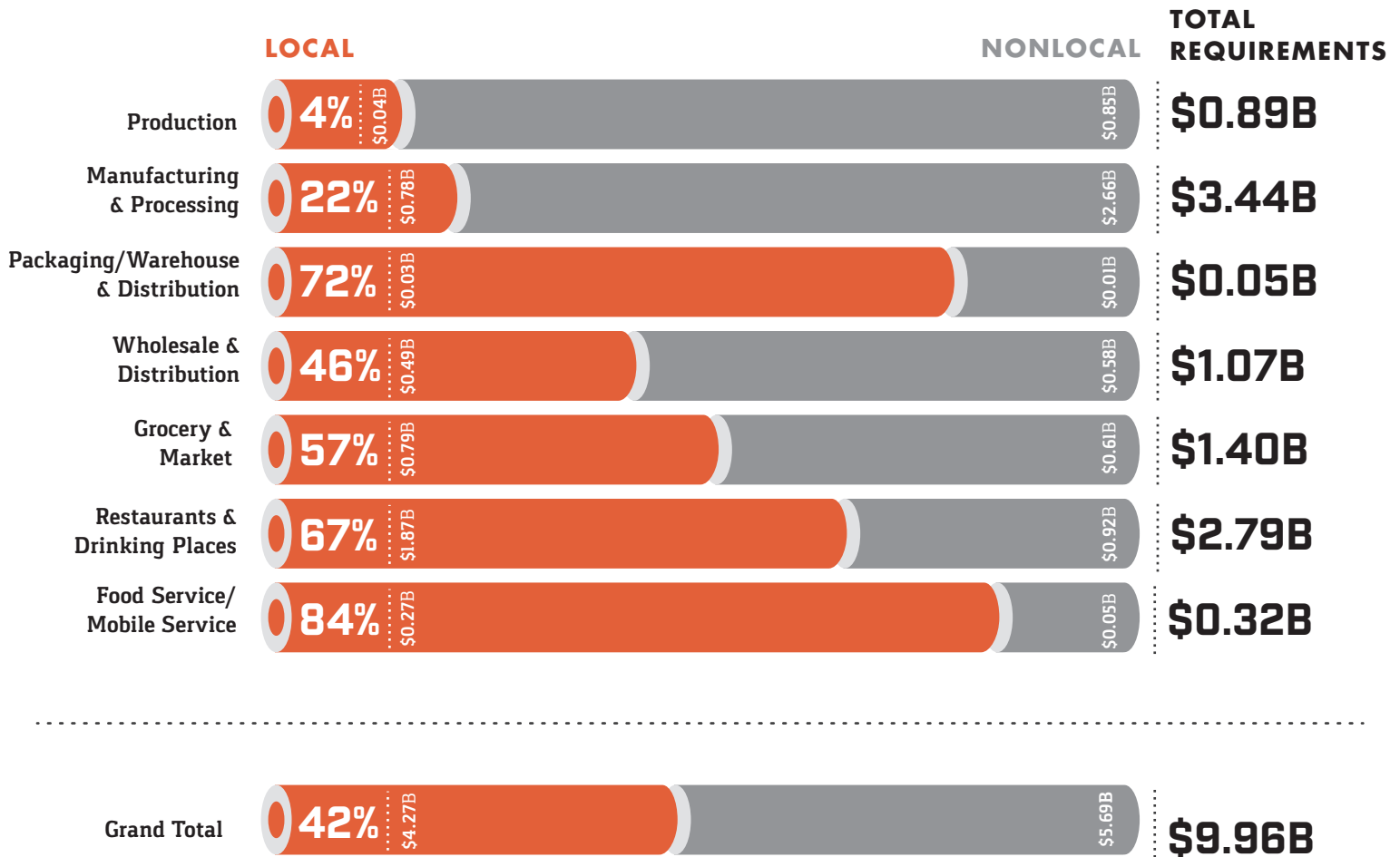
In the following section, what is assumed is that whatever can be captured from currently non-local sources is captured by establishments within Detroit.

There is about \$10 billion in goods and services that are required within Wayne County of all food system establishments, of which about 43 percent are satisfied by food system establishments that are located in Wayne County. The other 57 percent is satisfied by food system establishments that are located outside of Wayne County. By far, the largest localization opportunity is in manufacturing and processing, as 78 percent of the \$3.4 billion required within Wayne County of manufacturing and processing establishments is satisfied by manufacturing and processing establishments that are located outside of Wayne County. In addition, only 4% of requirements for the agricultural production sector for Wayne County are satisfied by Wayne County establishments. \$850M of potential revenue is available for Detroit firms— from farm equipment manufacturing to paper supply distributing to animal feed processing— from Wayne County food system establishments.

7. See Appendix D: Glossary of Food System Terms for an extended definition of a requirement.

PROPORTION OF FOOD REQUIREMENTS

of Wayne County Establishments Satisfied
by Wayne County Food System Firms



DETERMINANTS OF LOCALIZATION

At the level of the food industry firm, there are certain factors that determine whether an entity can localize pieces of its operations (defined as bringing elements of the food system in closer geographic proximity to a given end destination than they were previously). These factors are the determinants of localization. The following six determinants allow or impede the ability of firms within the food system to contribute toward greater localization of the Detroit's food economy as a whole:



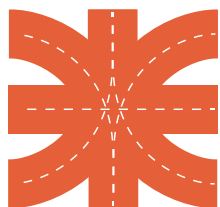
ACCESS TO CAPITAL

In order to start and maintain a business that engages in any aspect of the food system, a firm or entity must have the ability to pay for upfront lump sum fixed costs, such as a building, equipment, ingredients, initial marketing and branding costs, as well as ongoing operating expenses. Many food firms (particularly emerging, small, and medium-sized) are not able to tap into traditional funding sources for such capital, such as bank loans and equity. The cost of capital is often too expensive for such firms, and they lack the requisite levels of credit and options in terms of asset classes (i.e. debt versus equity). The inability for local firms to access capital prevents them from competing with national and global corporations who are part of the food economy and are not based in the city, thus reducing the localization of the food system overall. Lack of capital also impedes the ability of firms based in the city to attract appropriate workforce talent.



WORKFORCE DEVELOPMENT

For a local food system to be robust and serve the needs of its population, there must be a workforce that has the skills or can be properly trained to undertake the activities required by firms who are part of the system. Workforce training is often a difficult and costly endeavor, and requires the participation of educational and institutional actors within the city and their alignment with industry trends and needs. The lack of a workforce prepared for or willing to undertake food systems jobs is an impediment to the localization of the food economy. Without a skilled workforce and robust workforce development opportunities, firms are deterred from locating within the city, and those that exist may be attracted to other locations that have more specialized or skilled potential employees. In addition, firms may not be as productive or efficient as possible without employees that fit their particular skill set. This can result in residents missing out on opportunities for employment and economic mobility.



PUBLIC INFRASTRUCTURE

In order for food systems firms to locate within the city, there must be sufficient access to good quality, use appropriate, and well maintained roads, energy, water, building stock, and other infrastructure. Networks, clustering, and location of infrastructure also affects the ability of firms within the food system to source, produce, and distribute goods. Public priorities often dictate the management, use, and ownership of industrial and distribution infrastructure. The unpredictability, unreliability, or poor management of many of these crucial resources can deter food related firms from locating within the city.



POLITICAL WILL

For firms and entities to localize their food production and buying, there must be a political environment in which policymakers, regulators, and influencers understand the challenges and needs of small and medium sized firms as they relate to the aforementioned localization determinants. A convoluted environment of decision making and public sector service provision can cause barriers such as high operating costs and duplicative or confusing regulations that inhibit a firm's growth or cause them to locate elsewhere.



LOCAL DEMAND

For localization of food to take hold, there must be significant demand for, and willingness and ability to purchase local products by consumers. If consumers are ambivalent or have a preference for global and national products, which we know is the case overall for Detroit residents, or if they cannot afford the price points of locally made goods, firms within the city cannot compete in this market. Consumer education about the importance of buying local beyond viewing it as a niche category is a key element to localization. The ability and desire of firms to understand and respond to local perspectives and needs is also crucial.



BUSINESS VIABILITY

For local firms to capture some of the market share of larger regional, national, and global firms, they must have capacity internally that matches their growth goals, as well as the ability to compete in a marketplace occupied by other firms undertaking similar work. Firms must be able to differentiate themselves in some way from what is already available. The nature of the firms they are competing with, ability to enter the marketplace and remain financially sound, and ability to innovate, grow, and remain competitive all affect the success of the city's food related firms, and thus the localization of the food system overall.

CHAPTER FIVE

DETROIT'S LOCALIZATION CHALLENGES

LOCALIZATION CHALLENGES

The ability for Detroit's food system to localize is impacted by the aforementioned determinants. In some cases, Detroit's firms achieve positive results in these determinant areas. However, the challenges of localization are complex and cut across various subsectors of the overall food industry.

The following matrix displays key issues that impede the ability of firms to achieve localization within each sector (agriculture, manufacturing, distribution, retail, and restaurants and food service) through the lens of the entities most impacted by these challenges:

Buyer: an individual or entity that purchases raw materials or products

Worker: an employee of a company organization

Producer: an individual or entity who makes or sells products

Infrastructure: an entity that provides the physical connections (transit, power, light) needed to support the food system

Government: public agencies and entities that regulate and enforce laws and policies

Public/Society: city residents as a collective and a proxy for the larger public good

Months of interviews, data collection, and public input with each of the described entities informed this analysis.

FOOD LOCALIZATION CHALLENGES



AGRICULTURE



MANUFACTURING

includes processing, packaging

BUYER

There is a lack of efficient storage/delivery infrastructure. Price for local produce is still a major issue for buyers. Extend reach of programs that connect consumers to food system and encourage gardening/cooking/healthy eating.



Not enough inventory or particular products for large scale buyers, considered niche. Price of local manufacturing continues to be higher in comparison. Too few established marketplaces with scale (Eastern Market, Whole Foods) for local product.



WORKER

No dedicated pipeline to connect city workers to farm jobs. Wages are low and career ladders are perceived as low or non-existent. Need to increase awareness of existing ag training programs.



Food manufacturing requires different skill sets. New training is needed for specialized skill sets. Current workforce pipelines rely on word of mouth which excludes many potential Detroit workers.



PRODUCER

Capacity to grow is limited. Difficulty in accessing a larger market place because of inefficiencies/lack of cohesion. Lack of skilled farm/agricultural labor. Support organizations for producers need increased capacity/funding.



Lack of physical, solid manufacturing space. Challenge turning small batch recipes into large quantity with same quality. Lack of distribution service and marketplace for entry into market.



INFRASTRUCTURE

Aggregation of land is costly and city land acquisition is not consistent or transparent. Some land not suitable for agriculture. Lack of distribution services. Entities offering support with property assessment, acquisition, construction, irrigation and other infrastructure problems need increased capacity.



Existing building stock is poor quality and demands extra capital for renovation.



GOVERNMENT

Difficult to purchase public land. Ordinances do not incentivize ownership. Stricter policies for migrant workers is hurting workforce on farms.



Costly licensing and permit fees for small and emerging entrepreneurs. Unpredictable and overly regulated oversight of established firms. Transparency and role of government agencies is unclear.



PUBLIC/SOCIETY

Detroiters do not benefit from growth in agriculture jobs. Largely migrant workforce. Race and historical inequities impact minority farm workers.



Local products are not necessarily healthy. Local products are perceived as more expensive; residents choose cheaper options regardless of where it's made.





DISTRIBUTION

Lack of technology prevents potential buyers from keeping up to date with inventory. Small scale firms lack the ability to make purchasing efficient for large buyers. Local products considered niche, and large, national firms will not carry them.



Jobs require driver's license and potential 3rd shift employment. Clear distinction made between employees from suburbs compared to Detroit.



Access to capital and storage infrastructure are key to growth but current environment does not make this financially sustainable. Lack of cohesion between food system sectors make local distribution inefficient. Firms need large buyers to grow



Highways and road networks are the only way to transport goods in the area, and poor road conditions make transporting goods difficult.



Unpredictable and overly regulated oversight of established firms. Transparency and role of government agencies is unclear.



If there is no demand for local products, firms have no incentive to carry such products.



RETAIL

Psychographic research indicates large scale and national supermarket chains still preferred. Price is still the main determinant in buying food. Perception of poor store and product quality for Detroit stores.



Poor customer service and community engagement cited as key impediments to quality grocery experience in Detroit. Available jobs tend to be low-wage/low-skill. Workplace advancement difficult in family-owned, independent markets.



Small-scale producers lack proper food safety, labeling, and packaging processes to sell product in mid- to large-scale retail channels. Challenge to establish customer base in many Detroit neighborhoods due to price point and product type mismatch. Lack of local product marketing and distribution infrastructure keeps Detroit retailers unaware of local product offerings.



Lack of public transit hurts both employees and customers that cannot reach retail.



Government incentives and technical assistance do not target stores under 5,000 sq ft. Significant taxes, fines, and fees that deter firms from locating in the city as opposed to other municipalities in the metro area. Lack of police presence give a feeling of little safety for some retail locations. Permitting issues for additions and changes to buildings are complicated.



Preponderance of grocery stores are not full service; lack healthy and affordable food options. Store ownership does not reflect demographics of Detroit residents.



RESTAURANT/FOOD SERVICE

Local food is considered a niche market with high prices and products that target middle to high income demographics. Lack of diversity among firms in the restaurant and food service sector, with relatively few full service sit down restaurants, or healthy options city-wide.



Many food service jobs are part-time, low-wage, with few benefits. Few career ladders and training programs that result in long term individual job growth. Little ability for workers to organize around work conditions.



Current supply chains favor conventional products due to ease, existing relationships, and current infrastructure; firms have little incentive to add local products. Pipelines for food sourcing result in unhealthy mass produced items for restaurants/food service providers. Low operating capital makes it difficult for firms to perceive new growth markets and invest in areas of potential high demand, such as local product.



Lack of public transit that connects potential customers to restaurants and food service establishments. Inconsistent and disjointed infrastructure provision, including back bills for utilities such as gas and water.



Lack of health department capacity creates an environment with little clarity around regulation. Public priorities do not emphasize the growth of local food sector as much as possible; i.e., no existing analytics on Detroit restaurant and food service industries.



High quality local food products are often created by and marketed to upwardly mobile middle class residents and transplants; supply and demand do not benefit average citizens. Few opportunities that link food service and restaurant sector with paths to meaningful skilled careers. Prevalence of fast food and lack of high quality, healthy, and affordable options for everyday Detroiters.



ADDRESSING THE CHALLENGES

Stakeholders throughout Detroit's food system are addressing the localization challenges through the lens of the proposed determinants.

Detroit FoodLab's Operation Above Ground targets small-scale food producers who face onerous, non-transparent licensing policies in the city of Detroit.

Eastern Market Corporation marshals millions of dollars of public and private investment to modernize Eastern Market's physical plant and infrastructure to create a world-class regional food hub where local food is produced, processed, distributed, stored, sold, and consumed, all in one network of public facilities.

An outgrowth of these two efforts is Detroit Kitchen Connect, a network of full-service shared commercial kitchen spaces that were formerly underutilized, to leverage demand for licensed production spaces from Detroit food producers.

As aforementioned, Detroit's urban agricultural ecosystem is robust. Organizations such as Detroit Black Community Food Security Network and Earthworks Urban Farm offer agricultural skills training as a workforce development tool for local residents to create community wealth through food sovereignty. They, along with organizations such as Keep Growing Detroit, Greening of Detroit, and countless others, have built a network of farms and community gardens that combine commercial and personal-scale agricultural production with community organizing, policy advocacy, and business training to ensure the viability of these enterprises while offering a more equitable version of agricultural production narrative.

Detroit Economic Growth Corporation, the city's economic development arm, has several creative initiatives offering access to capital, strengthening business viability, and harnessing local demand for products and services in the Detroit food system.

The Green Grocer Project, an initiative of DEGC, has provided financing and technical assistance to over 30 Detroit grocery stores since 2010, leveraging over \$40M in investment. The D2D program, in partnership with DEGC and the New Economy Initiative, connects large institutional, corporate, and public sector entities to local firms, products, and services. In 2013, D2D's 15 largest companies and institutions collectively spent over \$550M with Detroit companies, many in the food sector.

Perhaps most telling, locally-owned food establishments are proliferating throughout the city, engaging the food system at every level. Detroit Vegan Soul and Supino's Pizzeria source many of their core ingredients locally; social enterprises such as COLORS restaurant and On The Rise Bakery offer workforce development platforms for Detroit residents; Russell Street Deli, Corridor Sausage, and Slow's BBQ have all partnered with the Detroit Lions to expand their businesses to Ford Field and its 65,000 patrons.

Despite the plethora of systemic challenges impeding localization in the Detroit food system, the collective impact of local organizations, institutions, businesses, and residents investing in the growth and resiliency of the system has been a powerful agent of change for the Detroit food system and food economy. The tipping point towards a just, equitable, localized food system in Detroit is closer than ever.

Stakeholders throughout Detroit's food system are addressing localization challenges, investing in the growth and resiliency of the system. The tipping point towards a just, equitable, localized food system in Detroit is closer than ever.

CHAPTER SIX

RECOMMENDATIONS FOR DETROIT'S FOOD SYSTEM

The following recommendations were developed in response to stakeholder interviews, research, and the need to highlight great work currently being done in the city as well as opportunities to pilot new ideas.

The recommendations are not ordered by importance or relative value; each recommendation addresses a strategic or tactical opportunity to create a more diversified, resilient food system in Detroit. We used the proposed determinants of localization as a guidepost for organizing our recommendations, while opening with a new concept that may allow for easier coordination among the many vested stakeholders in the Detroit food system.

These recommendations are not put forth with the assumption that the Detroit Food and Fitness Collaborative (DFFC) will take them on; the goal is to encourage organizations and agencies from across the Detroit Metro area to work collaboratively to move the needle towards a more robust food system.

The Detroit Food Policy Council (DFPC) may find some interesting suggestions in the field of policy; local educational institutions and workforce development agencies may see value in offering credit-based training programs in partnership with employers to create a well-trained pipeline of workers; or the Mayor and City Council may work with local food advocates and business owners to create a more business-friendly environment that enables or even incentivizes food businesses to stay and grow in the city. There are many possibilities, but a few are presented here with the hope that Detroiters will continue to work together to grow Detroit's food economy.

FOOD SYSTEM SUPPORT ORGANIZATION

Most of this report focuses on the size and composition of the Detroit food system— where the empirical meets the relational. Any food system is as much about how the various stakeholders interact with one another as it is about how much economic or product output they are able to create.

At its core, food is still about relationships; the single most important factor of localizing and enhancing Detroit's food system will be its ability to effectively cultivate and manage the almost infinite number of relationships needed to build a thriving and equitable food system.

Currently, there are thousands of stakeholders in the Detroit food system working to advance a specific sector of the system— sometimes in collaboration, other times in silos. More importantly, none of these entities on their own

have the relationships, capacity, or wherewithal to engage the universe of local, regional, and national stakeholders who have the resources, capital, and connections to invest in the Detroit food system in a meaningful way.

We believe the creation or designation of a dedicated organization whose sole purpose is to strengthen the Detroit food system is critical. This entity must operate within a grassroots, community-led framework, but build bridges with entities at all levels. It must also serve as an umbrella for the myriad food firms, organizations, and institutions addressing the Detroit food system's most critical needs. This is the most important first step in securing a sustainable, efficient, and equitable food system in Detroit.



RECOMMENDATION:

Create or designate the "go-to" support organization for the Detroit food system.

Equal parts think tank, resource provider, and trade association, this organization would deliberately focus on growing the Detroit food economy through research and analysis, policy advocacy, business development, and guiding investments.

This entity would not act as a gatekeeper or hold all of the critical resources for the field, but would centralize some vital functions such as marketing, communications, peer-to-peer referrals, and other shared services that are easier to amplify and scale with a single point of contact.

While there are organizations focused in one or more of these areas, there is no one single entity with the scale, capacity, and expertise to engage and invest in the Detroit food system at both macro and micro levels. The creation or designation of such an entity would bridge the gap between a burgeoning small-scale Detroit food ecosystem that needs critical support and investment, and the larger, conventional firms, institutions and funders who need guidance to invest in infrastructure, workforce, and other activities.

Strategies for Implementation:

Small-Scale Food Ecosystem Development

Perhaps more than any other city, Detroit has a robust existing ecosystem of nascent-, micro-, and small-scale food growers, producers and manufacturers, distributors, and retailers, as well as key stakeholder organizations, scrambling for resources. This network comprises just a small fraction of the economic output of the current system, but they do represent the best chance for the Detroit food system to diversify, innovate, and become more sustainable in the future— not to mention the system's best chance to truly represent and serve all of the patrons and residents of Detroit.

The food system support organization should focus on providing and connecting small-scale firms and support organizations with state-of-the-industry resources and tools: research and analytics to help inform strategic planning and tactical decisionmaking; operational support and consultation to guide small firms on implementing best practices; and fostering collaborations between small firms and organizations to create a functional small-scale supply chain, as well as create economies of scale within the conventional Detroit food supply chain.

INVESTMENT

Discussions with multiple large Detroit-based financial and philanthropic institutions echoed the same sentiment: the need for a “go-to” organization to help discern what critical investment needs and opportunities were present in the Detroit food system.

In essence, the Detroit food system needs a dispatcher for capital and other resources. We see a dual role for a dedicated support organization with

regard to investment. Leveraging the role of small-scale ecosystem builder, the support organization would provide seed capital to small food firms for the ideation and incubation of disruptive concepts that grow into sustainable products, enterprises, and organizations. The goal here is to increase the amount of capital offered and the type of funding structures available to small firms. On the other side of the investment spectrum, the support organization would assist the large financial and philanthropic institutions in deploying system-wide capital investments, as well as identifying the most promising small- and mid-scale products, firms, and organizations ready for investment.

POLICY AND REGULATION

Detroit has a rich existing food policy framework and collective of public and private stakeholders advocating for policy change at the local, county, and state level. Policy wins in urban agriculture on the local level and SNAP incentives at the federal level, offer a glimpse of what a coordinated effort in policy advocacy can accomplish. With a new mayoral administration, the time is ripe to present a united policy framework that covers the needs of the entire Detroit food system.

The support organization should work with the food policy council and other key stakeholders to research and codify policies in all relevant fields that will enhance the food system, particularly to stimulate growth and opportunity for small-scale firms and entrepreneurs. The critical value add of the support organization is to assist and guide the implementation



of policy and legislation in partnership with local government officials. Too often, implementation design gets lost in the policy discussion. The support organization will have access to content experts to help steward the implementation of new programs, initiatives, and regulations.

MARKETING AND BRANDING

Detroit is already known as a national food system innovator and provocateur within many fields of interest, from food justice, to alternative distribution and gastronomy. The problem is many Detroiters still perceive the food system of Detroit as a collection of party stores, fast food restaurants, and Eastern Market. This report attempts to demystify and contextualize the largesse of the Detroit food system for everyday Detroit residents. As with most reports however, actions speak louder than words. There is a critical need for intentional marketing of the Detroit food system and its stakeholders.

The support organization would play a key role in spearheading the marketing and branding of the Detroit food system. It will be well positioned to leverage its partnerships and convening capacity to develop a relevant brand for the marketing campaign, as well as secure buy-in from Detroit firms and organizations to achieve a critical mass of usage. In addition, the support organization would help individual firms with marketing best practices and resources, and assist small firms with collective marketing to larger firms, anchor institutions, and the public sector. Other areas of focus could include:

- **Market Intelligence:** to help connect the dots between the various sectors and industries of the system, particularly small firms with cutting edge research, insights, and analytics. Access to sound data supports marketplace innovation and best practices, policy implementation, and sound financial investment.

- **Anchor Institution Engagement:** works directly with the various large anchor institutions and public sector entities to increase the procurement of products and services from Detroit food system firms and organizations. It also helps to create a direct local food production and distribution pipeline to local anchors.

- **Advising and Convening:** serving as an “umbrella” for all things food in Detroit. The support organization would convene the non-profits, small/mid/large scale food enterprises, and institutional players to coordinate strategy and prioritize key investment areas. It would also advise new stakeholders and non-traditional partners on how to engage the Detroit food system.

STRUCTURE

To be successful, the support organization needs a staff of content experts specializing in research, policy, finance and business development, and community engagement. Relationships with key public and private stakeholders and thought-leaders are also important to achieve strategic goals. This food system “SWAT Team” could also partner with a Community Development Corporation (CDC) that raises and deploys its own capital to pilot and incubate innovative food ideas.

ACCESS TO CAPITAL

A critical impediment to the localization and growth of the Detroit food economy is the lack of available capital, either for purchasing real estate, investing in infrastructure, growing a business, or starting a new business. Much of this stems from Detroit's depressed real-estate values, weak market climate, and the corresponding caution from financial institutions. Perhaps as important, the dearth of appropriate financial products and the structures to deploy capital to various food businesses and institutions in Detroit, particularly small- and mid-sized firms, exacerbates the capital conundrum.

Food retail projects have several dedicated funding sources, including Detroit Economic Growth Corporation's Green Grocer Project and the Michigan Good Food Fund, which were seeded from the federal government's Healthy Food Financing Initiative (HFFI). These funds will also have small percentages dedicated to other food system uses, including investments in production, manufacturing, and processing. While these funds are a great first step, the Detroit food economy has significant investment needs, and additional funding mechanisms need to be initiated in order to address operational and infrastructure gaps at all levels.



RECOMMENDATION:

Develop a food funding syndicate of commercial, public, and philanthropic capital sources to invest in the Detroit food economy.

There cannot be a single entity or funding source that will address all the investment needs within the Detroit food economy. In particular, the credit needs of small- and mid-sized firms to address cash flow and working capital concerns is a massive impediment to stabilization and growth for those firms. Grant capital is also an essential piece of the puzzle, whether serving as credit enhancement, equity, lowering the

cost of capital, or paying for essential soft costs, which is often missing or under-capitalized. A food funding syndicate of banks, CDFIs and other intermediaries, public sector, and philanthropic entities targeting their investments at specific Detroit food system needs through a coordinated and collaborative strategy will have greater overall impact.

Strategies for Implementation:

SMALL BUSINESS FUND

The Small Business Fund would be a combination of grants and low-interest loans available to food businesses of various sizes, coupled with technical assistance and capacity building. Needs include patient capital, as well as enhanced underwriting capability to manage line-of-credit transactions for small business clients. In addition, this fund will build relationships and attract capital from equity and angel investors who understand small business growth potential and can provide mentoring and guidance throughout the investment process.

LOAN GUARANTEE FUND

This fund would target the acquisition of real estate being developed for food manufacturing and production purposes. Loan guarantee programs often secure and utilize federal funds such as Community Development Block Grants or HUD Section 108 to guarantee loans.

LOAN-LOSS RESERVE FUND

This fund would function similarly to the loan guarantee fund, but would be secured by business revenue and assets instead of real estate collateral. The uses could also be expanded through the real estate development process— from acquisition to construction to working capital.



INFRASTRUCTURE FUND

This fund includes a combination of grants and low-interest loans to support key infrastructure upgrades and investment within the Detroit food system.

CREDIT ENHANCEMENT FOR SUPPLIER FINANCING

One of the critical short-term capital investment vehicles for food businesses is financing from suppliers or buyers. Supplier financing tends to help with cash flow or working capital challenges, but the cost of capital is very high and the terms are incredibly short. Creating a credit enhancement pool that lowers the cost of capital and/or extends to term for payment (Net 10 to Net 30/45 payment schedule) for the borrower will allow for increased flexibility in business operations. A loan guarantee could also work, allowing for a portion of the loan to be secured with the guarantee, which may help increase the amount borrowed.

IMPLEMENTATION CONSIDERATIONS

- Infuse capital into existing food funds for investment and operations. The Detroit funding community should work with existing intermediaries to determine appropriate investments while newer funding mechanisms are being developed.
- Convene a food investment taskforce. This group would be comprised of public, commercial and community development lenders, philanthropic and anchor institutions, large food sector businesses, and other investors who currently deploy capital in Detroit. Ideally a large foundation or other anchor institution in Detroit with the necessary clout and gravitas would convene these partners. The food system support organization would serve as the administrative body managing the taskforce. This group's initial charge would be to:
 - Take an inventory of the existing funding and investment mechanisms that are available for food-related uses and businesses, and analyze the relative efficacy of those investment vehicles ability to deploy capital in Detroit
 - Attract new and underrepresented investors to the Table, particularly commercial banks, public institutions, and equity investors
 - Identify key investment needs and opportunities and create a 6-12 month investment strategy

ADDITIONAL RECOMMENDATIONS:

Banker/lender training on food business underwriting.

The Detroit lending community: commercial, community development, private, and philanthropic leaders and funders, does not have a firm grasp on the internal operations, risk management, and capital needs of the various sectors within the food system.

This underwriting knowledge gap hinders the ability for capital to flow to businesses, especially at the growth stage. Education and training for underwriters will be a useful tool to create deal flow with Detroit food firms and promote high-performing firms who are ready to borrow and grow their businesses.

Enhance mission-related investment capital deployment.

By law, foundations are required to deploy 5% of their earnings to nonprofit organizations. The other 95% or the corpus, is often invested in traditional securities or other investment vehicles that target market-rate returns to replenish and enhance the corpus. The obvious pitfall is many of these investments back businesses or financial products that have outcomes that run counter to the prescribed mission of the foundation. Mission-Related Investments (MRIs) are a vehicle that foundations use to make market-rate investments in mission-aligned businesses or financial products. Many of the largest foundations in the world are either operating in, near, or have funding priorities for Detroit; there are many Detroit-based mission-aligned food businesses and institutions that could offer reasonable rates of return for MRI vehicles. A similar argument can be made for large quasi-public institutions, such as universities, hospitals, and health-systems who are mandated to deliver community benefits, and spend millions of dollars annually developing programming versus potentially investing in local businesses with those dollars.



Explore EB-5 and other foreign investment vehicles as a patient capital tool for food system investment.

The Immigrant Investor Program, known as EB-5, was created in 1990 to stimulate the US economy through job creation and capital investment from foreign investors. Foreign investors are offered green cards in exchange for targeted investments in commercial enterprises. The minimum investment is \$1M; however, for areas with high unemployment, such as Detroit, the investment threshold is only \$500,000. EB-5 investments must create or preserve at least 10 full time jobs for US workers within 2 years. What makes EB-5 an attractive program is that the carrot of US Permanent Resident status offers a tacit return on investment that allows for lower return on investment (ROI) thresholds, longer ROI horizon periods and/or more risk tolerance for deals. Traditionally, large real estate firms have created EB-5 regional centers to funnel large EB-5 capital for cheap debt or equity financing to large real estate deals. The creation of an EB-5 regional center targeting food investment in Detroit could provide a pool for funding that is flexible in use and return, and would be a differentiated investment vehicle for foreign investors looking to engage the US market.

Research and explore alternative credit system.

Detroit has a very large cash economy, operating at both the consumer and business-to-business level. This commerce is extremely hard to capture, but is the lifeblood of many emerging businesses, particularly in low-income, under-invested neighborhoods throughout the city. An initiative to measure and determine credit worthiness for businesses and customers would greatly benefit both. Reporting transactions such as: COD payments to cash and carry operations, business-to-business lending transactions, monitoring credit issued by ownership at at corner stores, liquor stores, and supermarkets to determine ability to make consistent payments, and reporting those cash-based credit payments to credit bureaus— would allow small food businesses to establish a credit history and give their patrons a mechanism to do the same, enhancing everyone's ability to increase their credit worthiness and ability to access capital.

WORKFORCE DEVELOPMENT

Skills training and job readiness are critical for unemployed Detroiters to access jobs in the various sectors of the food system. Some jobs in the food industry are low-skilled, but many require some degree of skills training and/or a credential such as ServSafe Food Handler or ServSafe Manager certification. The good news is that many skills required in the food industry can be taught relatively quickly and easily, making it a sector with significant but surmountable barriers to entry with the right types of programs and initiatives in place.

These recommendations focus not just on the training itself but, on educating the educators, targeting resources, focusing on youth, and building an information network. Workforce development is not as simple as offering a single program; rather it involves a range of initiatives that are interconnected to ensure sophistication of the program approach, a diversity of opportunities, successful outreach and enrollment, and robust and stable placement and support networks. In addition, workforce development should ideally target and tap into federal, state, and local funding linked to credential-based training initiatives.



RECOMMENDATION:

Partner with major employers to develop vocational training and job placement initiative for youth and adults.

In any city, the private sector within an industry represents the most viable opportunity for introducing initiatives that will train individuals for real-world jobs, while creating a pathway to an actual work environment. Initiatives should target both youth and adults, conclude with receipt of a credential, and be connected with actual job opportunities. Ideally, programs would be coupled with public-sector initiatives to provide transportation and supportive services, such as financial education and life skills, so that individuals are prepared to work in any field, while gaining training specific to the food industry.

Linking these types of programs with actual employers connects training with employment opportunities creating a more seamless continuum than training programs that involve a separate placement initiative. Programs for youth can be taught in or out of school, adopting the popular charter-school paradigm of developing curricula by real-world industry leaders. In this way the program can take the form of vocational education in a charter school environment. Programs should be developed so as to be eligible for federal Department of Labor funding for workforce training.

ADDITIONAL RECOMMENDATIONS:

Develop a food-industry social enterprise with a training component.

One successful model of food-industry workforce development takes the form of a social enterprise that trains, employs, and sustains itself financially.

Colors Restaurant, affiliated with Restaurant Opportunities Center or ROC-United, trains students in the various jobs within the restaurant industry while promoting social justice and local product sourcing as part of its business model. On The Rise Bakery, operated by Capuchin Soup Kitchen uses its bakery to employ returning citizens.

Additional investment is needed in the creation and support of social enterprises throughout the Detroit food system that allow for on-site job training, industry certification, and other opportunities for job creation and entrepreneurship.

Build higher education programs and departments around the food industry.

Universities and community colleges are key conduits for workforce and enterprise development innovation and funding. Detroit's universities and colleges could partner with the food system support organization to create curricula, departments, and professional centers focused on the food system in fields such as food marketing; agricultural science and engineering; restaurant, hotel, and hospitality. Other major cities leverage their higher education institutions to create jobs and workforce skills in the food system as well as add to the canon of academic knowledge concerning food. Successful programs combine theory and practice, and take advantage of federal dollars for research and development.

City-to-farm programs.

The Michigan agricultural industry has a shortage of prepared and willing workers, and like most of the U.S. is dependent upon migrant labor. Meanwhile, many unemployed African American Detroiters do not think of farm labor as a viable career option because of transportation challenges and most importantly, it harkens to a time of sharecropping that many families fled the south to escape. However, with the right approach it is possible to reconnect African American workers to the land, and change the image of agriculture so it is again palatable to a Detroit workforce. The core of such an approach would have to focus on Detroiters reclaiming agriculture as part of a black identity, and promoting the wealth building potential of agriculture and land ownership to empower the community. A successful apprenticeship and city-to-farm program would serve several important supply-side and demand-side needs in the local economy, and could provide a farm incubator program specifically focused on black farmers that acknowledges and teaches the history around why many modern African Americans shun this field, as well as develop a land acquisition program to increase the number of African American-owned farms in urban and rural areas.

Existing programs, such as Earthworks Agricultural Training (EAT) program and Detroit Black Community Food Security Network's Urban Agriculture Internship program could be expanded to meet the large workforce and skill building needs of the agricultural sector while providing training models that emphasize and address racism and social equity in the food system.



Build a neighborhood network to advertise workforce opportunities.

Many individuals needing training and jobs live in communities that are under-served by formal communication channels, and residents hear about news via informal networks. It is critical to build a structured and effective means of connecting workforce programs and job opportunities with local community associations, development corporations, and community centers. Without such an effort, workforce programs and initiatives will be invisible to the populations that need them most.

Train the trainers.

In order to be effective, stakeholders in the workforce development ecosystem in Detroit need more education, training, and resources to understand the breadth and complexity of the food system and its sectors. Only by understanding the full potential of the food system in Detroit, will implementers be able to develop meaningful programming to help train, prepare, engage, and connect workers in the food system. This could include offering trainings for public-sector employees and training agencies, educating them on the depth and breadth of the food system, and creating a program for private-sector stakeholders within the food industry to regularly dialogue with workforce development professionals.

Workforce development is a critical piece to empowering Detroiters with skills and credentials, and connecting them with opportunities within the food industry.

A dynamic and diverse set of initiatives and investments in workforce development will create a steady pipeline of work-ready candidates, which will in turn standardize the hiring process within the sector. When successful, a workforce ecosystem functions smoothly with recruiting, training, placement, and ongoing support services. If Detroit makes these investments it can create a more competitive, trained workforce as well as recognized and accessible avenues for unemployed individuals to seek training and placement, and for employers to have a dependable work-ready pipeline.

BUSINESS VIABILITY

The viability of the Detroit food system will ultimately be measured by the long-term sustainability of the businesses that comprise the system's various sectors.

Small businesses become viable when they have potential to generate positive cash flow, continue to make a profit, and have a distinct client base with potential for growth. All businesses require a variety of resources to grow including capital, skilled labor and management, elimination of barriers, and access to markets.

There are many steps that might be undertaken to achieve sustainable growth for businesses operating in Detroit's food system. Some require new resources, thought leaders, and initiatives while others require deliberate leverage and connection of current resources to the target audience.

Numerous social and economic benefits will result by growing small businesses and strengthening existing ones in the system. This is done by creating and maintaining quality jobs, and building a system that will contribute to Detroit's overall economic health including:

- Expand the education/training and mentorship programs for business and entrepreneurs working in food related businesses.
- Increase collaborative efforts within sectors across the supply chain.
- Enhance linkages: connect large companies and small ones, connect large purchasers with smaller providers, and connect producers and distributors.
- Increase opportunities for sales and distribution within the region and outside it.
- Create an environment that enhances and embraces business growth, removing barriers and costs to entry.
- Build a brand marketing campaign that articulates the assets and opportunities within the food microsystem and appeals to various audiences.



RECOMMENDATION:

Develop a small scale food ecosystem.

The concept of discreet business sector ecosystems was founded in the tech industry. To quote Harvard Business School professor Rosabeth Moss Kanter on her approach to local regional competitiveness, “ecosystem conveys the idea that all the pieces of an economy come together in particular places, and that their strength and interactions determine prosperity and economic growth.”

Detroit has a burgeoning food industry. By connecting the dots— the resources, ideas, opportunities and people- we can create an interactive, interconnected environment whereby businesses collectively thrive due to their interaction with one another. The ultimate mission of this initiative is to provide small businesses with practical tools such as business education, market data and intelligence, support services and access to networks and capital. These tools are required to enhance business opportunities and prosperity.

This initiative would be targeted at existing and burgeoning small food businesses and entrepreneurs in Detroit, as well as the many organizations that support them such as FoodLab Detroit, Keep Growing Detroit, Detroit Black Community Food Security Network, Eastern Market Corporation, and many others. The recommended food system support organization would play a key role in connecting the various components required to create a thriving food ecosystem.

ADDITIONAL RECOMMENDATIONS:

Invest in data collection and metrics useful to businesses, investors, and commercial consumers.

Small firms lack basic metrics and analytics that assist with decision-making and investment. Likewise, investors, lenders and purchasers often lack the local knowledge and industry details to make accurate and prompt decisions. Build the data collection around critical assets (sales, employees, revenue, waste etc.), and group relevant data points by geography to identify clusters of synergistic opportunities and gaps. This data would be used to benchmark the economy overall as well as within sectors. The data could be published annually and distributed to critical audiences that need data to make informed decisions.

Develop rigorous training targeted to small-scale food businesses and start-up firms across the food system.

Consider creating a credentialed program where graduates can claim the credentials as part of their marketing. The training must address the basics of business as well as critical elements that many entrepreneurs never attain through traditional business training models such as food safety certifications, and FDA and USDA licensing and permitting requirements. Equally important are the skills required to create and maintain a thriving business which include closing skills, networking, marketing, accounting/bookkeeping, and financial training that is linked to credit enhancement and capital access. In addition, customer service and employee management is critical in the Detroit market. Combining a customer service training rubric that

focuses on a combination of industry-tested customer service techniques with a racial and social equity component is both good business and good community building. Partnering with Goldman Sachs 10,000 Small Businesses Initiative to develop a dedicated food industry track in partnership with local universities and community colleges is a positive first step.

Build a business support and mentoring infrastructure.

Young business owners and managers are often faced with many important decisions that can influence the growth of their venture. Mentorship has a proven track record in the technology industry. The Venture Mentoring Program at MIT is perhaps the best known and has built a reputation on harnessing the knowledge and experience of volunteer alumni and other business leaders to help MIT-affiliated entrepreneurs learn how to start and sustain a business. Successful mentoring initiatives include pairing a young business owner or manager to the skills and capabilities of established mentors. The role of the mentor is to offer guidance on decision-making, not make decisions or suggestions about future activities.

Detroit could build a mentoring service around the emerging growth sectors with established business mentors in the region.

The food system support organization could build a database of potential mentors available by skills and preferences such as marketing, sales, operations, IT/automation and finance to name a few.



Codify anchor-based training, mentoring, and technical assistance to small Detroit food firms.

The opportunities for dynamic growth of small food growers, producers, distributors, etc., are hampered by the inability to meet the quality control/assurance standards of large buyers. There have been key examples of Detroit anchor institutions and large firms assisting smaller firms in fulfilling services: US Foods working with small growers to help them understand how to package for larger distribution; Detroit Public Schools (DPS) also working with growers on what to grow for large-scale buys; Henry Ford Hospital working with Milano bakery to make products for institutional food purchasing. These lessons should be codified and leveraged to create a training and TA opportunity for small firms to understand how to engage large anchors and facilitate relationships or build incentives to match more smaller firms with large anchors.

Develop a cooperative for smaller businesses.

A fundamental challenge to buying local is consistency in the quality and availability of the product. A Detroit small-scale food business cooperative could operate like other cooperatives within the industry, most commonly found in the agricultural sector. The cooperative could explore creating a single meta-level brand for participating Detroit small firms, or a “community of businesses” model such as Zingerman’s Community of Businesses

based in Ann Arbor, that contains a common back-end infrastructure and community-owned intellectual property.

The successful implementation of these strategies will strengthen existing food businesses, support the growth of new ventures, and build awareness of opportunities within the local food system. Forging a connection between the essential components of the food ecosystem makes the overall brand of the food industry in Detroit stronger as well.

LOCAL DEMAND

This section of recommendations addresses proposed initiatives that will increase the demand for food systems activities located within the city of Detroit. Increasing local demand—not only for the consumption of food but also for its production, processing, packaging, and transportation—is an important component in any overall strategy to expand the size

and therefore the impact of the local food system in Detroit. It represents a financially sustainable and market-driven approach to growing the local food system, and will result in meaningful job growth for Detroit residents and tax revenues for Detroit government. These recommendations address local demand for both individual consumers and institutions.



RECOMMENDATION:

Invest in hands-on technical assistance for anchor procurement.

The D2D program, an initiative of the Detroit Economic Growth Corporation (DEGC) is a good foundation for increasing anchor institution's local procurement. While D2D's current focus on the creation of an anchor-to-vendor database is a critical first step, both DEGC and Detroit-based anchors recognize a higher level of outreach and engagement is necessary to create sustainable results for Detroit food firms seeking to do business with Detroit anchors. An effective anchor procurement program requires ongoing, intensive, hands-on assistance, helping entrepreneurs build capacity, and building relationships with the directors of anchor procurement departments and their service providers. This requires long-term funding to support one or more full-time positions dedicated to this work.

Having engaged people on the ground is the only way local procurement initiatives can really be successful. The other pieces are important too, such as the database of local vendors, B-to-B events, and working with anchors to adjust their bidding requirements. One idea is for the new food system support organization to focus solely on connecting small-scale food firms to anchors and larger firms leveraging existing initiatives through DEGC and the Woodward Corridor's "Live Local, Buy Local, Hire Local" campaign.

ADDITIONAL RECOMMENDATIONS:

Develop a Detroit food brand centered on the local food economy.

This campaign will build awareness and become a framework for other sector-focused marketing campaigns. The campaign will target both the corporate and consumer markets for specialty and locally produced products. The brand is used to build a market reputation for Detroit as an inviting and innovative food environment. The brand also strengthens "buy local" principles for all points within the Detroit food system from farmer's markets, to local distributors and restaurants.

Proactively market existing food businesses and initiatives.

Nothing hurts a business' revenue growth more than anonymity. Creating a brand and developing a market could include the following:

Affiliation: Develop a "Detroit Grown, Detroit Made" style logo and concept for the Detroit food sector. Local members of the food system would display this affiliation proudly as a signal to individual and institutional consumers.

Directory: Create a Detroit Food Firms directory, which would serve as a one-stop resource for individual and institutional consumers interested in doing business with locally-owned food businesses.

Media: Create mass-appeal messaging through multiple media channels-television, print, social-to increase awareness of both the importance of supporting the local food system and the businesses participating in the campaign.

Education: Conduct grassroots campaigns at the neighborhood level to inform residents and businesses of the food system and the potential economic impact of a more localized system.

Create a “Buy Local” campaign.

Detroit food firms collectively set earned media goals to raise the profile of individual firms, as well as the collective efforts of Detroit food businesses and support organizations. Editorial coverage often brings a level of credibility not associated with advertising.

Start a local business of the month campaign. Begin as a grassroots effort to acknowledge great local businesses and drive consumer traffic to those firms.

Create a Detroit Food Awards program to serve as recognition and acknowledgment of the best food firms in the city, and give Detroit consumers guidance on which businesses offer superior products and services.

The goal of these strategies is to increase both awareness of the local food system as a whole and demand for different components of the local food system resulting in the expansion of the local economy. The potential for new business formation and growth in existing ventures, job creation, and tax revenue generation is tied to building awareness of the growth potential of the Detroit food system. Moreover, these strategies will increase civic pride in Detroit while localizing more of the food system, ultimately resulting in a smaller environmental footprint.

POLITICAL WILL

In order for the food industry and related sectors to achieve meaningful growth that benefits the residents of Detroit, there must be the support and desire from key stakeholders at the public level. Political will plays an important role in the development and structuring of policies, programs, initiatives, incentives, and other innovative strategies to sustain food-related businesses and employment. A strong public will and capacity can also encourage innovation in the industry. Currently, Detroit is ripe with opportunities for food firms given the

land use and production environment in the city. Smart public policy and a thorough understanding of the local food sector by public agencies and institutions would foster positive business growth contributing to quality job creation, entrepreneurship, productive and dynamic uses of land, and other positive outcomes.

The following recommendations focus on the role that the public sector can undertake in cultivating this growth. Political will is a complex concept, but these interrelated recommendations seek to create a context in which the public sector and decision makers will have more information and greater agency to take action on local economic development related to food.



RECOMMENDATION:

Create and execute local purchasing legislation for public sector agencies and departments, as well as publicly-funded institutions and projects.

In cities throughout the country, local purchasing agreements and procurement contracts that require a minimum local spend have helped to boost companies in various sectors of the local economy. Such agreements foster a public commitment to local businesses on the part of government agencies and community institutions, and ensure a dedicated stream of revenue for firms in the local economy. They also help to retain businesses that may have located elsewhere, and in some cases attract new firms into the city.

In a fragile economic climate, lowest-bid theory for public sourcing will be pervasive. That said, it is important to view this strategy as a public investment in the business tax base to help small businesses grow within the city's borders, as well as to attract new businesses to Detroit through a public revenue pipeline. Such a geographically targeted economic development initiative seeks to not only increase tangible opportunities for small and local firms, but to symbolically establish and assert the value of supporting local businesses.

Suggestions to begin exploring local purchasing legislation include:

- Analyzing the local spend of public agencies and institutions on food
- Establishing a pilot program to increase local spending in the food sector categories with the most potential for growth
- Create a minimum local purchase requirement for public sector entities to source a percentage of their goods from local firms
- Enact legislation that requires large institutions and companies receiving public funding to include a percentage of small, Detroit food-businesses in their procurement pipeline.

ADDITIONAL RECOMMENDATIONS:

Make food system jobs a key workforce driver in the new administration.

The support of the new administration in recognizing the importance of the food economy is critical. Reaching out to the Duggan administration to illustrate in a straightforward and statistically backed manner the potential of increased quality employment in food related industries throughout the city is critical. The food sector should become an active category in all city efforts to promote workforce development and training, employee retention, and career paths for city residents.

Tax credits for businesses employing and/or investing in returning citizens, low-income, welfare-to-work, and disabled workers.

Successful workforce development initiatives tied to specific sectors of the economy seek to build bridges between vulnerable populations and existing businesses in order to ensure that new economic progress benefits all sectors of society, and allows companies to invest in underutilized resources. The city of Detroit can create pathways for the most marginalized members of society to play a productive, active, and positive role in the growth of the economy as a whole by incentivizing businesses to train and hire these populations. A first step could be to establish a pilot tax credit program for businesses that hire various segments of the population that have experienced high rates of unemployment, such as returning citizens and disabled workers.



Policy advocacy to ease travel restrictions on returning citizens.

Distribution and logistics jobs are critical for the Detroit food system to engage external markets. The jobs within this sector do not require high-level skills and education, making these jobs an appealing option for the sizable percentage of Detroiters with a felony conviction. However, the inability to cross international borders for work makes it extremely difficult to obtain good paying distribution and trucking jobs for many Detroiters, which disproportionately affects unemployed and underemployed African Americans.

Streamline city licensing and permitting processes for food firms.

Creating an appealing business climate is critical for business attraction and retention, especially in many lower-margin industries and for start-up businesses. The cost and ease of doing business must be comparable to, and in many cases must exceed, other local jurisdictions. Detroit's inconsistent climate of fee and fine collection is a nuisance to local businesses, and makes budgeting and forecasting operations costs difficult. In addition, the tax structure and processes for licensing and permitting for food related businesses are unclear at best. Cities that have been successful in promoting growth in the food economy have established transparent and clearly communicated criteria surrounding fees, paperwork, and regulatory requirements for businesses.

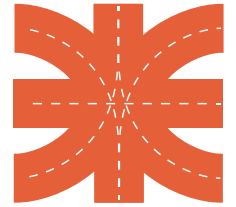
Some steps to consider taking to assist city government in creating a more business-friendly environment include:

- Develop and publish clear and consistent guidelines for all fees and fines for each city agency interacting with businesses
- Create an environment of transparency and openness surrounding public data and regulatory requirements for businesses
- Collect and make available data surrounding fees and fines levied on businesses within the city limits
- Analyze the tax and fine structure of municipalities within the region and other cities deemed to be competitive in terms of attracting food sector businesses

PUBLIC INFRASTRUCTURE

Many of the challenges around Detroit's food industry have to do with inadequate, under-sized, or missing pieces of infrastructure. Because infrastructure can be very expensive, investments need to be targeted and strategically deployed. Infrastructure investments are optimized when shared, co-used, or operated through a cooperative structure that builds not just efficiencies, but also encourages dialogue and synergy between different users and sectors of the food economy. The reality is that Detroit companies

are not competing with each other; rather the city and region are competing in a national and global marketplace. Infrastructure investments can enable the local economy to compete on volume, price, speed, quality, and innovation in ways that will support the entire local value chain. As the Detroit value chain thrives, and as local businesses are more competitive, the more jobs, opportunity and wealth will be available for Detroit's workforce.



RECOMMENDATION:

Create a public infrastructure initiative.

The public sector, private sector, and funder community should unite in an annual effort to appraise the food industry and identify infrastructure weaknesses and gaps. In addition, this study should review national best practices and models, new equipment, and industry innovations to stay ahead of the curve in terms of the most meaningful infrastructure investments.

Based on this appraisal, this collaborative of stakeholders should commit to deploy funding to support the most critical infrastructure needs. In this way the collective stakeholders will ensure an avenue for ongoing assessment of the state of Detroit's food system infrastructure, and a predicTable methodology for maintaining the industry's competitiveness.

ADDITIONAL RECOMMENDATIONS:

Invest in shared food hub infrastructure.

In the same way that large-scale produce distributors benefit from the Detroit Produce Terminal, smaller distributors, aggregators, and manufacturers would benefit from a shared facility with loading docks, refrigerator-freezers, and dry storage, as well as shared equipment such as pallet jacks and refrigerated vehicles. This facility could be operated by the public sector, a nonprofit entity or for profit entity, or operated as a co-op. Such a facility could greatly empower local businesses across the value chain, provide valuable infrastructure for storage and logistics to smaller companies, and create new resources for local businesses to grow and gain market share.

Expand Eastern Market's (EMC) kitchen incubator.

Detroit Kitchen Connect is a terrific initiative that is building a network of shared kitchens around the city. However, Detroit really needs a full-scale kitchen incubator, with enough space for several entrepreneurs to work at the same time; sufficient cold and dry storage; top-of-the-line commercial cooking and baking equipment; and bottling and packaging equipment and space. In addition, effective incubators have in-house business technical assistance and assemble contract opportunities for their clients. The foundation community, the state, and DEGC should get behind Eastern Market's initiative and help them expand this activity.

Formalize transportation options.

Many food industry workplaces are not easily accessible by an urban population due to Detroit's inadequate public transportation network and the fact that 20% of Detroiters do not own a personal vehicle (US Census 2010). There are informal ride sharing programs, however, more needs to be done to make food industry jobs accessible to residents. The city, state, DEGC, and SEMCOG should work to obtain JARC and other federal transportation dollars to subsidize a reverse commuter program. DDOT and SMART should work closely to coordinate bus routes that connect neighborhoods with geographic clusters of food industry employers.

Transportation Riders United is one local advocacy organization working to bring entities together around this important issue.

Investments in infrastructure are central to a competitive economy.

A more competitive and innovative food sector will be able to support more new businesses, accelerate existing businesses, and ultimately create more jobs. Many firms hit a point of stagnation because investments in infrastructure that allow them to access more business or fulfill larger orders are just too expensive or otherwise unattainable. With support from the public sector and foundation community,

Detroit can build a new, shared infrastructure that will empower entrepreneurs and support the growth of the local manufacturing, production, packaging, and distribution segments of the Detroit food economy.

CHAPTER SEVEN

A VISION FOR DETROIT'S FOOD SYSTEM

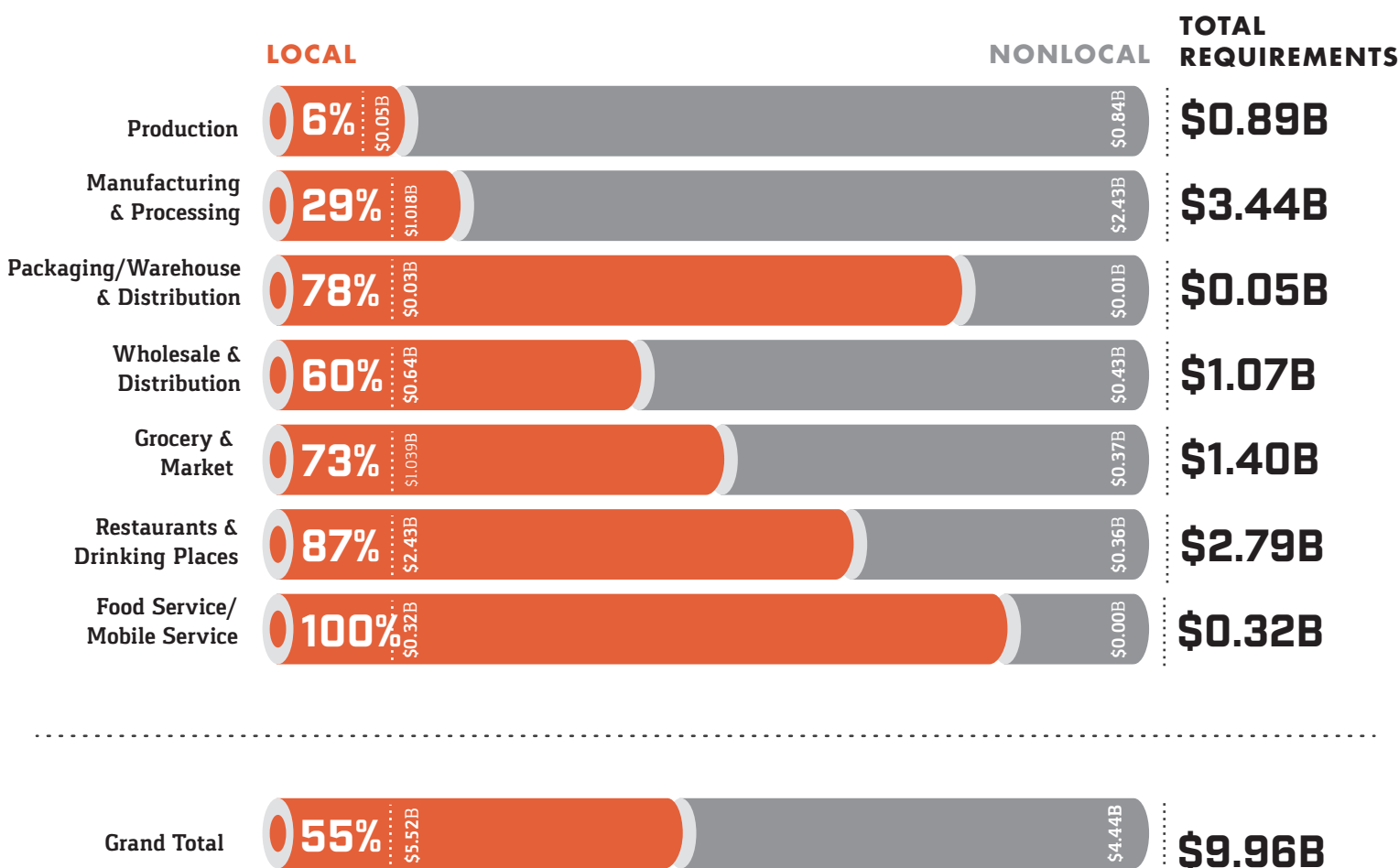
THE 30% LOCALIZATION SHIFT

Our final thought exercise provides a glimpse into Detroit's potential future. This report quantified the current economic impact of the Detroit food system, identified the core impediments and potential opportunities for localization, and recommended tactics and strategies to achieve a stronger, localized, more equitable food system.

So, what does the future look like? What are the outcomes of a wholesale shift in sourcing from non-local establishments to local ones in the food system? With a 30% localization shift, the food system would become the 2nd largest industry in the Detroit economy and largest private sector industry, surpassing healthcare. With that as the bar, the expanded food system would represent about \$5.4 billion in annual revenues, directly employ over 52,000 people, and represent about \$1.3 billion in annual wages and salaries. The system's regional economic impact would also expand, with \$8.4 billion in direct, indirect, and induced annual expenditures, about 95,000 jobs, and \$2.7 billion in wages and salaries for the three-county region.

PROPORTION OF FOOD REQUIREMENTS WITH 30% LOCALIZATION INCREASE

of Wayne County Establishments Satisfied
by Wayne County Food System Firms



Sources: Economic Modeling Specialists International (2012), Econosult Solutions, Inc. (2013)

THE 30% LOCALIZATION SHIFT

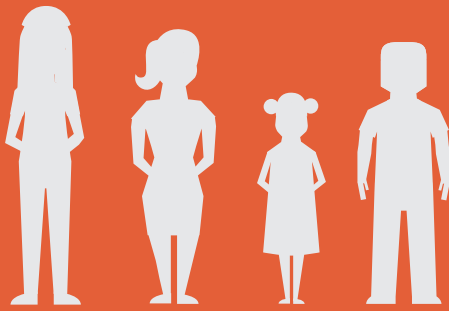
The other important implication examines the localization intensity that a 30% shift creates in the food system, particularly for various food sectors. The grocery and market sector would capture an additional \$240 million with 73% of its requirements met locally, while manufacturing and processing sector capturing an additional \$230 million for Wayne County firms with 29% of its requirements met locally. The food services and mobile food sector hits an important milestone; with the 30% localization shift, its requirements would be completely satisfied by local firms yielding \$320 million dollars. In aggregate, 55% of the Detroit food system's requirements would be met by local firms.

The 30% localization shift would push the Detroit food system past the tipping point with more of its requirements fulfilled locally than not.

A firmly localized food system would also deeply impact the quality and structure of the lives of Detroiters. A Michigan State University study from 2010 posits the potential for urban agricultural yield to feed Detroit citizens. Reactivation of less than 300 acres vacant land could supply 31% of seasonal vegetables and 17% of seasonal fruits consumed by Detroit⁸. The previous chapters discuss the potential challenges in executing such a scenario, but also highlight the countless beneficial impacts of a localization strategy such as this one.

With that in mind, we return to our group of Detroit residents to see how their lives have changed 5 years into the future, through the lens of a more localized food system...

8. Colasanti, K. A., & Hamm, M. W. (2010, November). Assessing the local food supply capacity of Detroit, Michigan. *Journal of Agriculture, Food Systems, and Community Development*, 1(2):41-58. doi:10.5304/jafscd.2010.012.002



RITA JENKINS

Corrections Administrator, Age: 49

TAMIKA BANKS

Food Entrepreneur, Age: 28

JANELLE PRICE

Student, Age: 12

TYRELL BANKS

Commercial Truck Driver, Age: 24

After spearheading the successful implementation of the food industry work release pilot at work, **RITA IS NOW IN CHARGE OF ALL PRISON WORK RELEASE PROGRAMMING**. She helped **TYRELL FIND A JOB** with at a local meat distributor as a truck driver. **TAMIKA JOINED THE DETROIT FOOD LAB**, which supported her catering and dessert baking ambitions. Over time, Tamika began

RITA HAS A LEISURELY HOME-COOKED BREAKFAST, while Janelle has a Fresh Corner Cafe parfait from the local party store. Tamika left for work at 4:30am to supervise a production run of her desserts at a Detroit Kitchen Connect site.

JANELLE RUSHES TO THE NEW SALAD BAR, installed by Detroit Public Schools in each school cafeteria; Rita meets with Detroit's new food system support organization and several large Detroit food firms to discuss institutional spending for local food products; and Tamika is delivering desserts across Detroit to various clients.



7:00AM



DETROITERS CURRENTLY SPEND \$79.8M ON DAIRY PRODUCTS ANNUALLY. WITH 30% LOCALIZATION, DAIRY PRODUCT MANUFACTURERS CAN PICK UP AN ADDITIONAL \$8M

Source: Econsult Solutions, Inc.

9:00AM

The potential for small independent grower and producer cooperatives **ALREADY EXISTS IN DETROIT**. Our recommendation for business viability highlights the need for an initiative focused on building a small-scale ecosystem.

11:00AM



OF DETROIT PUBLIC SCHOOL STUDENTS WERE ELIGIBLE FOR FREE-REDUCED MEALS

Source: Michigan.gov, Center for Educational Performance and Information

1:00PM

Detroit Public Schools spends approximately **\$22M ON FOOD PROCUREMENT ANNUALLY**, including school breakfast, lunch, and after-school programs.

Source: Detroit Public Schools, Office of School Nutrition

to sell her sweet potato-based desserts at venues throughout the city. **JANELLE HAS DEVELOPED A LOVE FOR GARDENING** thanks to the school gardening program. Janelle is now a vegetarian and is very opinionated about the shopping choices for her family and wants to get kids at the school as excited as she is about healthy eating.



Tax incentives for local food firms who employ formerly incarcerated Detroiters would remove a major impediment to job placement. See the recommendation section for more detail.

TAMIKA LEAVES KEEP GROWING DETROIT WITH CASES

of locally-grown sweet potatoes and she heads to the D-Town Food Coop Market to drop off her desserts from the morning. Janelle's knee deep in dirt afterschool at Earthworks. Rita meets Tyrell at Grand Price Supermarket to buy some barbeque for dinner.



THE FAMILY REUNITES AT THE TABLE FOR DINNER.

Tamika and Janelle make an assortment of vegetarian dishes, while Rita and Tyrell bring meat to the feast. Tamika shares some local dark chocolate produced by a fellow Detroit Food Lab member for sampling.



3:00PM

5:00PM

7:00PM

9:00PM

The agricultural production sector of the Detroit Food System is poised for explosive growth.

\$3.8M → \$258.7M

CURRENT REVENUES REVENUES WITH 30% LOCALIZATION

109 → 4,323

CURRENT JOBS JOBS WITH 30% LOCALIZATION

If Keep Growing Detroit retained their current marketshare, they would earn over \$5.4M in annual revenues.

There was **\$178.2M** in grocery leakage in city of Detroit in 2013. Detroit grocers are well positioned to leverage the flight of local grocery spending and bring it back to Detroit

Source: Econsult Solutions, Inc



\$38.7M

ANNUAL REVENUE OF THE MEAT PROCESSING INDUSTRY (FROM CARCASSES, RENDERING, AND BY-PRODUCTS) IN DETROIT WITH 30% LOCALIZATION OF THE DETROIT FOOD SYSTEM.

Chocolate is the next boom commodity in Detroit. With 30% localization, Detroit firms can capture an additional **\$22.4M** in chocolate manufacturing (from cacao and purchased chocolate).

Source: Econsult Solutions, Inc



YVETTE PARKER

Office Manager, Age: 57

STEPHEN PARKER

Hospital Administrator, Age: 59

TATIANA PARKER

Bartender, Age: 24

MARCUS PARKER

College Student, Age: 21

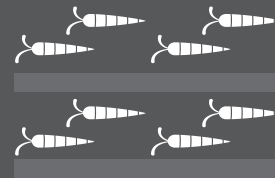
NOT MUCH HAS CHANGED IN THE PARKER HOUSEHOLD. Yvette and Stephen Parker continue to live in the house they have occupied for the past 24 years. Marcus is now a junior at the University of Michigan. He lives on campus in Ann Arbor.

YVETTE MAKES A FRESH JUICE BLEND WHILE STEPHEN EXERCISES. They talk fitness while Tatiana is still sleeping after a long night waitressing and tending bar.



TATIANA IS AT EASTERN MARKET KEEP GROWING DETROIT

and their Grown in Detroit brand to distribute Detroit-grown and -made food products. Yvette and Stephen are eating healthy lunches they make at home.



EASTERN MARKET



7:00AM



THE FRUIT SMOOTHIE AND JUICING MOVEMENT HITS DETROIT.

WITH 30% ADD'L LOCALIZATION,

\$17.5M

IN FROZEN FRUIT, JUICE, AND VEGETABLE MANUFACTURING REVENUES ARE AVAILABLE FOR DETROIT FIRMS.

Source: Econsult Solutions, Inc.

9:00AM

Detroiters currently spend **\$142.8M** annually on Fruits and Vegetables.

Source: Econsult Solutions, Inc.

Tatiana will be able to take advantage of dedicated workforce programming and job placement assistance in the food system.

See the workforce recommendations section for more details.

11:00AM



THE WHOLESALE AND DISTRIBUTION SECTOR HAS 2,569 JOBS, WITH THE POTENTIAL FOR 840 MORE WITH 30% ADD'L LOCALIZATION. IT ALSO HAS SOME OF THE HIGHEST WAGES EARNED OF ANY FOOD SECTOR AT \$177.8M.

1:00PM

Crop production has one of the highest opportunities for localization with **\$123.6M** available for Detroit firms to capture.

Source: Econsult Solutions, Inc.

His sister Tatiana has just graduated from college and now lives at home while looking for permanent employment. Yvette and Stephen are at the same workplaces, but Yvette has been promoted to office manager from bookkeeper. Stephen's lost a little weight too.



From bookkeepers to graphic artists, the myriad occupations that support the food system represent **16.8%** of the jobs in the Detroit food system.

Source: Econsult Solutions, Inc.

STEPHEN PICKS UP THEIR FRESH FOOD SHARE BOX sold at Henry Ford Hospital, which he takes to Yvette at the Rosedale Community Players. Tatiana gets home and changes for her other part-time gig at a local restaurant.

THEATRE

YVETTE AND STEPHEN HEAD OUT ON A DATE NIGHT at a new Food Innovation lab that hosts cooking classes in its test kitchen. Yvette and Stephen learn to cook vegetarian dishes from across the globe. Tatiana gets her second wind while bartending at a local bar.

FOOD INNOVATION LAB

3:00PM

THE GROWN IN DETROIT BRAND HAS THE POTENTIAL FOR CITY- AND REGION-WIDE RECOGNITION FOR QUALITY AND VALUE FROM DETROIT CONSUMERS.

5:00PM

The canning industry is hot in Detroit. With add'l 30% localization, an extra **\$42.5M** is available for Fruit and Vegetable Canning, while **\$9M** is open for Detroit firms involved in Specialty Product Canning.

7:00PM

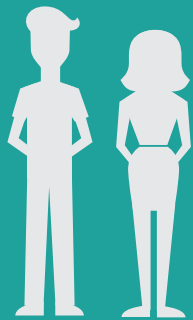
BREWERIES, WINERIES, AND DISTILLERIES OFFER A MASSIVE SET OF OPPORTUNITIES FOR DETROIT FIRMS TO INCREASE MARKET SHARE. WITH 30% ADD'L LOCALIZATION, DETROIT FIRMS WOULD ABSORB AN ADDITIONAL \$99.8M.

9:00PM

Anchor institutions, such as Wayne State University, could play a unique role in the Detroit Food System through purchasing, programming, and community engagement.

The recommendation section highlights strategies for building a Detroit-wide food brand.

See more about anchor institutions and the food system in the recommendations section.



JORDAN WILKINSON

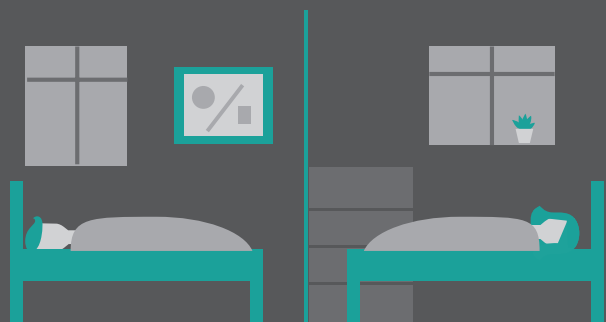
Tech Entrepreneur, Craft Beer Enthusiast, Age: 28

KIRA DEACON

Tech Entrepreneur, Age: 28

AFTER DEVELOPING THEIR “SECRET CITY DETROIT” WEBSITE AND APP, KIRA AND JORDAN DECIDED TO DO A SERIES CALLED “DETROIT MADE” THAT PROFILES THE PEOPLE OF DETROIT. Kira and Jordan have interviewed many people whose stories were not known to the public, and have come to see themselves as advocates for the city and its current population.

JORDAN AND KIRA ARE BOTH ASLEEP.
They still don't typically wake up until 9:30.



7:00AM



30.4%
OF DETROIT RESIDENTS ARE FOOD INSECURE, DOUBLE THE NATIONAL AVERAGE

For many, exploring the “Secret City” of Detroit reveals racial and social inequities that plague Detroit residents.

Source: Detroit Future City

9:00AM

Many micro- and small businesses in Detroit lack the credit history to help grow their businesses. The *recommendations section* explores using alternative credit indicators to determine credit-worthiness of Detroit food firms.

JORDAN AND KIRA GET TO THE OFFICE AND MAKE THEIR OWN COFFEE using fresh roasted beans from Great Lakes Coffee. They are interviewing independent businesses this week, starting with a new grocery store in the North End that's part grocery store, part pop-up retail facility.



11:00AM

\$453.9M
GROCERY STORE REVENUE

6,076
EMPLOYMENT



Source: Econsult Solutions, Inc.

1:00PM

\$112.4M **\$33.4M**

\$112.4M of the demand for general line grocery is satisfied locally. With a **30%** increase in localization, an additional \$33.4M could be satisfied locally.

They make some revenue for their blog through advertising and offering deals for local Detroit based businesses, but primarily work freelance gigs in the food and tech space.



6% GROWTH



DETROIT HAS 12,000 EMPLOYEES IN DIGITAL AND CREATIVE INDUSTRIES WITH PROJECTED 6% GROWTH IN 10 YEARS

Source: Detroit Future City

JORDAN POSTS A QUICK BLOG ENTRY

about the interview with the new market on his blog, then meets Kira at Eastern Market for the food truck rally for a happy hour, which showcases tons of small food producers and caterers from the Eastern Market commissary.

EASTERN MARKET FOOD TRUCK RALLY



3:00PM

5:00PM

KIRA MAKES A QUIET DINNER FOR HER BOYFRIEND

, then calls it a night early. Jordan heads over to a local pub where they are showcasing his home brew, Winterfell, during Brew Week, a new seasonal marketing event for bars throughout the city.



7:00PM

9:00PM

Catering is a big industry in Detroit and houses a large number of entrepreneurs and food firms in the Detroit Food System.



AT 30% LOCALIZATION AN ADDITIONAL \$4.7M IS AVAILABLE TO DETROIT FIRMS

That said, the 545 jobs in the catering industry comprise only 8% of the total number of catering jobs for the Detroit MSA.

A large, licensed commercial kitchen or commissary space for food preparation is one of the last pieces of a pending food entrepreneurship explosion for Detroit. See a discussion of competitive licensing fees, shared kitchen spaces and investing in Eastern Market infrastructure in the recommendations section.

FOR BUDDING FOOD ENTREPRENEURS LIKE JORDAN, A DETROIT FOOD SYSTEM SUPPORT AGENCY THAT ACTS AS A FOOD BUSINESS DEVELOPMENT SWAT TEAM IS A WIN-WIN FOR ALL PARTIES. LEARN MORE ABOUT THIS IN THE RECOMMENDATIONS SECTION.

Kira visits several specialty markets to get unique spices and marinades for her dinner. Detroit firms can potentially capture **\$5.6M** annually in Specialty Food Stores with 30% localization.

Source: Econsult Solutions, Inc.

Source: Econsult Solutions, Inc.

CHAPTER EIGHT

CONCLUSION

This report is one important step in developing and supporting dynamic programs, policies, and activities to grow a more economically viable and just food system in Detroit.

CONCLUSION

WHAT HAVE WE TRIED TO ACCOMPLISH

This report, first and foremost, is an attempt to assess the current state of Detroit's food system and the economic, social, and physical value it holds, and to provide recommendations based on the challenges within the system. Through a significant amount of data analysis, qualitative interviews with residents, businesses, public leaders, advocates, and other stakeholders, as well as an assessment of existing resources, we have outlined a comprehensive picture of Detroit's food system today.

What we can distill from this analysis is that Detroit's food system is rich, vibrant, and comprises a large sector of the economy.

Detroiters interact with food every day—they grow, manufacture, process, package, distribute, trade, and discard food. They actively engage in the food economy, which has broad implications for economic development, but also for social and environmental well-being.

This report seeks to draw attention to that fact. We have taken great effort to highlight the manner in which city residents and stakeholders currently interact with food on a daily basis by displaying to readers the lives of average Detroiters and their relationship to the food sector. Our analysis resulted in a holistic understanding of the opportunities and challenges of Detroit's food system, and we have put forth recommendations that, cumulatively, form a strategic approach to cultivating a food system that works for all city residents.

WHY THIS MATTERS

The potential impact of investing in Detroit's food system is virtually limitless. We hope that this report has put forth solutions that are both innovative and thoughtful, and have a basis in the lived reality of the diverse groups that comprise Detroit's social, political, and economic fabric. While we believe that greater investment in the food system can have tremendous benefits for city residents, we seek to illustrate the importance of demystifying the complicated language and policy that currently contextualizes such decisions.

Programs and policies that deal with the food industry—through employment, workforce training, infrastructure investments, local sourcing, and other means—should be comprehensible to the everyday citizen of Detroit. No sector of the economy can work for all city residents if they do not possess the knowledge, tools, and resources to understand the opportunities afforded to them by that sector.

The food economy in Detroit is already the third largest sector of the economy, and is poised to be the next largest growth sector for the city. Only by engaging Detroiters and supporting the local, small, and medium sized actors in the system can we ensure that this growth directly affects the creation of jobs, wealth, and better socioeconomic conditions for residents.

WHAT'S NEXT

This study is simply the beginning of a dynamic set of programs, policies, and activities centered on supporting and cultivating equitable growth for Detroit's food system. The distribution of this study will take the form of a campaign that engages Detroit residents through various communications, social media, and public forums. We hope that the report can serve as a catalyst for public debate, and can spark convenings among funders and policymakers with key stakeholders in the system to iron out an implementation plan, investment, and further action.

In addition, research does not have to end where policy begins. We hope that groups with local knowledge seize this opportunity to analyze and highlight the dynamics of sub-sectors within the food economy, such as urban agriculture, value added products, food based entrepreneurship, and others. Some of this work is already underway, but far more can be done at a neighborhood and community level to understand the challenges for growth and discrepancies in employment, wages, and political agency within these micro economies of food.

The work of building a food system that functions for all Detroiters will be no small task, but we hope that this report can serve as the first leap into unlocking the potential of the city's new economy.

ACKNOWLEDGEMENTS

ACKNOWLEDGEMENTS

The Detroit Food and Fitness Collaborative would like to express our appreciation to everyone who participated in the production of this report. Many thanks to those who attended focus groups, read, wrote, reviewed, provided feedback, and assisted in the preparation, editing, proofreading and design. Your commitment and tireless efforts to produce a much— needed and highly— anticipated report are greatly appreciated.

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APPENDICES

APPENDIX A

APPENDIX A

ECONOMIC AND FISCAL IMPACT METHODOLOGY

A.1 HISTORY

The theory behind input-output modeling stretches as far back as the mid 17th century, when Sir William Petty described the interconnectedness of “production, distribution, and wealth disposal.” While Petty can be credited with noticing links between economies, input-output modeling did not begin to take true form until the mid 18th century, when French physician Francois Quesnay created the Tableau Économique. His work detailed how a landowner spends his earnings on goods from farms and merchants, who in turn spend their money on a host of goods and services. Over the course of the century, an algebraic framework was added by Achille-Nicholas Isnard. Robert Torrens and Léon Walras refined the model by establishing the connections between profits and production.

The modern input-output system can be attributed to Wassily Leontief. In his thesis, “The Economy as a Circular Flow” (1928), he outlined the economy as an integrated system of linear equations relating inputs and outputs. This framework soon gained popularity, and became a widely accepted analytical tool. In 1936, Leontief produced the first input-output analysis of the US. Leontief’s work became the US Department of Commerce’s Bureau of Economic Analysis’s (BEA) standard benchmark for US production in the 1950’s. Leontief received a Nobel Prize for his work in 1973.

By the 1970’s, the BEA had developed regional multipliers that could benchmark regional production throughout the US. Through extensive surveying, the impacts of each industry could be determined at the individual county level. These multipliers later became known as the Regional Input-Output Modeling System, or RIMS. These multipliers would later be improved in the 1980’s and reclassified as RIMS II multipliers. This new system soon became a trusted standard in economic impact studies. The updated RIMS II multipliers show the effect on the local economy that localized expenditures have in terms of employment, output, and earnings.

A.2 APPLICATION

The use and application of multipliers is fairly basic and intuitive. Multipliers, in their most basic form, are the result of an algebraic analysis expressing how two inputs are interconnected in the production of an output. The result of the equation generates a multiplier that is broken down into direct, indirect, and induced effects. In a generalized example: if the multiplier for good "X" to good "Y" is 3, then the direct of good "X" on "Y" is 1, with indirect and induced effects of 2. Essentially, every unit of good "X" supports 2 units of good "Y".

When implemented on a large complex scale, such as that of the US economy or any subsection of it, multiplier effects across industries can be complicated. However, the same general concept comes into play. Each industry has largely different and varied inputs into other industries. The quantity of the output is largely decided by the scale and efficiency of the industries involved. As a result, the sum of those inputs equates to an output product plus a value added/component. By arranging these inputs and outputs by industry in a matrix, and performing some algebra to find the Leontief inverse matrix, each industry's effect on final demand can be estimated. Additionally, the direct, indirect, and induced effects can also be determined. Direct effects include direct purchases for production, indirect effects include expenses during production, and induced effects concern the expenditures of employees directly involved with production. Using building construction as an example, the direct effects would include materials, brick, steel, and mortar, the indirect effects would involve the steel fabrication and concrete mixing, and the induced effects would consider the construction workers purchases from their wages. While impacts vary in size, each industry has rippling effects throughout the economy. By using an input-output model, these effects can be more accurately quantified and explained.

RIMS II is one of several popular choices for regional input-output modeling. Each system has its own nuances in establishing proper location coefficients. RIMS II uses a location quotient to determine its regional purchase coefficient (RPC). This represents the proportion of demand for a good that is filled locally; this assessment helps determine the multiplier for the localized region. RIMS II takes the multipliers and divides them into over 500 industry categories in accordance to the North American Industrial Classification System (NAICS) codes. A comprehensive breakdown of a region's multipliers by industry can be shown.

Despite the usefulness of input-output modeling, there are some shortcomings to the system. Notably, input-output models ignore economies of scale. Input-output models assume that costs and inputs remain proportionate through different levels of production. Further, multipliers are not generally updated on a timely basis; most multipliers are prone to be outdated with the current economy. If the multipliers are sourced from a year of a recession economy, the multipliers may not accurately represent the flows from an economic boom period. Additionally, the multipliers may not capture sudden legal or technological changes which may improve or decrease efficiency in the production process. Regardless, I-O models still serve as the standard in the estimation of local and regional impacts.

A.3 ECONOMIC IMPACT MODEL

The methodology and input-output model used in this economic impact analysis are considered standard for estimating such expenditure impacts, and the results are typically recognized as reasonable and plausible effects, based on the assumptions (including data) used to generate the impacts. In general, one can say that any economic activity can be described in terms of the total output generated from every dollar of direct expenditures. If an industry in a given region sells \$1 million of its goods, there is a direct infusion of \$1 million into the region. These are referred to as direct expenditures.

However, the economic impact on the region does not stop with that initial direct expenditure. Regional suppliers to that industry have also been called upon to increase their production to meet the needs of the industry to produce the \$1 million in goods sold. Further, suppliers of these same suppliers must also increase production to meet their increased needs as well. These are referred to as indirect expenditures. In addition, these direct and indirect expenditures require workers, and these workers must be paid for their labor. These wages and salaries will, in turn, be spent in part on goods and services produced locally, engendering another round of impacts. These are referred to as induced expenditures.

Direct expenditures are fed into a model constructed by Econsult Corporation and based on RIMS II data. The model then produces a calculation of the total expenditure effect on the regional economy. This total effect includes the initial direct expenditure effect, as well as the ripple effects described, the indirect and induced expenditure effects.

Part of the total expenditure effect is actually the increase in total wages and salaries (usually referred to as earnings), which the model can separate from the expenditure estimates. Direct payroll estimates are fed into the "household" industry of the input-output model. Impacts of this industry are estimated using the personal consumption expenditure breakdown of the national input-output table and are adjusted to account for regional consumption spending and leakages from personal taxes and savings. The direct, indirect, and induced earnings represent a component of the total economic impact attributable to wages and salaries. Finally, the model calculates the total expenditures affecting the various industries and translates this estimate into an estimate of the total labor (or jobs) required to produce this output.

In short, the input-output model estimates the total economic activity in a region that can be attributed to the direct demand for the goods or services of various industries. This type of approach is used to estimate the total economic activity attributable to the expenditures associated with various types of spending in the region (see Figure A.1 and Table A.1).

Figure A.1 Flowchart of Input-Output Methodology for Estimating Economic Impact

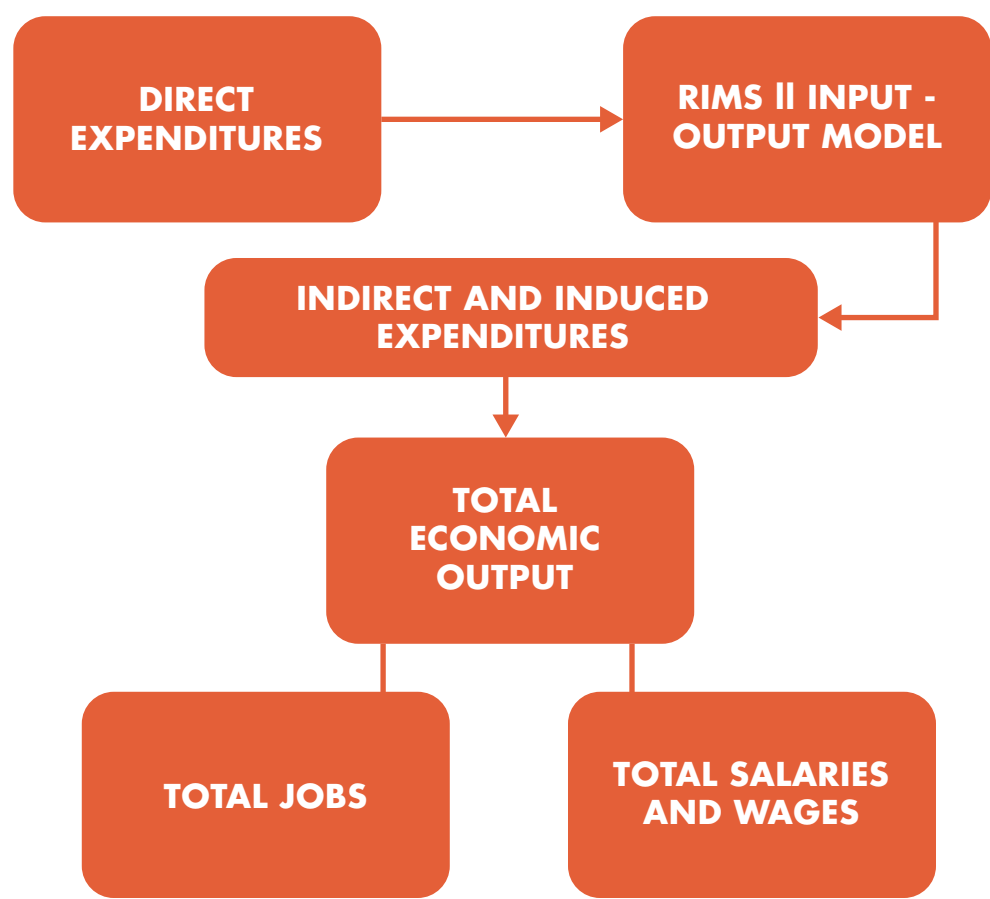


Table A.1 Glossary of Terms for Input-Output Models

- **Multiplier Effect:** the notion that initial outlays have a ripple effect on a local economy, to the extent that direct expenditures lead to indirect and induced expenditures.
- **Economic Impacts:** total expenditures, employment, and earnings generated.
- **Fiscal Impacts:** local and/or state tax revenues generated.
- **Direct Expenditures:** initial outlays usually associated with the project or activity being modeled; examples: one-time upfront construction and related expenditures associated with a new or renovated facility, annual expenditures associated with ongoing facility maintenance and/or operating activity.
- **Direct Employment:** the full time equivalent jobs associated with the direct expenditures.
- **Direct Earnings:** the salaries and wages earned by employees and contractors as part of the direct expenditures.
- **Indirect Expenditures:** indirect and induced outlays resulting from the direct expenditures; examples: vendors increasing production to meet new demand associated with the direct expenditures, workers spending direct earnings on various purchases within the local economy.
- **Indirect Employment:** the full time equivalent jobs associated with the indirect expenditures.
- **Indirect Earnings:** the salaries and wages earned by employees and contractors as part of the indirect expenditures.
- **Total Expenditures:** the sum total of direct expenditures and indirect expenditures.
- **Total Employment:** the sum total of direct employment and indirect employment.
- **Total Earnings:** the sum total of direct earnings and indirect earnings.

A.4 FISCAL IMPACT MODEL

The RIMS II model provides estimates of the economic impact of a new project or program on the regional economy. It does not, however, estimate the fiscal impact of the increased economic activity on state and local governments. Econsult has constructed a model that takes the output from the RIMS II model and generates detailed estimates of the increases in state and local tax collections that arise from the new project. Those revenues are in fact a part of the total economic impact of a new project that is often ignored in conventional economic impact analyses.

The RIMS II model provides estimates of direct, indirect, and induced expenditures, earnings, and employment within the defined region. The Econsult fiscal impact model combines the RIMS II output with the relevant tax types and tax bases associated with the jurisdiction or jurisdictions for which fiscal impact is being modeled. Specifically, the estimated earnings supported by the direct, indirect, and induced expenditures generated by the model are used to apportion the net increase in the relevant tax bases and therefore in those tax revenue categories. The resulting estimates represent the projected tax revenue gains to the jurisdiction or jurisdictions as a result of the increased business activity and its attendant indirect and induced effects.

A.5 SOURCES

Miller, Ronald E., and Peter D. Blair. *Input-output Analysis Foundations and Extensions*. Cambridge, UK: Cambridge UP, 2009. Print.

Bess, Rebecca & Ambargis Zoë. "Input-Output models for Impact Analysis: Suggestions for Practitioners Using RIMS II Multipliers" *Conference Proceeding, Southern Regional Science Association Conference March 2011*

Lahr, Michael. "Input-Output Analysis: Technical Description and Application." *Rutgers University Edward J. Bloustein School of Planning and Public Policy*

APPENDIX B

FISCAL IMPACT METHODOLOGY

The Detroit economy, as taken from Economic Modeling Specialists International, is \$24 Billion. The food economy total of this, based on the NAICS in Appendix H is \$1.1 B. This 5% proportion was then applied to the applicable Detroit taxes to represent the amount of tax revenue generated by the food system. The Michigan gross state product was taken from the St. Louis Fed Federal Reserve Economic Data (FRED).

Table B.1 Food System as a Percentage of Detroit Economy

GRP	Detroit	Michigan
Economy Total	\$23,998,705,144	\$400,504,000,000
Food Economy Total	\$1,092,991,852	
Percentage of GRP	5%	0.27%

Table B.2 Relevant Taxes of the City of Detroit and the State of Michigan

Tax Category	Name of tax	State Tax Rate	Local Tax Rate
Sales	Sales	0.06	
Business	CIT, corporate income tax	0.06	0.02
	CIT, small business	0.018	
Income	Resident Income Tax	0.0425	0.024
	Non-resident income tax		0.012
Property	State Education income tax	0.006	
	Industrial Personal (IPP)		0.06107
	Commercial Personal (IPP)		0.0729
	Principle Residence or Ag Exemption)		0.06707
	Non-Homestead		0.0849008
Utility	Utility Users Tax		0.05

Table B.3 FY 2012 Tax Revenue from Detroit and Michigan's CAFRs

	City				State			
	Municipal Income	Utility Users	Property	Business	Income	Business	Sales	SET
FY 2012 Revenues (\$M)	\$221.00	\$39.80	\$217	\$12	\$8,240.10	\$1,294.30	\$6,955.20	\$1,789.70

APPENDIX C

STAKEHOLDER INTERVIEWS AND PUBLIC MEETINGS CONDUCTED AS PART OF THE FORMATION OF THIS REPORT

Stakeholder Interviews

Atlas Wholesale Food Company
 Better Made Snack Foods
 Community Foundation for Southeast Michigan
 Detroit Economic Growth Corporation
 Detroit Food and Fitness Collaborative
 Steering Committee Detroit Future City
 Detroit Public Schools, Office of Nutrition Services
 Detroit Regional Workforce Fund
 Eastern Market Corporation
 Ecology Center
 Edibles Rex
 Full Circle Advisory, Inc.
 Henry Ford Health System
 Keep Growing Detroit
 Kresge Foundation
 McClure's Pickles
 Midtown Detroit, Inc.
 US Foods
 W.K. Kellogg Foundation
 Wolverine Packing Company

Public Meetings and Focus Groups

Banking Roundtable: Detroit LISC, NCB Capital, Detroit Development Fund, Urban Partnership Bank

Community Stakeholder Public Meeting: Detroit residents, Detroit Food and Fitness and Detroit Food Policy Council members

Food Entrepreneurship Roundtable: FoodLab Detroit member businesses

Grocer's Roundtable: Metro Foodland, 7 Mile Foods, Lafayette Foods, Apollo Market, DEGC, and LISC

Grower's Roundtable: Keep Growing Detroit member businesses

Site Visits

Associated Food and Petroleum Dealers Trade Show
 Better Made Snack Foods
 D-Town Farm
 Detroit Produce Terminal
 Eastern Market Corporation
 Earthworks Urban Farm
 Grand Price Supermarket
 Whole Foods Market - Detroit

APPENDIX D

GLOSSARY OF FOOD SYSTEM TERMS

Census Designated Place (CDP): a statistical entity; an unincorporated community, concentration of population, housing and commercial structures, known by name, but not within an incorporated place; some examples are places with the same social and economic activities, village centers within towns and administrative centers

City: an incorporated place governed by home rule; in Michigan, a city must have a minimum population of 750, except home rule cities, which must have a minimum population of 2,000 and a population density > 500 people per square mile

Employment: Number of full-time and part time jobs; the total number of people that are employed at any time during a specified year by the specified industry or occupation-type.

Food Services and Mobile Food Services: full-service and partial-service food industry businesses of a specialized, mobile, or off-premises nature. This category includes many types of businesses, including caterers, community food services, food trucks, and other mobile or off- site food services

Food System: includes all processes and infrastructure along the food supply chain and the resources and inputs needed at each step

Grocery and Market: Businesses that sell food goods directly to consumers, and are not full- service or partial-service restaurants. These businesses include grocery stores and various types of retail stores.

Incorporated Place: a legally bound entity; cities, boroughs, towns or villages, depending on the state

Industry Requirements: "Derived from EMSI's Input-Output model, this Figure describes the purchases a given industry makes from all other industries-an industry's supply chain-and also estimates whether those purchases came from within or without the region of study. Source: EMSI's model, incorporating data from the Bureau of Economic Analysis (BEA)." (Source: EMSI, 2011)

Institutional Food Service: provision of catering to schools, hospitals, jails, etc...

Localization: the act of bringing more steps of the supply chain to the region of the product's consumption

Manufacturing and Processing: transformation of raw food into intended product, i.e. cocoa beans into chocolate

MSA: short for Metropolitan Statistical Area, this is a geographic location, mostly defined in terms of whole counties, that has at least one urbanized area of 50,000 or more population, in addition to adjacent territory that has a high level of social and economic integration with the urbanized core, as defined by commuting connectivity

NAICS: North American Industry Classification System; standard used by Federal statistical agencies in classifying business establishments for collecting, analyzing and publishing data related to the U.S. economy

Packaging and Warehousing: An aspect of the food system in which manufactured/processed food product is packaged, and prepared for sale to wholesalers and food distributors

Production: farm or ranch operation and associated activities

Restaurant and Drinking Places: Full-service and partial-service establishments that serve prepared food directly to customers on premises

Revenue: Total sales or receipts made by a given industry in a given year.

SOC: Standard Occupational Classification; used by Federal statistical agencies to classify workers into occupational categories for collecting, calculating and publishing data

Wholesale and Distribution: sale of goods, usually in bulk, to retailers or other large buyers at the beginning of the supply chain

APPENDIX E

DESCRIBING THE LOCAL FOOD SYSTEM IN ECONOMIC TERMS

E.1 OVERVIEW AND METHODOLOGY

The purpose of this section is to describe the size and composition of the food system in Detroit in economic terms. This was accomplished by aggregating industry and occupation data from business data provided by Economic Modeling Systems International (EMSI), and checking the accuracy of the results through various primary and secondary research methods.

About 100 industries were considered food system industries, and about 50 occupations were considered food system occupations. The food system in the aggregate was considered to be the sum of the following parts (see Figure E.1):

- Food system occupations in food system industries
- Food system occupations in non-food system industries
- Non-food system occupations in food system industries

Figure E.1 Defining The Food System Aggregate

	Food System Industries	Non-Food System Industries
Food System Occupations	Included	Included
Non-Food System Occupations	Included	Excluded

E.2 THE SIZE OF THE FOOD SYSTEM IN DETROIT

Based on this definition and approach, it is estimated that the food system in Detroit represents about \$3.7 billion in annual revenues and directly employs about 36,000 people earning about \$1 billion in wages and salaries per year (see Table E.1). The manufacturing category is the largest by annual revenues and also represents the category with the highest average annual salary, and the restaurant category is the largest by employment and also represents the category with the lowest average annual salary (see Figure E.2 and Figure E.3).^{A1}

A1. See Appendix I for additional detail on the economic activity directly represented by food system industries and occupations in Detroit.

Table E.1 Distribution Of Estimated Economic Activity Directly Represented By Food System In Detroit ^{A2}

Stage	Revenues (\$M)	Employment	Wages & Salaries (\$M)
Production Industries	\$3.80	109	\$2.90
Manufacturing and Processing Industries	\$1,247.00	2,310	\$140.20
Packaging and Warehousing Industries	\$47.00	592	\$25.20
Wholesale and Distribution Industries	\$484.20	2,569	\$177.80
Grocery and Market Industries	\$453.90	6,076	\$171.90
Restaurants/Drinking Places	\$711.00	15,064	\$245.60
Food Services/Mobile Food Services	\$215.70	3,493	\$77.80
Total for All Industries	\$3,162	30,213	\$841
Occupational Activity Not Accounted for Above	\$514	6,086	\$136
Total	\$3,677	36,299	\$978

A2. Revenues are associated with industries and not occupations, so a revenue estimate was made for food system occupations in non-food system industries by assuming the same proportion of employment to revenues as for food system industries.

Figure E.2 Distribution Of Estimated Revenues Directly Represented By The Food System In Detroit

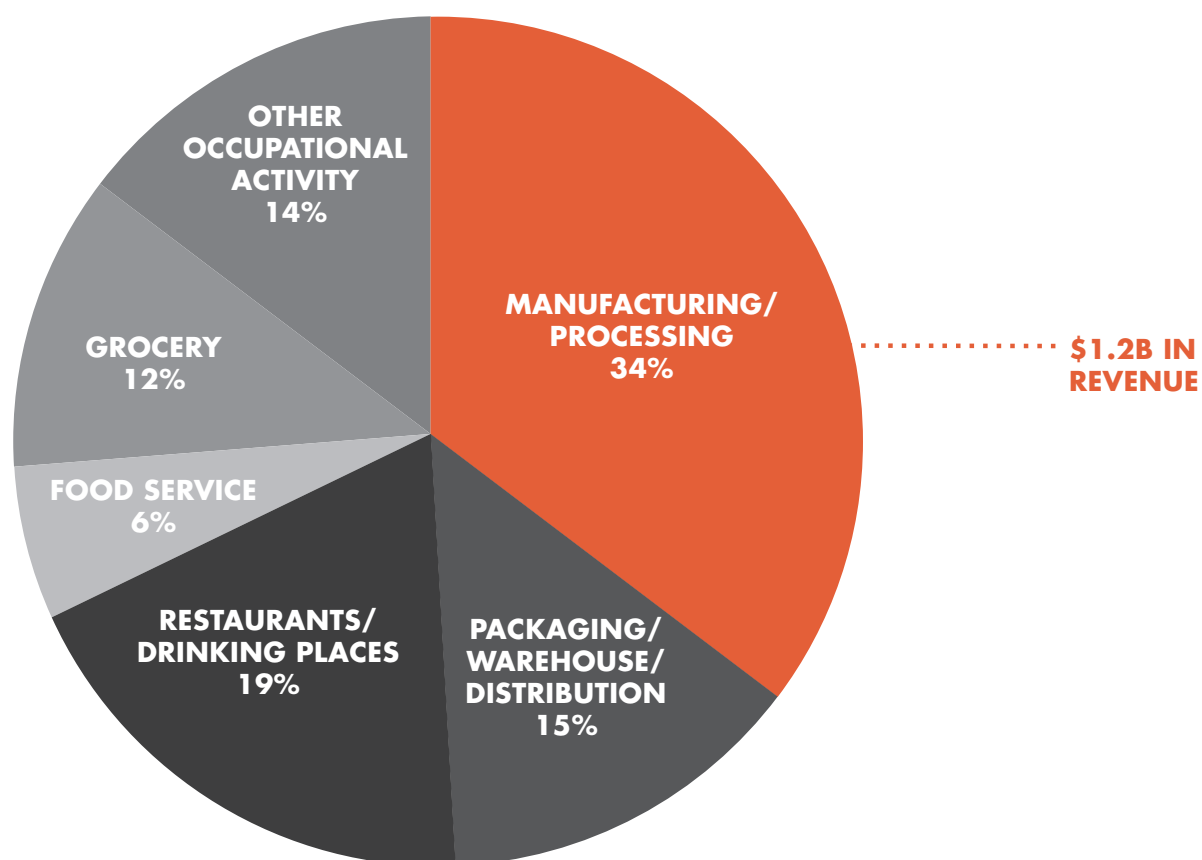
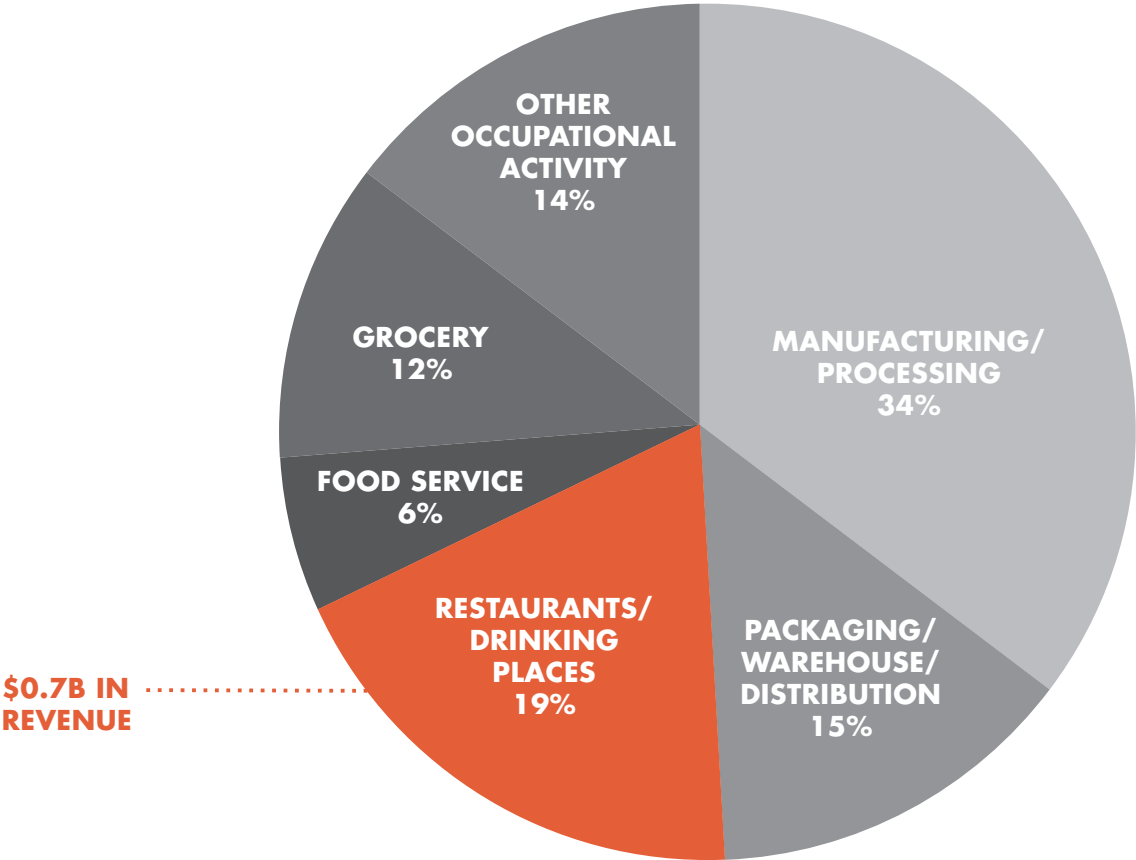


Figure E.3 Distribution Of Estimated Revenues Directly Represented By The Food System In Detroit



E.3 FOOD SYSTEM EMPLOYMENT IN DETROIT

As noted in the previous section, local food systems are important for economic development reasons because they can represent a high quantity and quality of jobs for local residents. This is already the case in Detroit, where one out of every eight jobs in Detroit is a food system job: 36,000 food system jobs out of a total of 292,000. If the food system in Detroit were classified as its own industry, it would represent the third largest industry in Detroit by employment, trailing only government and health care (see Table E.2).

Table E.2 Food System Employment Vs. Top 10 Industries In The City Of Detroit In 2012

#	NAICS Code	Description	# Jobs
1	90	Government	66,080
2	62	Health Care and Social Assistance	52,218
	(various)	(Food System)	36,299
3	72	Accommodation and Food Services	24,289
4	31-33	Manufacturing	22,585
5	54	Professional, Scientific, and Technical Services	16,970
6	81	Other Services (except Public Administration)	16,142
7	56	Administrative and Support and Waste Management and Remediation Services	16,059
8	44-45	Retail Trade	14,548
9	61	Educational Services (Private)	10,097
10	52	Finance and Insurance	8,069
		All Industries	291,858

The food system in Detroit has also grown in head count over the past decade, at a time when employment is down significantly in Detroit. Employment in food system industries grew by 7 percent from 2002 to 2012, whereas employment in all industries shrank by 11 percent during the same time period (see Table E.3).^{A3}

Table E.3 Employment In Food Service Industries And Occupations Over Time

	2002	2012	Change
Food Service Industries	28,326	30,212	6.70%
Food Service Occupations	21,721	21,286	-2.00%
All Industries and Occupations	327,875	291,858	-11.00%

A3. See Appendices J and K for additional detail on employment in food system industries and occupations in Detroit over time.

As noted in the previous section, local food systems represent a wide range of jobs, in terms of income levels, skill levels, and necessary educational attainment levels (see Table E.4 and Table E.5). In the aggregate, the food system in Detroit offers a diversity of employment opportunities for local residents, with many salaries above Detroit's median household income of \$27,862.^{A4}

Table E.4 Salary Level Of Jobs In Illustrative Industries Within The Local Food System

Category	Average Salary	Illustrative High-Wage Industry	Illustrative Low-Wage Industry
Production	\$25,722	\$32,283 – Postharvest Crop Activities	\$20,577 - Farm Labor Contractors and Crew Leaders
Manufacturing and Processing	\$59,274	\$84,059 – Soft Drink Manufacturing	\$25,585 – Perishable Prepared Food Manufacturing
Packaging and Warehousing	\$43,482	\$42,814 - Refrigerated Warehousing and Storing	
Wholesale and Distribution	\$66,380	\$83,845 - Fresh Fruit and Vegetable Merchant Wholesalers	\$39,594 - Fish and Seafood Merchant Wholesalers
Grocery and Market	\$27,917	\$37,156 Commercial Bakeries	\$18,180 - Retail Bakeries
Restaurants/Drinking Places	\$16,419	\$18,018 – Drinking Places (Alcoholic Beverages)	\$15,667 – Limited-Service Restaurants
Food Service/Mobile Food Service	\$22,585	\$36,528 - Community Food Services	\$11,048 - Caterers

A4. US Census Bureau, State & County QuickFacts

Table E.5 Distribution Of Educational Attainment Level Of Different Kinds Of Food System Jobs ^{A5}

Category	% "A" Jobs	% "B" Jobs	% "C" Jobs
Production	72.90%	18.60%	8.50%
Manufacturing and Processing	73.20%	15.20%	11.60%
Packaging and Warehousing	66.90%	20.20%	13.00%
Wholesale and Distribution	79.80%	10.10%	10.10%
Grocery and Market	78.00%	18.20%	3.90%
Restaurants/Drinking Places	86.20%	12.80%	1.00%
Food Service/Mobile Food Service	63.20%	27.60%	9.20%
Food Jobs Not in Food Industry	80.40%	15.00%	4.50%

A5. "A" jobs are those considered to not require significant prerequisites "B" jobs are those considered to require some college education, long-term on the job training, experience in a related field, or a postsecondary non-degree award "C" jobs considered to require a Bachelor's degree or above

APPENDIX F

DETROIT FOOD SYSTEM

F.1 A DIVERSITY OF EMPLOYMENT OPPORTUNITIES

Because of its complexity, a local food system can represent a wide range of jobs. People tend to think of the employment opportunities associated with functions at both ends of the food system— on a farm, in a restaurant, or at a supermarket— rather than with functions in the middle— manufacturing, processing, wholesaling, and distribution.

In fact, a local food system includes a diversity of jobs representing a wide range of income levels, skill levels, and necessary educational attainment levels. It is for this reason that promoting local food systems is seen as a useful economic development tool and a powerful avenue for promoting social equity, because as food systems grow in size and complexity, they can create a high quantity, quality, and diversity of jobs for a particular jurisdiction. There is opportunity in industries outside of those traditionally associated with the food system including manufacturing and wholesale (see Table F.1).

Table F.1 Top 10 Food System Industries In The City Of Detroit, By Revenue

NAICS	Description	\$M Revenues (City)	Employment (City)	\$M Earnings (City)
312111	Soft Drink Manufacturing	\$539.60	839	\$72.10
722211	Limited-Service Restaurants	\$375.30	8,174	\$129.70
311919	Other Snack Food Manufacturing	\$278.40	567	\$27.20
722110	Full-Service Restaurants	\$251.70	5,163	\$87.00
445110	Supermarkets and Other Grocery (except Convenience) Stores	\$196.00	2,973	\$79.50
722310	Food Service Contractors	\$180.40	2,646	\$62.30
424480	Fresh Fruit and Vegetable Merchant Wholesalers	\$133.00	544	\$48.80
445310	Beer, Wine, and Liquor Stores	\$112.10	1,378	\$45.50
424470	Meat and Meat Product Merchant Wholesalers	\$109.30	513	\$40.10
311514	Dry, Condensed, and Evaporated Dairy Product Manufacturing	\$104.80	106	\$8.80

F.2 CURRENT ECONOMIC IMPACT

Based on our methodological approach, it is estimated that the food system in Detroit is responsible for about \$5.8 billion in annual economic impact, supporting about 59,000 jobs and about \$1.9 billion in earnings per year throughout the three county region (see Table F.2).^{A6} Manufacturing has the biggest expenditure impact, as it is directly and indirectly responsible for about \$2.3 billion in annual economic impact, almost 40 percent of the total food system, and the restaurant category has the largest employment impact, as it is directly and indirectly responsible for supporting about 24,500 jobs.

A6. It is expenditures and not revenues that produce spillover impacts, since it is in the spending of money that indirect and induced effects take place. Therefore, to be conservative, the \$3.7 billion revenue Figure was converted into a \$3.2 billion expenditure Figure, based on average profit margin estimates for food system industries. It was this \$3.2 billion expenditure amount, and not the \$3.7 billion revenue amount, that was modeled in this report. Another way of describing this approach is that it conservatively assumes that none of the profits generated by the food service industry were in turn spent within the Detroit economy. If some or all of the profits generated by the food service industry were in turn spent within the Detroit economy, whether through reinvestment in food service establishments or through distributions to owners and investors that are Detroit residents, then the actual economic impact of the food system in Detroit is higher than the estimates in this report.

Table F.2 Estimated Annual Economic Impact Of The Food System In Detroit On The Three-County Region Of Wayne, Macomb, And Oakland Counties, By Food System Category

Economic Impact Category	Production	Manufacturing and Processing	Packaging and Warehousing	Wholesale and Distribution
Direct Expenditures (\$M)	\$3	\$1,296	\$45	\$457
Indirect and Induced Expenditures (\$M)	\$4	\$993	\$40	\$384
Total Expenditures (\$M)	\$7	\$2,289	\$84	\$841
Total Employment (Jobs)	269	7,145	1,262	8,054
Total Wages & Salaries (\$M)	\$7	\$394	\$46	\$387
Average Annual Salaries (\$)	26,590	55,158	36,836	48,036

Economic Impact Category	Grocery and Market	Restaurants/ Drinking Places	Food Service/ Mobile Food Service	Total
Direct Expenditures (\$M)	\$445	\$713	\$217	\$3,176
Indirect and Induced Expenditures (\$M)	\$375	\$633	\$194	\$2,622
Total Expenditures (\$M)	\$820	\$1,346	\$411	\$5,798
Total Employment (Jobs)	11,902	24,539	5,690	58,861
Total Wages & Salaries (\$M)	\$360	\$515	\$161	\$1,871
Average Annual Salaries (\$)	30,234	20,994	28,295	31,784

F.3 CURRENT FISCAL IMPACT

In addition to generating considerable economic impacts for a wide range of industries throughout the three-county region, the food system in Detroit produces significant tax revenues for the City of Detroit and the State of Michigan. It is estimated that the food system in Detroit, and the spillover impacts that result from its existence throughout the three-county region, grow various local and state tax bases such that the City of Detroit and the State of Michigan generate a combined \$125 million per year in tax revenues (see Table F.3).

Table F.3 Estimated Annual Fiscal Impact Of The Food System In Detroit In 2012 To The City Of Detroit And State Of Michigan Governments

Fiscal Impact	Detroit	Michigan
Personal Income Tax (M)	\$9.50	\$22.50
Sales & Use Tax (M)		\$74.40
Corporate Income Tax (M)	\$0.50	\$3.50
Property Tax (M)	\$9.90	\$4.90
Utility Users Tax (M)	\$1.80	
Total (M)	\$21.80	\$105.30

F.4 FOOD RETAIL SUPPLY AND DEMAND

Data limitations prevent a more thorough exploration of Detroit-level localization opportunities. However, one important area in which some data are available is consumer spending in grocery stores and restaurants. Here the data on supply (revenues by Detroit merchants) and demand (spending by Detroit residents) suggest a dearth of grocery stores and full-service restaurants (see Table F.4). In total, less than half of the retail demand is met in Detroit. This reinforces the size and distribution of market opportunity within Detroit, as well as the need for action to address issues of inequitable access.^{A7}

Table F.4 Retail Supply Vs. Demand In Detroit In Selected Food System Categories

Production Stage	Household Demand Inside Region (\$M)	Household Demand Outside Region (\$M)
Production	\$21.50	\$348.00
Manufacturing and Processing	\$556.20	\$1,676.00
Packaging and Warehousing	\$2.40	\$0.50
Wholesale and Distribution	\$215.10	\$254.80
Grocery and Market	\$723.90	\$545.50
Restaurants/Drinking Places	\$1,477.20	\$726.50
Food Services/Mobile Food Services	\$212.10	\$39.00
TOTAL	\$3,208.50	\$3,590.30

A7. See Appendices M and N for additional data on demographic and consumer spending characteristics for Detroit.

APPENDIX G

INDUSTRIES AND OCCUPATIONS CONSIDERED AS PART OF THE LOCAL FOOD SYSTEM

Table G.1 Six-Digit North American Industry Classification System (NAICS) Codes Considered as Part of the Local Food System

NAICS	Description
111000	Crop Production
112000	Animal Production
114111	Finfish Fishing
114112	Shellfish Fishing
114119	Other Marine Fishing
114210	Hunting and Trapping
115112	Soil Preparation, Planting, and Cultivating
115113	Crop Harvesting, Primarily by Machine
115114	Postharvest Crop Activities (except Cotton Ginning)
115115	Farm Labor Contractors and Crew Leaders
115116	Farm Management Services
115210	Support Activities for Animal Production
311211	Flour Milling
311212	Rice Milling
311213	Malt Manufacturing
311221	Wet Corn Milling
311222	Soybean Processing
311223	Other Oilseed Processing
311225	Fats and Oils Refining and Blending
311230	Breakfast Cereal Manufacturing
311311	Sugarcane Mills
311312	Cane Sugar Refining
311313	Beet Sugar Manufacturing
311320	Chocolate and Confectionery Manufacturing from Cacao Beans
311330	Confectionery Manufacturing from Purchased Chocolate
311340	Nonchocolate Confectionery Manufacturing
311411	Frozen Fruit, Juice, and Vegetable Manufacturing
311412	Frozen Specialty Food Manufacturing
311421	Fruit and Vegetable Canning
311422	Specialty Canning

NAICS	Description
311423	Dried and Dehydrated Food Manufacturing
311511	Fluid Milk Manufacturing
311512	Creamery Butter Manufacturing
311513	Cheese Manufacturing
311514	Dry, Condensed, and Evaporated Dairy Product Manufacturing
311520	Ice Cream and Frozen Dessert Manufacturing
311611	Animal (except Poultry) Slaughtering
311612	Meat Processed from Carcasses
311613	Rendering and Meat Byproduct Processing
311615	Poultry Processing
311711	Seafood Canning
311712	Fresh and Frozen Seafood Processing
311811	Retail Bakeries
311812	Commercial Bakeries
311813	Frozen Cakes, Pies, and Other Pastries Manufacturing
311821	Cookie and Cracker Manufacturing
311822	Flour Mixes and Dough Manufacturing from Purchased Flour
311823	Dry Pasta Manufacturing
311830	Tortilla Manufacturing
311911	Roasted Nuts and Peanut Butter Manufacturing
311919	Other Snack Food Manufacturing
311920	Coffee and Tea Manufacturing
311930	Flavoring Syrup and Concentrate Manufacturing
311941	Mayonnaise, Dressing, and Other Prepared Sauce Manufacturing
311942	Spice and Extract Manufacturing
311991	Perishable Prepared Food Manufacturing
311999	All Other Miscellaneous Food Manufacturing
312111	Soft Drink Manufacturing
312112	Bottled Water Manufacturing
312113	Ice Manufacturing
312120	Breweries
312130	Wineries
312140	Distilleries
424410	General Line Grocery Merchant Wholesalers
424420	Packaged Frozen Food Merchant Wholesalers
424430	Dairy Product (except Dried or Canned) Merchant Wholesalers
424440	Poultry and Poultry Product Merchant Wholesalers
424450	Confectionery Merchant Wholesalers
424460	Fish and Seafood Merchant Wholesalers
424470	Meat and Meat Product Merchant Wholesalers
424480	Fresh Fruit and Vegetable Merchant Wholesalers
424490	Other Grocery and Related Products Merchant Wholesalers
424510	Grain and Field Bean Merchant Wholesalers
424520	Livestock Merchant Wholesalers
424590	Other Farm Product Raw Material Merchant Wholesalers
424810	Beer and Ale Merchant Wholesalers

NAICS	Description
424820	Wine and Distilled Alcoholic Beverage Merchant Wholesalers
424910	Farm Supplies Merchant Wholesalers
444220	Nursery, Garden Center, and Farm Supply Stores
445110	Supermarkets and Other Grocery (except Convenience) Stores
445120	Convenience Stores
445210	Meat Markets
445220	Fish and Seafood Markets
445230	Fruit and Vegetable Markets
445291	Baked Goods Stores
445292	Confectionery and Nut Stores
445299	All Other Specialty Food Stores
445310	Beer, Wine, and Liquor Stores
446191	Food (Health) Supplement Stores
454210	Vending Machine Operators
488991	Packing and Crating
493120	Refrigerated Warehousing and Storage
493130	Farm Product Warehousing and Storage
624210	Community Food Services
722110	Full-Service Restaurants
722211	Limited-Service Restaurants
722212	Cafeterias, Grill Buffets, and Buffets
722213	Snack and Nonalcoholic Beverage Bars
722310	Food Service Contractors
722320	Caterers
722330	Mobile Food Services
722410	Drinking Places (Alcoholic Beverages)

Table G.2 Six-Digit Standard Occupation Classification (SOC) Codes Considered as Part of the Local Food System

SOC	Description
11-9013	Farmers, Ranchers, and Other Agricultural Managers
11-9051	Food Service Managers
13-1021	Buyers and Purchasing Agents, Farm Products
13-1074	Farm Labor Contractors
17-2021	Agricultural Engineers
19-1011	Animal Scientists
19-1012	Food Scientists and Technologists
19-1013	Soil and Plant Scientists
19-4011	Agricultural and Food Science Technicians
25-9021	Farm and Home Management Advisors
29-1031	Dietitians and Nutritionists
29-2051	Dietetic Technicians

SOC	Description
35-1011	Chefs and Head Cooks
35-1012	First-Line Supervisors of Food Preparation and Serving Workers
35-2011	Cooks, Fast Food
35-2013	Cooks, Institution and Cafeteria
35-2013	Cooks, Private Household
35-2014	Cooks, Restaurant
35-2015	Cooks, Short Order
35-2019	Cooks, All Other
35-2021	Food Preparation Workers
35-3011	Bartenders
35-3021	Combined Food Preparation and Serving Workers, Including Fast Food
35-3022	Counter Attendants, Cafeteria, Food Concession, and Coffee Shop
35-3031	Waiters and Waitresses
35-3041	Food Servers, Nonrestaurant
35-9011	Dining Room and Cafeteria Attendants and Bartender Helpers
35-9021	Dishwashers
35-9031	Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop
35-9099	Food Preparation and Serving Related Workers, All Other
45-1011	First-Line Supervisors of Farming, Fishing, and Forestry Workers
45-2011	Agricultural Inspectors
45-2021	Animal Breeders
45-2041	Graders and Sorters, Agricultural Products
45-2091	Agricultural Equipment Operators
45-2092	Farmworkers and Laborers, Crop, Nursery, and Greenhouse
45-2093	Farmworkers, Farm, Ranch, and Aquacultural Animals
45-2099	Agricultural Workers, All Other
45-3011	Fishers and Related Fishing Workers
45-3021	Hunters and Trappers
49-3041	Farm Equipment Mechanics and Service Technicians
51-3011	Bakers
51-3021	Butchers and Meat Cutters
51-3022	Meat, Poultry, and Fish Cutters and Trimmers
51-3023	Slaughterers and Meat Packers
51-3091	Food and Tobacco Roasting, Baking, and Drying Machine Operators and Tenders
51-3092	Food Batchmakers
51-3093	Food Cooking Machine Operators and Tenders

APPENDIX I

ECONOMIC ACTIVITY REPRESENTED BY FOOD SYSTEM INDUSTRIES AND OCCUPATIONS WITHIN THE CITY OF DETROIT

Table I.1 Estimated Economic Activity Represented by Food System Industries and Occupations in the City of Detroit and the Detroit Metropolitan Statistical Area (MSA)

	Revenues (\$B)	Employment (000)	Wages & Salaries (\$B)
City	\$3.68	36.3	\$0.98
MSA	\$19.33	249.9	\$5.81
City as a percentage of MSA	19%	15%	17%

Table I.2 Estimated Economic Activity Represented by Food Systems Industries in the City of Detroit and the Detroit Metropolitan Statistical Area (MSA), by Food System Stage

Stage	City Revenues (\$M)	MSA Revenues (\$M)	City ÷ MSA Revenues	City Employment	MSA Employment
Production Industries	\$3.80	\$700.00	1%	109	6,611
Manufacturing and Processing Industries	\$1,247.00	\$3,701.00	34%	2,310	7,532
Packaging and Warehousing Industries	\$47.00	\$125.10	38%	592	1,442
Wholesale and Distribution Industries	\$484.20	\$1,660.20	29%	2,569	9,896
Grocery and Market Industries	\$453.90	\$2,944.70	15%	6,076	40,479
Restaurant/Drinking Places	\$711.00	\$6,283.30	11%	15,064	128,570
Food Service	\$215.70	\$1,025.00	21%	3,493	18,694
Total for All Industries	\$3,162.60	\$16,439.30	19%	30,213	213,224
Occupational Activity Not Accounted for Above	\$514.50	\$2,891.90	18%	6,086	36,677
Total	\$3,677.10	\$19,331.20	19%	36,299	249,901

Stage	City ÷ MSA Employment	City Wages and Salaries (\$M)	MSA Wages and Salaries (\$M)	City ÷ MSA Wages and Salaries
Production Industries	2%	\$2.90	\$172.20	2%
Manufacturing and Processing Industries	31%	\$140.20	\$425.20	33%
Packaging and Warehousing Industries	41%	\$25.20	\$62.10	40%
Wholesale and Distribution Industries	26%	\$177.80	\$609.70	29%
Grocery and Market Industries	15%	\$171.90	\$1,145.70	15%
Restaurant/Drinking Places	12%	\$245.60	\$2,170.80	11%
Food Service	19%	\$77.80	\$358.70	22%
Total for All Industries	14%	\$841.40	\$4,944.50	17%
Occupational Activity Not Accounted for Above	17%	\$136.90	\$869.80	16%
Total	15%	\$978.30	\$5,814.30	17%

Table I.3 Estimated Economic Activity Represented by Food System Industries in the City of Detroit and the Detroit Metropolitan Statistical Area (MSA)

NAICS	Description	City Revenues (\$M)	MSA Revenues (\$M)
111000	Crop Production	\$0.00	\$564.60
112000	Animal Production	\$0.00	\$93.00
114111	Finfish Fishing	\$0.10	\$1.10
114112	Shellfish Fishing	\$0.00	\$0.10
114119	Other Marine Fishing	\$0.00	\$0.00
114210	Hunting and Trapping	\$0.70	\$12.40
115112	Soil Preparation, Planting, and Cultivating	\$0.00	\$5.70
115113	Crop Harvesting, Primarily by Machine	\$0.00	\$0.00
115114	Postharvest Crop Activities (except Cotton Ginning)	\$2.50	\$6.80
115115	Farm Labor Contractors and Crew Leaders	\$0.50	\$4.70
115116	Farm Management Services	\$0.00	\$0.20
115210	Support Activities for Animal Production	\$0.00	\$11.40
311213	Malt Manufacturing	\$0.00	\$0.00
311221	Wet Corn Milling	\$0.00	\$0.00
311222	Soybean Processing	\$0.00	\$0.40
311223	Other Oilseed Processing	\$24.00	\$53.20
311225	Fats and Oils Refining and Blending	\$38.00	\$86.90
311230	Breakfast Cereal Manufacturing	\$0.00	\$0.00
311311	Sugarcane Mills	\$0.00	\$2.50
311312	Cane Sugar Refining	\$0.00	\$31.50
311313	Beet Sugar Manufacturing	\$0.00	\$0.00
311320	Chocolate and Confectionery Manufacturing from Cacao Beans	\$0.00	\$4.80
311330	Confectionery Manufacturing from Purchased Chocolate	\$1.50	\$41.20
311340	Nonchocolate Confectionery Manufacturing	\$1.50	\$7.90
311411	Frozen Fruit, Juice, and Vegetable Manufacturing	\$0.10	\$0.90
311412	Frozen Specialty Food Manufacturing	\$14.90	\$240.10
311421	Fruit and Vegetable Canning	\$31.60	\$195.70
311422	Specialty Canning	\$0.00	\$0.60
311423	Dried and Dehydrated Food Manufacturing	\$0.10	\$0.10
311511	Fluid Milk Manufacturing	\$0.00	\$236.10
311512	Creamery Butter Manufacturing	\$0.00	\$0.20
311513	Cheese Manufacturing	\$0.00	\$37.00
311514	Dry, Condensed, and Evaporated Dairy Product Manufacturing	\$104.80	\$104.80
311520	Ice Cream and Frozen Dessert Manufacturing	\$1.60	\$5.40
311611	Animal (except Poultry) Slaughtering	\$5.90	\$23.10
311612	Meat Processed from Carcasses	\$90.50	\$347.20
311613	Rendering and Meat Byproduct Processing	\$0.00	\$11.20
311615	Poultry Processing	\$23.10	\$24.10
311711	Seafood Canning	\$0.90	\$0.90
311712	Fresh and Frozen Seafood Processing	\$0.00	\$9.30
311811	Retail Bakeries	\$24.50	\$95.70
311812	Commercial Bakeries	\$42.50	\$171.80
311813	Frozen Cakes, Pies, and Other Pastries Manufacturing	\$0.00	\$3.20
311821	Cookie and Cracker Manufacturing	\$8.80	\$18.60
311822	Flour Mixes and Dough Manufacturing from Purchased Flour	\$1.70	\$13.80
311823	Dry Pasta Manufacturing	\$5.70	\$12.50
311830	Tortilla Manufacturing	\$0.90	\$0.90

	City ÷ MSA Revenues	City Employment	MSA Employment	City ÷ MSA Employment	City Wages and Salaries (\$M)	MSA Wages and Salaries (\$M)	City ÷ MSA Wages and Salaries
	0%	0	4,691	0%	\$0.00	\$127.80	0%
	0%	0	655	0%	\$0.00	\$15.80	0%
	10%	10	75	13%	\$0.10	\$0.60	10%
	1%	2	12	17%	\$0.00	\$0.10	1%
	0%	0	0	0%	\$0.00	\$0.00	0%
	6%	7	122	6%	\$0.20	\$2.80	6%
	0%	0	212	0%	\$0.00	\$4.90	0%
	4%	0	10	0%	\$0.00	\$0.00	4%
	37%	71	221	32%	\$2.20	\$5.90	37%
	10%	19	240	8%	\$0.40	\$4.10	10%
	0%	0	36	0%	\$0.00	\$0.20	0%
	0%	0	337	0%	\$0.00	\$9.90	0%
	0%	0	0	0%	\$0.00	\$0.00	0%
	0%	0	0	0%	\$0.00	\$0.00	0%
	0%	0	1	0%	\$0.00	\$0.00	0%
	45%	9	19	47%	\$1.00	\$2.30	45%
	44%	14	32	44%	\$1.40	\$3.10	44%
	0%	0	0	0%	\$0.00	\$0.00	0%
	0%	0	15	0%	\$0.00	\$0.20	0%
	0%	0	59	0%	\$0.00	\$2.60	0%
	0%	0	0	0%	\$0.00	\$0.00	0%
	0%	0	21	0%	\$0.00	\$0.50	0%
	4%	14	254	6%	\$0.20	\$6.10	4%
	19%	5	36	14%	\$0.20	\$1.10	19%
	6%	1	14	7%	\$0.00	\$0.10	6%
	6%	45	644	7%	\$1.90	\$31.40	6%
	16%	134	582	23%	\$3.50	\$21.40	16%
	7%	0	8	0%	\$0.00	\$0.10	7%
	100%	0	0	0%	\$0.00	\$0.00	100%
	0%	0	382	0%	\$0.00	\$23.70	0%
	0%	0	1	0%	\$0.00	\$0.00	0%
	0%	0	54	0%	\$0.00	\$2.40	0%
	100%	106	106	100%	\$8.80	\$8.80	100%
	30%	5	30	17%	\$0.20	\$0.60	30%
	26%	16	50	32%	\$0.60	\$2.30	26%
	26%	179	728	25%	\$8.90	\$34.20	26%
	0%	0	18	0%	\$0.00	\$1.10	0%
	96%	49	52	94%	\$3.30	\$3.40	96%
	100%	2	2	100%	\$0.10	\$0.10	100%
	0%	0	10	0%	\$0.00	\$1.40	0%
	26%	303	1,207	25%	\$5.50	\$21.50	26%
	25%	254	1,249	20%	\$9.60	\$38.70	25%
	0%	0	18	0%	\$0.00	\$0.70	0%
	47%	35	74	47%	\$1.20	\$2.50	47%
	12%	4	49	8%	\$0.20	\$1.80	12%
	45%	14	35	40%	\$0.80	\$1.70	45%
	100%	14	14	100%	\$0.20	\$0.20	100%

NAICS	Description	City Revenues (\$M)	MSA Revenues (\$M)
311911	Roasted Nuts and Peanut Butter Manufacturing	\$3.30	\$95.10
311919	Other Snack Food Manufacturing	\$278.40	\$293.50
311920	Coffee and Tea Manufacturing	\$11.30	\$17.80
311930	Flavoring Syrup and Concentrate Manufacturing	\$0.20	\$1.90
311941	Mayonnaise, Dressing, and Other Prepared Sauce Manufacturing	\$2.80	\$51.00
311942	Spice and Extract Manufacturing	\$2.90	\$46.50
311991	Perishable Prepared Food Manufacturing	\$36.40	\$70.40
311999	All Other Miscellaneous Food Manufacturing	\$0.40	\$36.90
312111	Soft Drink Manufacturing	\$539.60	\$891.60
312112	Bottled Water Manufacturing	\$0.00	\$576.70
312113	Ice Manufacturing	\$1.80	\$10.10
312120	Breweries	\$6.70	\$32.40
312130	Wineries	\$0.30	\$35.00
312140	Distilleries	\$7.10	\$27.90
424410	General Line Grocery Merchant Wholesalers	\$15.00	\$278.00
424420	Packaged Frozen Food Merchant Wholesalers	\$11.60	\$29.90
424430	Dairy Product (except Dried or Canned) Merchant Wholesalers	\$10.80	\$177.70
424440	Poultry and Poultry Product Merchant Wholesalers	\$0.40	\$4.00
424450	Confectionery Merchant Wholesalers	\$33.80	\$172.80
424460	Fish and Seafood Merchant Wholesalers	\$8.10	\$16.50
424470	Meat and Meat Product Merchant Wholesalers	\$109.30	\$142.00
424480	Fresh Fruit and Vegetable Merchant Wholesalers	\$133.00	\$201.20
424490	Other Grocery and Related Products Merchant Wholesalers	\$79.40	\$329.40
424510	Grain and Field Bean Merchant Wholesalers	\$0.30	\$2.40
424520	Livestock Merchant Wholesalers	\$0.00	\$0.40
424590	Other Farm Product Raw Material Merchant Wholesalers	\$1.80	\$3.20
424810	Beer and Ale Merchant Wholesalers	\$25.30	\$156.10
424820	Wine and Distilled Alcoholic Beverage Merchant Wholesalers	\$55.50	\$111.30
424910	Farm Supplies Merchant Wholesalers	\$0.00	\$35.10
444220	Nursery, Garden Center, and Farm Supply Stores	\$7.10	\$98.30
445110	Supermarkets and Other Grocery (except Convenience) Stores	\$196.00	\$1,705.20
445120	Convenience Stores	\$21.90	\$114.80
445210	Meat Markets	\$14.50	\$59.80
445220	Fish and Seafood Markets	\$2.10	\$6.70
445230	Fruit and Vegetable Markets	\$19.20	\$126.20
445291	Baked Goods Stores	\$2.10	\$32.50
445292	Confectionery and Nut Stores	\$1.80	\$18.80
445299	All Other Specialty Food Stores	\$3.70	\$48.30
445310	Beer, Wine, and Liquor Stores	\$112.10	\$295.80
446191	Food (Health) Supplement Stores	\$5.10	\$119.70
454210	Vending Machine Operators	\$1.30	\$51.00
488991	Packing and Crating	\$11.20	\$70.40
493120	Refrigerated Warehousing and Storage	\$35.30	\$53.10
493130	Farm Product Warehousing and Storage	\$0.50	\$1.60
624210	Community Food Services	\$16.70	\$23.30
722110	Full-Service Restaurants	\$251.70	\$3,195.20
722211	Limited-Service Restaurants	\$375.30	\$2,423.30
722212	Cafeterias, Grill Buffets, and Buffets	\$1.40	\$56.60
722213	Snack and Nonalcoholic Beverage Bars	\$11.40	\$286.90
722310	Food Service Contractors	\$180.40	\$710.30
722320	Caterers	\$17.40	\$271.90
722330	Mobile Food Services	\$1.20	\$19.50
722410	Drinking Places (Alcoholic Beverages)	\$71.20	\$321.30
Total	All Industries	\$3,162.20	\$16,439.30

	City ÷ MSA Revenues	City Employment	MSA Employment	City ÷ MSA Employment	City Wages and Salaries (\$M)	MSA Wages and Salaries (\$M)	City ÷ MSA Wages and Salaries
	4%	7	183	4%	\$0.30	\$9.30	4%
	95%	567	594	95%	\$27.20	\$28.70	95%
	64%	36	52	69%	\$1.20	\$1.90	64%
	10%	2	10	20%	\$0.00	\$0.20	10%
	6%	13	154	8%	\$0.30	\$5.80	6%
	6%	6	64	9%	\$0.30	\$5.30	6%
	52%	172	288	60%	\$4.80	\$9.40	52%
	1%	1	48	2%	\$0.10	\$4.90	1%
	61%	839	1,511	56%	\$72.10	\$119.20	61%
	0%	0	1,091	0%	\$0.00	\$77.10	0%
	18%	6	50	12%	\$0.20	\$1.40	18%
	21%	10	86	12%	\$0.60	\$2.70	21%
	1%	1	78	1%	\$0.00	\$4.00	1%
	25%	3	15	20%	\$0.40	\$1.60	25%
	5%	78	1,556	5%	\$5.50	\$102.10	5%
	39%	55	171	32%	\$4.30	\$11.00	39%
	6%	61	1,103	6%	\$4.00	\$65.30	6%
	11%	4	39	10%	\$0.20	\$1.50	11%
	20%	215	1,113	19%	\$12.40	\$63.50	20%
	49%	72	154	47%	\$3.00	\$6.10	49%
	77%	513	716	72%	\$40.10	\$52.20	77%
	66%	544	917	59%	\$48.80	\$73.90	66%
	24%	640	2,494	26%	\$29.10	\$120.90	24%
	10%	1	35	3%	\$0.10	\$0.90	10%
	6%	0	11	0%	\$0.00	\$0.20	6%
	56%	8	16	50%	\$0.60	\$1.20	56%
	16%	125	842	15%	\$9.30	\$57.30	16%
	50%	253	530	48%	\$20.40	\$40.90	50%
	0%	0	199	0%	\$0.00	\$12.90	0%
	7%	101	1,227	8%	\$2.90	\$39.90	7%
	11%	2,973	24,178	12%	\$79.50	\$691.30	11%
	19%	419	2,365	18%	\$8.90	\$46.60	19%
	24%	178	858	21%	\$5.90	\$24.20	24%
	32%	51	120	43%	\$0.90	\$2.70	32%
	15%	216	1,622	13%	\$7.80	\$51.20	15%
	6%	50	589	8%	\$0.90	\$13.20	6%
	9%	38	382	10%	\$0.70	\$7.60	9%
	8%	69	871	8%	\$1.50	\$19.60	8%
	38%	1,378	3,948	35%	\$45.50	\$120.00	38%
	4%	23	995	2%	\$2.00	\$48.60	4%
	3%	23	868	3%	\$0.50	\$20.70	3%
	16%	108	697	15%	\$5.00	\$31.30	16%
	67%	471	709	66%	\$19.90	\$29.90	67%
	32%	13	36	36%	\$0.30	\$0.90	32%
	72%	254	386	66%	\$9.10	\$12.70	72%
	8%	5,163	61,216	8%	\$87.00	\$1,103.90	8%
	15%	8,174	54,009	15%	\$129.70	\$837.20	15%
	2%	24	970	2%	\$0.50	\$19.60	2%
	4%	247	5,603	4%	\$3.90	\$99.10	4%
	25%	2,646	10,912	24%	\$62.30	\$245.30	25%
	6%	545	6,935	8%	\$6.00	\$93.90	6%
	6%	48	461	10%	\$0.40	\$6.80	6%
	22%	1,456	6,772	22%	\$24.60	\$111.00	22%
	19%	30,213	213,224	14%	\$841.40	\$4,944.60	16%

Figure I.1 Distribution of Estimated Economic Activity Represented by Food Systems Industries in the City of Detroit, by Food System Stage

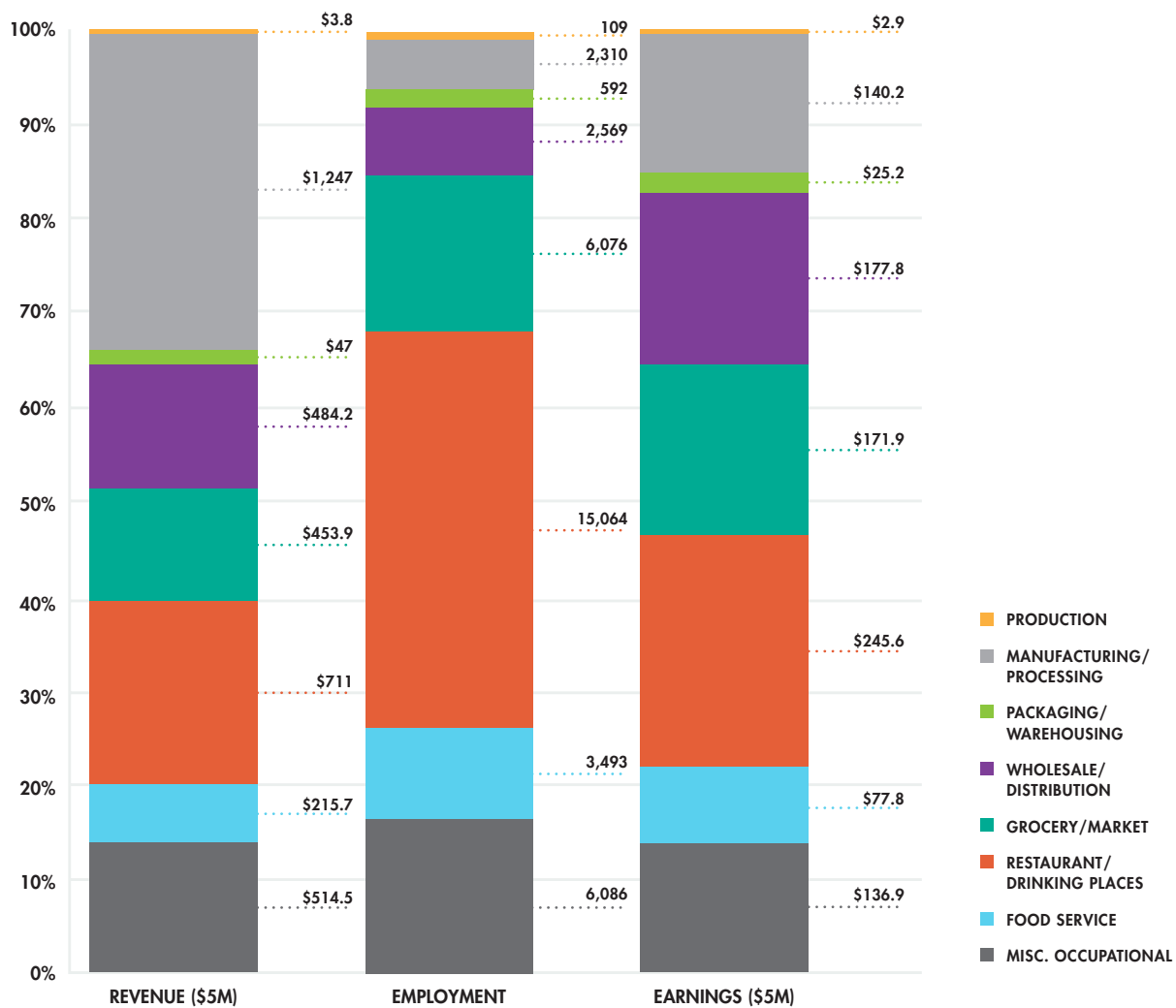


Table I.4 - Change in Employment in Food System Industries in the City of Detroit and the Detroit Metropolitan Statistical Area (MSA) from 2002 to 2012

NAICS	Description	2002 City Employment	2012 City Employment	2002-2012 % City Change	2002 MSA Employment	2012 MSA Employment	2002-2012 % MSA Change
111000	Crop Production	0	0	0%	5,720	4,691	-18%
112000	Animal Production	0	0	0%	580	655	13%
114111	Finfish Fishing	5	10	100%	86	75	-13%
114112	Shellfish Fishing	5	2	-60%	34	12	-65%
114119	Other Marine Fishing	0	0	0%	0	0	0%
114210	Hunting and Trapping	5	7	40%	96	122	27%
115112	Soil Preparation, Planting, and Cultivating	0	0	0%	147	212	44%
115113	Crop Harvesting, Primarily by Machine	0	0	0%	5	10	100%
115114	Postharvest Crop Activities (except Cotton Ginning)	32	71	122%	100	221	121%
115115	Farm Labor Contractors and Crew Leaders	17	19	12%	189	240	27%
115116	Farm Management Services	0	0	0%	5	36	620%
115210	Support Activities for Animal Production	0	0	0%	393	337	-14%
311213	Malt Manufacturing	0	0	0%	0	0	0%
311221	Wet Corn Milling	0	0	0%	0	0	0%
311222	Soybean Processing	0	0	0%	5	1	-80%
311223	Other Oilseed Processing	5	9	80%	17	19	12%
311225	Fats and Oils Refining and Blending	10	14	40%	27	32	19%
311230	Breakfast Cereal Manufacturing	0	0	0%	0	0	0%
311311	Sugarcane Mills	0	0	0%	0	15	100%
311312	Cane Sugar Refining	0	0	0%	0	59	100%
311313	Beet Sugar Manufacturing	0	0	0%	5	0	-100%
311320	Chocolate and Confectionery Manufacturing from Cacao Beans	0	0	0%	0	21	100%
311330	Confectionery Manufacturing from Purchased Chocolate	5	14	180%	222	254	14%
311340	Nonchocolate Confectionery Manufacturing	5	5	0%	64	36	-44%
311411	Frozen Fruit, Juice, and Vegetable Manufacturing	5	1	-80%	14	14	0%
311412	Frozen Specialty Food Manufacturing	28	45	61%	310	644	108%
311421	Fruit and Vegetable Canning	35	134	283%	576	582	1%
311422	Specialty Canning	0	0	0%	5	8	60%
311423	Dried and Dehydrated Food Manufacturing	0	0	0%	5	0	-100%
311511	Fluid Milk Manufacturing	0	0	0%	656	382	-42%
311512	Creamery Butter Manufacturing	0	0	0%	0	1	100%
311513	Cheese Manufacturing	0	0	0%	11	54	391%
311514	Dry, Condensed, and Evaporated Dairy Product Manufacturing	98	106	8%	98	106	8%
311520	Ice Cream and Frozen Dessert Manufacturing	133	5	-96%	147	30	-80%
311611	Animal (except Poultry) Slaughtering	183	16	-91%	246	50	-80%
311612	Meat Processed from Carcasses	224	179	-20%	885	728	-18%
311613	Rendering and Meat Byproduct Processing	0	0	0%	5	18	260%
311615	Poultry Processing	0	49	100%	0	52	100%
311711	Seafood Canning	37	2	-95%	38	2	-95%
311712	Fresh and Frozen Seafood Processing	0	0	0%	5	10	100%
311811	Retail Bakeries	334	303	-9%	2,062	1,207	-41%
311812	Commercial Bakeries	262	254	-3%	1,520	1,249	-18%

NAICS	Description	2002 City Employment	2012 City Employment	2002-2012 % City Change	2002 MSA Employment	2012 MSA Employment	2002-2012 % MSA Change
311813	Frozen Cakes, Pies, and Other Pastries Manufacturing	0	0	0%	5	18	260%
311821	Cookie and Cracker Manufacturing	0	35	100%	40	74	85%
311822	Flour Mixes and Dough Manufacturing from Purchased Flour	5	4	-20%	23	49	113%
311823	Dry Pasta Manufacturing	29	14	-52%	67	35	-48%
311830	Tortilla Manufacturing	28	14	-50%	28	14	-50%
311911	Roasted Nuts and Peanut Butter Manufacturing	24	7	-71%	133	183	38%
311919	Other Snack Food Manufacturing	860	567	-34%	879	594	-32%
311920	Coffee and Tea Manufacturing	5	36	620%	55	52	-5%
311930	Flavoring Syrup and Concentrate Manufacturing	5	2	-60%	5	10	100%
311941	Mayonnaise, Dressing, and Other Prepared Sauce Manufacturing	10	13	30%	78	154	97%
311942	Spice and Extract Manufacturing	5	6	20%	31	64	106%
311991	Perishable Prepared Food Manufacturing	41	172	320%	74	288	289%
311999	All Other Miscellaneous Food Manufacturing	21	1	-95%	126	48	-62%
312111	Soft Drink Manufacturing	1,036	839	-19%	1,471	1,511	3%
312112	Bottled Water Manufacturing	0	0	0%	1,001	1,091	9%
312113	Ice Manufacturing	12	6	-50%	58	50	-14%
312120	Breweries	19	10	-47%	34	86	153%
312130	Wineries	0	1	100%	5	78	1460%
312140	Distilleries	5	3	-40%	10	15	50%
424410	General Line Grocery Merchant Wholesalers	115	78	-32%	2,332	1,556	-33%
424420	Packaged Frozen Food Merchant Wholesalers	348	55	-84%	598	171	-71%
424430	Dairy Product (except Dried or Canned) Merchant Wholesalers	11	61	455%	967	1,103	14%
424440	Poultry and Poultry Product Merchant Wholesalers	31	4	-87%	45	39	-13%
424450	Confectionery Merchant Wholesalers	164	215	31%	888	1,113	25%
424460	Fish and Seafood Merchant Wholesalers	120	72	-40%	267	154	-42%
424470	Meat and Meat Product Merchant Wholesalers	445	513	15%	615	716	16%
424480	Fresh Fruit and Vegetable Merchant Wholesalers	382	544	42%	649	917	41%
424490	Other Grocery and Related Products Merchant Wholesalers	708	640	-10%	2,447	2,494	2%
424510	Grain and Field Bean Merchant Wholesalers	0	1	100%	23	35	52%
424520	Livestock Merchant Wholesalers	0	0	0%	5	11	120%
424590	Other Farm Product Raw Material Merchant Wholesalers	33	8	-76%	37	16	-57%
424810	Beer and Ale Merchant Wholesalers	341	125	-63%	1,130	842	-25%
424820	Wine and Distilled Alcoholic Beverage Merchant Wholesalers	110	253	130%	499	530	6%
424910	Farm Supplies Merchant Wholesalers	0	0	0%	153	199	30%
444220	Nursery, Garden Center, and Farm Supply Stores	138	101	-27%	1,787	1,227	-31%
445110	Supermarkets and Other Grocery (except Convenience) Stores	2,989	2,973	-1%	28,057	24,178	-14%
445120	Convenience Stores	471	419	-11%	2,797	2,365	-15%
445210	Meat Markets	259	178	-31%	1,063	858	-19%
445220	Fish and Seafood Markets	49	51	4%	187	120	-36%
445230	Fruit and Vegetable Markets	179	216	21%	2,228	1,622	-27%
445291	Baked Goods Stores	53	50	-6%	582	589	1%
445292	Confectionery and Nut Stores	29	38	31%	354	382	8%
445299	All Other Specialty Food Stores	104	69	-34%	1,095	871	-20%
445310	Beer, Wine, and Liquor Stores	1,331	1,378	4%	4,349	3,948	-9%
446191	Food (Health) Supplement Stores	5	23	360%	1,177	995	-15%
454210	Vending Machine Operators	18	23	28%	1,257	868	-31%
488991	Packing and Crating	244	108	-56%	1,509	697	-54%
493120	Refrigerated Warehousing and Storage	441	471	7%	664	709	7%
493130	Farm Product Warehousing and Storage	5	13	160%	13	36	177%
624210	Community Food Services	86	254	195%	198	386	95%
722110	Full-Service Restaurants	3,735	5,163	38%	51,143	61,216	20%
722211	Limited-Service Restaurants	6,536	8,174	25%	47,821	54,009	13%
722212	Cafeterias, Grill Buffets, and Buffets	38	24	-37%	1,354	970	-28%
722213	Snack and Nonalcoholic Beverage Bars	102	247	142%	4,871	5,603	15%
722310	Food Service Contractors	2,401	2,646	10%	10,522	10,912	4%
722320	Caterers	870	545	-37%	10,708	6,935	-35%
722330	Mobile Food Services	35	48	37%	392	461	18%
722410	Drinking Places (Alcoholic Beverages)	1,862	1,456	-22%	9,632	6,772	-30%
Total	All Industries	28,326	30,212	7%	212,821	213,224	0%

Table I.5 - Estimated Economic Activity Represented by Food Systems Occupations in the City of Detroit and the Detroit Metropolitan Statistical Area (MSA)

SOC	Description	City Employment	MSA Employment	City + MSA Employment	City Wages and Salaries (\$M)	MSA Wages and Salaries (\$M)	City + MSA Wages and Salaries
11-9013	Food Scientists and Technologists	15	3,798	0.39%	\$0.40	\$87.10	0.47%
11-9051	Agricultural Inspectors	884	6,500	13.60%	\$21.40	\$186.20	11.47%
13-1021	Farm Equipment Mechanics and Service Technicians	5	113	4.42%	\$0.00	\$7.90	0.00%
13-1074	Bakers	5	5	100.00%	\$0.00	\$0.00	0.00%
17-2021	Farm Labor Contractors	11	75	14.67%	\$0.80	\$6.50	12.35%
19-1011	Butchers and Meat Cutters	5	25	20.00%	\$0.00	\$1.80	0.00%
19-1012	Soil and Plant Scientists	16	120	13.33%	\$0.80	\$7.20	10.97%
19-1013	Meat, Poultry, and Fish Cutters and Trimmers	5	100	5.00%	\$0.00	\$5.00	0.00%
19-4011	Food Service Managers	10	99	10.10%	\$0.00	\$4.60	0.00%
25-9021	Cooks, Private Household	87	248	35.08%	\$4.80	\$12.40	38.52%
29-1031	Cooks, All Other	173	1,229	14.08%	\$8.50	\$66.10	12.88%
29-2051	Bartenders	224	686	32.65%	\$6.10	\$18.80	32.34%
35-1011	Combined Food Preparation and Serving Workers, Including Fast Food	231	1,376	16.79%	\$7.00	\$45.40	15.34%
35-1012	Agricultural Workers, All Other	1,730	13,751	12.58%	\$47.70	\$413.60	11.53%
35-2011	Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop	664	6,956	9.55%	\$11.90	\$125.50	9.49%
35-2012	Food Preparation and Serving Related Workers, All Other	696	4,131	16.85%	\$16.50	\$99.20	16.62%
35-2013	Slaughterers and Meat Packers	5	13	38.46%	\$0.00	\$0.40	0.00%
35-2014	Farmworkers, Farm, Ranch, and Aquacultural Animals	1,464	14,457	10.13%	\$32.80	\$338.60	9.68%
35-2015	Counter Attendants, Cafeteria, Food Concession, and Coffee Shop	268	1,724	15.55%	\$5.40	\$35.10	15.53%
35-2019	Cooks, Restaurant	109	725	15.03%	\$2.70	\$16.10	16.83%
35-2021	Farmworkers and Laborers, Crop, Nursery, and Greenhouse	1,239	10,258	12.08%	\$27.20	\$224.00	12.13%
35-3011	Agricultural Equipment Operators	991	5,845	16.95%	\$20.60	\$121.90	16.91%
35-3021	Hunters and Trappers	4,044	32,427	12.47%	\$72.60	\$585.60	12.40%
35-3022	Graders and Sorters, Agricultural Products	973	7,153	13.60%	\$19.20	\$139.80	13.73%
35-3031	Fishers and Related Fishing Workers	3,496	32,423	10.78%	\$65.00	\$634.20	10.24%
35-3041	Dining Room and Cafeteria Attendants and Bartender Helpers	442	3,175	13.92%	\$9.60	\$69.80	13.82%
35-9011	Animal Breeders	891	6,314	14.11%	\$16.40	\$119.00	13.77%
35-9021	First-Line Supervisors of Farming, Fishing, and Forestry Workers	827	7,207	11.47%	\$14.50	\$129.30	11.22%
35-9031	Dishwashers	504	5,182	9.73%	\$9.20	\$101.50	9.04%
35-9099	Food Servers, Nonrestaurant	328	1,112	29.50%	\$6.10	\$21.60	28.16%
45-1011	Animal Scientists	13	146	8.90%	\$0.50	\$6.20	7.67%
45-2011	Agricultural and Food Science Technicians	16	51	31.37%	\$0.50	\$1.90	27.49%
45-2021	Farmers, Ranchers, and Other Agricultural Managers	0	5	0.00%	\$0.00	\$0.00	0.00%
45-2041	Chefs and Head Cooks	23	129	17.83%	\$0.40	\$2.70	16.47%
45-2091	Buyers and Purchasing Agents, Farm Products	10	140	7.14%	\$0.20	\$3.80	5.65%
45-2092	Cooks, Fast Food	39	1,623	2.40%	\$0.80	\$35.80	2.20%
45-2093	Agricultural Engineers	11	195	5.64%	\$0.20	\$3.60	5.35%
45-2099	Food and Tobacco Roasting, Baking, and Drying Machine Operators and Tenders	5	56	8.93%	\$0.00	\$1.60	0.00%
45-3011	Dietetic Technicians	21	208	10.10%	\$0.40	\$4.60	9.62%
45-3021	Food Batchmakers	5	11	45.45%	\$0.00	\$0.40	0.00%
49-3041	Food Cooking Machine Operators and Tenders	5	159	3.14%	\$0.00	\$5.00	0.00%
51-3011	Waiters and Waitresses	325	2,138	15.20%	\$7.20	\$49.50	14.64%
51-3021	Food Preparation Workers	173	1,295	13.36%	\$4.40	\$37.30	11.73%
51-3022	Cooks, Institution and Cafeteria	68	1,010	6.73%	\$1.50	\$23.00	6.57%
51-3023	First-Line Supervisors of Food Preparation and Serving Workers	26	97	26.80%	\$0.70	\$2.50	25.64%
51-3091	Dietitians and Nutritionists	20	189	10.58%	\$0.70	\$7.10	9.91%
51-3092	Cooks, Short Order	168	838	20.05%	\$4.70	\$20.20	23.19%
51-3093	Farm and Home Management Advisors	16	70	22.86%	\$0.40	\$2.00	21.97%
Total	All Occupations	21,286	175,587	13.18%	\$449.70	\$3,831.20	13.05%

APPENDIX J

CHANGE IN EMPLOYMENT IN FOOD SYSTEMS INDUSTRIES IN DETROIT AND DETROIT MSA

Table J.1 Change in Employment in Food Systems Occupations in the City of Detroit and the Detroit Metropolitan Statistical Area

SOC	Description	City Employment (2002)	City Employment (2012)	2002-2012 % Change	MSA Employment (2002)	MSA Employment (2012)	2002-2012 % Change
11-9013	Farmers, Ranchers, and Other Agricultural Managers	16	15	-6%	4,724	3,798	-20%
11-9051	Food Service Managers	570	884	55%	4,559	6,500	43%
13-1021	Buyers and Purchasing Agents, Farm Products	12	5	-58%	122	113	-7%
13-1074	Farm Labor Contractors	0	5	100%	5	5	0%
17-2021	Agricultural Engineers	10	11	10%	72	75	4%
19-1011	Animal Scientists	5	5	0%	24	25	4%
19-1012	Food Scientists and Technologists	22	16	-27%	137	120	-12%
19-1013	Soil and Plant Scientists	10	5	-50%	96	100	4%
19-4011	Agricultural and Food Science Technicians	16	10	-38%	129	99	-23%
25-9021	Farm and Home Management Advisors	90	87	-3%	221	248	12%
29-1031	Dietitians and Nutritionists	161	173	7%	1,029	1,229	19%
29-2051	Dietetic Technicians	221	224	1%	669	686	3%
35-1011	Chefs and Head Cooks	223	231	4%	1,355	1,376	2%
35-1012	First-Line Supervisors of Food Preparation and Serving Workers	1,765	1,730	-2%	13,371	13,751	3%
35-2011	Cooks, Fast Food	687	664	-3%	7,015	6,956	-1%
35-2012	Cooks, Institution and Cafeteria	894	696	-22%	4,510	4,131	-8%
35-2013	Cooks, Private Household	5	5	0%	15	13	-13%
35-2014	Cooks, Restaurant	1,351	1,464	8%	12,516	14,457	16%
35-2015	Cooks, Short Order	309	268	-13%	1,869	1,724	-8%
35-2019	Cooks, All Other	104	109	5%	781	725	-7%
35-2021	Food Preparation Workers	1,370	1,239	-10%	10,549	10,258	-3%
35-3011	Bartenders	1,278	991	-22%	6,911	5,845	-15%
35-3021	Combined Food Preparation and Serving Workers, Including Fast Food	3,971	4,044	2%	30,010	32,427	8%
35-3022	Counter Attendants, Cafeteria, Food Concession, and Coffee Shop	1,081	973	-10%	7,662	7,153	-7%
35-3031	Waiters and Waitresses	3,451	3,496	1%	30,784	32,423	5%
35-3041	Food Servers, Nonrestaurant	500	442	-12%	3,277	3,175	-3%
35-9011	Dining Room and Cafeteria Attendants and Bartender Helpers	896	891	-1%	6,555	6,314	-4%
35-9021	Dishwashers	824	827	0%	7,175	7,207	0%
35-9031	Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop	505	504	0%	4,846	5,182	7%
35-9099	Food Preparation and Serving Related Workers, All Other	263	328	25%	1,288	1,112	-14%
45-1011	First-Line Supervisors of Farming, Fishing, and Forestry Workers	15	13	-13%	146	146	0%
45-2011	Agricultural Inspectors	16	16	0%	53	51	-4%
45-2021	Animal Breeders	0	0	0%	5	5	0%
45-2041	Graders and Sorters, Agricultural Products	28	23	-18%	144	129	-10%
45-2091	Agricultural Equipment Operators	11	10	-9%	147	140	-5%
45-2092	Farmworkers and Laborers, Crop, Nursery, and Greenhouse	52	39	-25%	1,733	1,623	-6%

SOC	Description	City Employment (2002)	City Employment (2012)	2002-2012 % Change	MSA Employment (2002)	MSA Employment (2012)	2002-2012 % Change
45-2093	Farmworkers, Farm, Ranch, and Aquacultural Animals	17	11	-35%	230	195	-15%
45-2099	Agricultural Workers, All Other	10	5	-50%	61	56	-8%
45-3011	Fishers and Related Fishing Workers	25	21	-16%	233	208	-11%
45-3021	Hunters and Trappers	5	5	0%	20	11	-45%
49-3041	Farm Equipment Mechanics and Service Technicians	5	5	0%	169	159	-6%
51-3011	Bakers	320	325	2%	2,390	2,138	-11%
51-3021	Butchers and Meat Cutters	199	173	-13%	1,476	1,295	-12%
51-3022	Meat, Poultry, and Fish Cutters and Trimmers	107	68	-36%	1,086	1,010	-7%
51-3023	Slaughterers and Meat Packers	44	26	-41%	131	97	-26%
51-3091	Food and Tobacco Roasting, Baking, and Drying Machine Operators and Tenders	24	20	-17%	205	189	-8%
51-3092	Food Batchmakers	212	168	-21%	1,012	838	-17%
51-3093	Food Cooking Machine Operators and Tenders	21	16	-24%	81	70	-14%
Total	All Occupations	21,721	21,286	-2%	171,598	175,587	2%

APPENDIX K

FOOD SYSTEM EMPLOYMENT VS. ALL EMPLOYMENT IN THE CITY OF DETROIT

Table K.1 Change in Employment in Detroit City, by Two-Digit NAICS Code

NAICS	Description	2002 Jobs	2012 Jobs	# Change	Percent Change
11	Agriculture, Forestry, Fishing and Hunting	84	101	17	20%
21	Mining, Quarrying, and Oil and Gas Extraction	344	397	53	15%
22	Utilities	1,233	1,632	399	32%
23	Construction	9,221	6,939	-2,282	-25%
31-33	Manufacturing	36,776	22,585	-14,191	-39%
42	Wholesale Trade	8,685	6,798	-1,887	-22%
44-45	Retail Trade	17,400	14,548	-2,852	-16%
48-49	Transportation and Warehousing	8,824	7,582	-1,242	-14%
51	Information	8,099	4,895	-3,204	-40%
52	Finance and Insurance	9,202	8,069	-1,133	-12%
53	Real Estate and Rental and Leasing	5,193	6,002	809	16%
54	Professional, Scientific, and Technical Services	16,499	16,970	471	3%
55	Management of Companies and Enterprises	6,338	5,397	-941	-15%
56	Administrative and Support and Waste Management and Remediation Services	14,887	16,059	1,172	8%
61	Educational Services (Private)	7,114	10,097	2,983	42%
62	Health Care and Social Assistance	46,919	52,218	5,299	11%
71	Arts, Entertainment, and Recreation	12,269	4,859	-7,410	-60%
72	Accommodation and Food Services	17,128	24,289	7,161	42%
81	Other Services (except Public Administration)	15,584	16,142	558	4%
90	Government	86,069	66,080	-19,989	-23%
99	Unclassified Industry	<10	198	-	-
	Total	327,875	291,858	-36,017	-11%

Table K.2 Change in Employment in the City of Detroit, by Two-Digit Standard Occupation Classification (SOC) Code

SOC	Description	2002 Jobs	2012 Jobs	# Change	Percent Change
11	Management Occupations	16,968	15,584	-1,384	-8%
13	Business and Financial Operations Occupations	16,507	16,182	-325	-2%
15	Computer and Mathematical Occupations	5,847	5,411	-436	-7%
17	Architecture and Engineering Occupations	8,047	6,586	-1,461	-18%
19	Life, Physical, and Social Science Occupations	1,911	1,703	-208	-11%
21	Community and Social Service Occupations	8,066	7,695	-371	-5%
23	Legal Occupations	4,652	4,220	-432	-9%
25	Education, Training, and Library Occupations	28,816	23,918	-4,898	-17%
27	Arts, Design, Entertainment, Sports, and Media Occupations	6,025	6,091	66	1%
29	Healthcare Practitioners and Technical Occupations	18,699	20,224	1,525	8%
31	Healthcare Support Occupations	8,392	9,655	1,263	15%
33	Protective Service Occupations	14,618	11,712	-2,906	-20%
35	Food Preparation and Serving Related Occupations	19,475	18,907	-568	-3%
37	Building and Grounds Cleaning and Maintenance Occupations	12,142	13,462	1,320	11%
39	Personal Care and Service Occupations	14,519	16,375	1,856	13%
41	Sales and Related Occupations	23,719	20,823	-2,896	-12%
43	Office and Administrative Support Occupations	49,002	39,873	-9,129	-19%
45	Farming, Fishing, and Forestry Occupations	208	166	-42	-20%
47	Construction and Extraction Occupations	9,609	7,330	-2,279	-24%
49	Installation, Maintenance, and Repair Occupations	10,571	8,904	-1,667	-16%
51	Production Occupations	26,549	17,478	-9,071	-34%
53	Transportation and Material Moving Occupations	20,517	16,734	-3,783	-18%
55	Military occupations	1,708	1,476	-232	-14%
99	Unclassified Occupation	1,307	1,347	40	3%
	Total	327,875	291,858	-36,017	-11%

Table K.3 Estimated Economic Activity Represented by Food System Industries and Occupations in the Detroit MSA and Comparable MSAs

	Revenues (\$B)	Employment (000)	Wages & Salaries (\$B)
Detroit MSA	\$19.33	249.9	\$5.81
Chicago MSA	\$75.07	641.1	\$19.15
Cleveland MSA	\$11.80	146.1	\$3.43
New Orleans MSA	\$9.05	99.5	\$2.59
Newark MSA	\$16.85	153.4	\$4.84
Oakland MSA	\$35.19	327.8	\$10.40
Philadelphia MSA	\$39.18	401.5	\$10.99

APPENDIX L

INDUSTRY DISTRIBUTION OF FOOD SYSTEM LOCALIZATION OPPORTUNITY FOR THE CITY OF DETROIT

L.1 OVERVIEW AND METHODOLOGY

This section considers, among other topics, which of these categories make sense to focus on in terms of re-localizing that which is currently sourced non-locally, and what localization goal levels are feasible and aspirational. For some functions, there is considerable room for re-localization, whereas for other functions, even a small amount of re-localization may be prohibitively difficult to achieve.

What is useful at this juncture is to consider the consequences of a wholesale shift in sourcing from non-local establishments to local establishments. Specifically, what would a capture rate of 30 percent mean to the Detroit economy, in terms of taking 30 percent of that which is non-locally sourced within the food system and have that be sourced within Detroit?

For the purposes of this exercise, it is assumed that such a shift could be absorbed by food system establishments in Detroit. This presumes that existing food system establishments in Detroit could increase their capacity to meet the new demand without having to reduce their service levels to existing customers, and/or that new food system establishments could be created in Detroit to help meet the new demand.

L.2 THE EXPANDED FOOD SYSTEM IN DETROIT

Such a shift—of 30 percent of that which is currently non-locally sourced within the food system and have that be sourced within Detroit - would represent a significant amount of direct economic activity within Detroit. The expanded food system in Detroit would now represent about \$5.4 billion in annual revenues, directly employ over 52,000 people, and represent about \$1.3 billion in annual wages and salaries (see Table L.1). The food system in Detroit, if it were classified as its own industry, would then be the second largest industry and the largest private sector industry in Detroit by employment (see Table L.2). ^{A8}

A8. See the bottom of this Appendix for additional detail on the localization opportunity in Detroit represented by a 30 percent shift.

Table L.1 Distribution of Estimated Economic Activity Directly Represented by The Food System in Detroit, Assuming that 30 Percent of that Which is Currently Satisfied by the Food System Establishments Located Outside of Wayne County Becomes Satisfied by Food System Establishments Located in Detroit

	Revenues (\$B)	Employment ('000 Jobs)	Wages & Salaries (\$B)
Current Food System	\$3.68	36.3	\$0.98
Increase Resulting from 30 Percent Localization	\$1.70	16	\$0.29
Expanded Food System	\$5.38	52.3	\$1.27

Table L.2 Food System Employment vs. Top 10 Industries in Detroit, Assuming That 30 Percent of That Which is Currently Satisfied by Food System Establishments Located Outside of Wayne County Becomes Satisfied by Food System Establishments Located in Detroit

#	NAICS Code	Description
1	90	Government
	(various)	(Food System)
2	62	Health Care and Social Assistance
3	72	Accommodation and Food Services
4	31-33	Manufacturing
5	54	Professional, Scientific, and Technical Services
6	81	Other Services (except Public Administration)
7	56	Administrative and Support and Waste Management and Remediation Services
8	44-45	Retail Trade
9	61	Educational Services (Private)
10	52	Finance and Insurance
		All Industries

L.3 EXPANDED ECONOMIC IMPACT

If Detroit's food system was more local, the economic impacts it generates would be measurably larger. If 30 percent of the demand for food system goods and services that is satisfied outside of Wayne County is redirected into Detroit, resulting economic impacts would be greater than 30 percent. It is estimated that the food system in Detroit would be responsible for about \$8.4 billion in annual economic impact, supporting about 95,000 jobs and about \$2.7 billion in earnings per year throughout the three county region (see Table L.3, Figure L.1, and Table L.4).^{A9} The manufacturing category would continue to have the biggest expenditure impact, as it would be directly and indirectly responsible for about \$3.6 billion in annual economic impact, and the restaurant category would continue to have the biggest employment impact, as it would be directly and indirectly responsible for supporting about 32,000 jobs.

Table L.3 Estimated Annual Economic Impact of the Food System in Detroit on the Three-County Region of Wayne, Macomb, and Oakland Counties, Assuming That 30 Percent of That Which is Currently Satisfied by Food System Establishments Located Outside of Wayne County Becomes Satisfied by Food System Establishments Located in Detroit

Economic Impact Category	Current	30 Percent Localization	Expanded
Direct Expenditures (\$B)	\$3.20	\$1.40	\$4.60
Indirect and Induced Expenditures (\$B)	\$2.60	\$1.10	\$3.70
Total Expenditures (\$B)	\$5.80	\$2.60	\$8.40
Total Employment ('000 Jobs)	58.9	36.8	95.7
Total Wages & Salaries (\$B)	\$1.90	\$0.80	\$2.70
Average Annual Salaries (\$)	\$31,784	\$21,739	\$27,830

A9. As noted above, it is expenditures and not revenues that produce spillover impacts, since it is in the spending of money that indirect and induced effects take place. Therefore, the \$5.4 billion revenue Figure was converted into a \$4.6 billion expenditure Figure, and it was this expenditure amount, and not the revenue amount, that was modeled in this report.

Figure L.1 Estimated Annual Economic Impact of the Food System in Detroit on the Three-County Region of Wayne, Macomb, and Oakland Counties, Assuming That 30 Percent of That Which is Currently Satisfied by Food System Establishments Located Outside of Wayne County Becomes Satisfied by Food System Establishments Located in Detroit

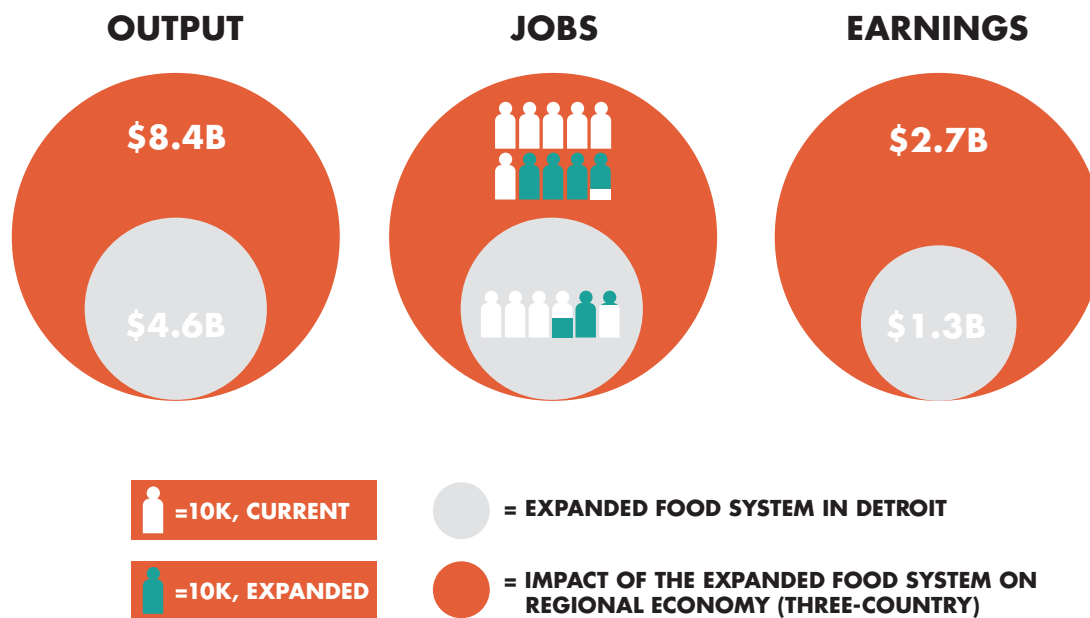


Table L.4 Estimated Annual Economic Impact of the Food System in Detroit on the Three-County Region of Wayne, Macomb, and Oakland Counties, Assuming That 30 Percent of That Which is Currently Satisfied by Food System Establishments Located Outside of Wayne County Becomes Satisfied by Food System Establishments Located in Detroit, by Food System Stage

Economic Impact Category	Production	Manufacturing and Processing	Packaging and Warehousing	Wholesale and Distribution	Grocery and Market	Restaurants/Drinking Places	Food Service/Mobile Food Service	Total
Direct Expenditures (\$M)	\$180	\$2,013	\$48	\$599	\$600	\$951	\$230	\$4,621
Indirect and Induced Expenditures (\$M)	\$121	\$1,543	\$43	\$503	\$504	\$844	\$205	\$3,763
Total Expenditures (\$M)	\$301	\$3,556	\$90	\$1,102	\$1,104	\$1,795	\$435	\$8,384
Total Employment (Jobs)	16,267	13,296	1,388	10,246	16,014	32,312	6,166	95,689
Total Wages & Salaries (\$M)	\$228	\$561	\$50	\$485	\$481	\$687	\$170	\$2,663
Average Annual Salaries (\$)	\$14,016	\$42,193	\$36,019	\$47,335	\$30,037	\$21,262	\$27,571	\$27,830

L.4 INDUSTRY DISTRIBUTION OF EXPANDED ECONOMIC IMPACT

The expanded food system in Detroit would continue to benefit a wide range of industries (see Table L.5). The manufacturing sector would continue to be the one that sees the largest expenditure impact, but 63 percent of the expenditure impact would be in sectors besides manufacturing. The food services sector would continue to be the one that sees the largest employment impact, but 72 percent of the employment impact would be in sectors besides food services.

Table L.5 Industry Distribution of Estimated Annual Economic Impact within the Three-County Region of Wayne, Macomb, and Oakland Counties if 30 Percent of What is Currently Satisfied by Food System Establishments Located Outside of Wayne County Becomes Satisfied by Food Establishment Located in Detroit

Expenditure Impact within the Region	%
Manufacturing	36.80%
Food services and drinking places	10.90%
Wholesale trade	9.60%
Retail trade	7.10%
Agriculture, forestry, fishing and hunting	7.10%
All other industries	28.50%
Employment Impact within the Region	%
Food services and drinking places	27.40%
Manufacturing	15.70%
Retail Trade	12.20%
Agriculture, forestry, fishing and hunting	10.40%
Real estate and rental and leasing	5.60%
All other industries	28.80%

L.5 EXPANDED FISCAL IMPACT

The expanded food system in Detroit would similarly produce a significantly higher amount of tax revenues for the City of Detroit and the State of Michigan. It is estimated that the expanded food system in Detroit, and the spillover impacts that result from its existence throughout the three-county region, would grow various local and state tax bases such that the City of Detroit and the State of Michigan. In Detroit, the expanded fiscal impact would be about \$28 million (see Table L.6).

Table L.6 Estimated Annual Fiscal Impact of the Food System in Detroit to the City of Detroit and State of Michigan Governments, Assuming That 30 Percent of That Which is Currently Satisfied by Food System Establishments Located Outside of Wayne County Becomes Satisfied by Food System Establishments Located in Detroit

Fiscal Impact	Detroit
Personal Income Tax (M)	\$12.00
Sales & Use Tax (M)	
Corporate Income Tax (M)	\$0.70
Property Tax (M)	\$12.60
Utility Users Tax (M)	\$2.30
Total (M)	\$27.60

Table L.7 Percentage of Requirements of Food System Industries in Wayne County That Are Satisfied by Establishments Located within the City of Detroit, Sorted by NAICS Code

NAICS	Industry
111000	Crop Production
112000	Animal Production
114111	Finfish Fishing
114112	Shellfish Fishing
114119	Other Marine Fishing
114210	Hunting and Trapping
115112	Soil Preparation, Planting, and Cultivating
115113	Crop Harvesting, Primarily by Machine
115114	Postharvest Crop Activities (except Cotton Ginning)
115115	Farm Labor Contractors and Crew Leaders
115116	Farm Management Services
115210	Support Activities for Animal Production
311211	Flour Milling
311212	Rice Milling
311213	Malt Manufacturing
311221	Wet Corn Milling
311222	Soybean Processing
311223	Other Oilseed Processing
311225	Fats and Oils Refining and Blending
311230	Breakfast Cereal Manufacturing
311311	Sugarcane Mills
311312	Cane Sugar Refining
311313	Beet Sugar Manufacturing
311320	Chocolate and Confectionery Manufacturing from Cacao Beans
311330	Confectionery Manufacturing from Purchased Chocolate
311340	Nonchocolate Confectionery Manufacturing
311411	Frozen Fruit, Juice, and Vegetable Manufacturing
311412	Frozen Specialty Food Manufacturing
311421	Fruit and Vegetable Canning
311422	Specialty Canning
311423	Dried and Dehydrated Food Manufacturing
311511	Fluid Milk Manufacturing
311512	Creamery Butter Manufacturing
311513	Cheese Manufacturing
311514	Dry, Condensed, and Evaporated Dairy Product Manufacturing

\$M Satisfied Locally	\$M Satisfied Non-Locally = 100% Percent Localization Opportunity	30 Percent Localization Opportunity
\$23.90	\$412.10	\$123.60
\$5.60	\$396.50	\$119.00
\$0.30	\$9.60	\$2.90
\$0.00	\$7.60	\$2.30
\$0.00	\$0.60	\$0.20
\$1.70	\$4.80	\$1.40
\$0.40	\$2.70	\$0.80
\$0.00	\$0.80	\$0.20
\$3.70	\$1.10	\$0.30
\$0.80	\$8.70	\$2.60
\$0.00	\$1.50	\$0.50
\$0.40	\$3.80	\$1.10
\$0.10	\$26.40	\$7.90
\$0.00	\$7.10	\$2.10
\$0.00	\$2.00	\$0.60
\$0.00	\$99.90	\$30.00
\$0.00	\$27.30	\$8.20
\$7.50	\$0.00	\$0.00
\$20.70	\$29.90	\$9.00
\$0.00	\$61.00	\$18.30
\$0.00	\$8.40	\$2.50
\$10.10	\$2.60	\$0.80
\$0.00	\$14.30	\$4.30
\$2.30	\$20.70	\$6.20
\$2.40	\$54.00	\$16.20
\$1.80	\$32.60	\$9.80
\$0.30	\$58.40	\$17.50
\$38.60	\$65.70	\$19.70
\$15.20	\$141.70	\$42.50
\$0.30	\$30.10	\$9.00
\$0.10	\$23.50	\$7.10
\$79.70	\$100.80	\$30.20
\$0.00	\$6.80	\$2.00
\$2.40	\$155.60	\$46.70
\$35.10	\$26.70	\$8.00

NAICS	Industry
311520	Ice Cream and Frozen Dessert Manufacturing
311611	Animal (except Poultry) Slaughtering
311612	Meat Processed from Carcasses
311613	Rendering and Meat Byproduct Processing
311615	Poultry Processing
311711	Seafood Canning
311712	Fresh and Frozen Seafood Processing
311811	Retail Bakeries
311812	Commercial Bakeries
311813	Frozen Cakes, Pies, and Other Pastries Manufacturing
311821	Cookie and Cracker Manufacturing
311822	Flour Mixes and Dough Manufacturing from Purchased Flour
311823	Dry Pasta Manufacturing
311830	Tortilla Manufacturing
311911	Roasted Nuts and Peanut Butter Manufacturing
311919	Other Snack Food Manufacturing
311920	Coffee and Tea Manufacturing
311930	Flavoring Syrup and Concentrate Manufacturing
311941	Mayonnaise, Dressing, and Other Prepared Sauce Manufacturing
311942	Spice and Extract Manufacturing
311991	Perishable Prepared Food Manufacturing
311999	All Other Miscellaneous Food Manufacturing
312111	Soft Drink Manufacturing
312112	Bottled Water Manufacturing
312113	Ice Manufacturing
312120	Breweries
312130	Wineries
312140	Distilleries
424410	General Line Grocery Merchant Wholesalers
424420	Packaged Frozen Food Merchant Wholesalers
424430	Dairy Product (except Dried or Canned) Merchant Wholesalers
424440	Poultry and Poultry Product Merchant Wholesalers
424450	Confectionery Merchant Wholesalers
424460	Fish and Seafood Merchant Wholesalers
424470	Meat and Meat Product Merchant Wholesalers
424480	Fresh Fruit and Vegetable Merchant Wholesalers
424490	Other Grocery and Related Products Merchant Wholesalers
424510	Grain and Field Bean Merchant Wholesalers
424520	Livestock Merchant Wholesalers

\$M Satisfied Locally	\$M Satisfied Non-Locally = 100% Percent Localization Opportunity	30 Percent Localization Opportunity
\$1.10	\$54.10	\$16.20
\$5.00	\$256.60	\$77.00
\$119.00	\$111.50	\$33.50
\$4.70	\$17.30	\$5.20
\$20.60	\$221.80	\$66.50
\$0.80	\$4.60	\$1.40
\$3.30	\$55.80	\$16.70
\$12.60	\$32.20	\$9.70
\$30.20	\$126.40	\$37.90
\$0.00	\$11.80	\$3.50
\$11.20	\$58.40	\$17.50
\$5.20	\$25.60	\$7.70
\$7.20	\$8.90	\$2.70
\$0.90	\$15.00	\$4.50
\$6.10	\$30.30	\$9.10
\$67.00	\$40.20	\$12.10
\$6.50	\$45.90	\$13.80
\$0.40	\$164.10	\$49.20
\$1.50	\$32.60	\$9.80
\$8.20	\$58.30	\$17.50
\$22.10	\$30.60	\$9.20
\$0.60	\$60.60	\$18.20
\$210.60	\$20.10	\$6.00
\$38.40	\$0.60	\$0.20
\$2.40	\$13.90	\$4.20
\$8.30	\$159.30	\$47.80
\$1.10	\$112.30	\$33.70
\$12.80	\$61.00	\$18.30
\$112.40	\$111.20	\$33.40
\$11.30	\$17.60	\$5.30
\$35.10	\$3.90	\$1.20
\$0.30	\$8.40	\$2.50
\$36.50	\$17.20	\$5.20
\$10.70	\$9.80	\$2.90
\$31.30	\$3.30	\$1.00
\$73.70	\$1.00	\$0.30
\$70.80	\$141.60	\$42.50
\$1.00	\$52.10	\$15.60
\$0.20	\$6.70	\$2.00

NAICS	Industry
424590	Other Farm Product Raw Material Merchant Wholesalers
424810	Beer and Ale Merchant Wholesalers
424820	Wine and Distilled Alcoholic Beverage Merchant Wholesalers
424910	Farm Supplies Merchant Wholesalers
444220	Nursery, Garden Center, and Farm Supply Stores
445110	Supermarkets and Other Grocery (except Convenience) Stores
445120	Convenience Stores
445210	Meat Markets
445220	Fish and Seafood Markets
445230	Fruit and Vegetable Markets
445291	Baked Goods Stores
445292	Confectionery and Nut Stores
445299	All Other Specialty Food Stores
445310	Beer, Wine, and Liquor Stores
446191	Food (Health) Supplement Stores
454210	Vending Machine Operators
488991	Packing and Crating
493120	Refrigerated Warehousing and Storage
493130	Farm Product Warehousing and Storage
624210	Community Food Services
722110	Full-Service Restaurants
722211	Limited-Service Restaurants
722212	Cafeterias, Grill Buffets, and Buffets
722213	Snack and Nonalcoholic Beverage Bars
722310	Food Service Contractors
722320	Caterers
722330	Mobile Food Services
722410	Drinking Places (Alcoholic Beverages)
Total	All Industries

\$M Satisfied Locally	\$M Satisfied Non-Locally = 100% Percent Localization Opportunity	30 Percent Localization Opportunity
\$1.30	\$8.50	\$2.60
\$50.80	\$42.10	\$12.60
\$52.10	\$50.60	\$15.20
\$3.00	\$108.10	\$32.40
\$27.00	\$22.10	\$6.60
\$514.20	\$372.80	\$111.80
\$41.90	\$7.10	\$2.10
\$20.20	\$0.30	\$0.10
\$2.70	\$4.70	\$1.40
\$20.40	\$0.60	\$0.20
\$8.50	\$7.00	\$2.10
\$8.00	\$1.00	\$0.30
\$14.80	\$18.80	\$5.60
\$55.00	\$2.10	\$0.60
\$22.60	\$0.50	\$0.20
\$13.00	\$11.50	\$3.50
\$14.50	\$0.40	\$0.10
\$19.50	\$7.60	\$2.30
\$0.50	\$5.30	\$1.60
\$10.60	\$0.30	\$0.10
\$925.40	\$625.50	\$187.70
\$756.50	\$177.40	\$53.20
\$18.20	\$21.30	\$6.40
\$74.00	\$72.30	\$21.70
\$193.80	\$26.00	\$7.80
\$57.50	\$15.70	\$4.70
\$3.80	\$7.30	\$2.20
\$96.30	\$23.40	\$7.00
\$4,270.30	\$5,687.80	\$1,706.50

Table L.8 Estimated Economic Activity Represented by Food System Industries in the City of Detroit, by Food System Stage, If 30 Percent of What is Currently Satisfied Non-Locally Becomes Satisfied Locally

Stage	Current Revenues (\$M)	Revenues w/30 Percent Localization (\$M)	Expanded Revenues (\$M)	Current Employment (Jobs)
Production	\$3.80	\$254.90	\$258.70	109
Manufacturing and Processing	\$1,246.60	\$800.10	\$2,046.70	2,310
Packaging and Warehousing	\$47.00	\$4	\$51.00	592
Wholesale and Distribution	\$484.20	\$174.60	\$658.80	2,569
Grocery and Market	\$453.90	\$182.10	\$636.00	6,076
Restaurant/Drinking Places	\$711.00	\$275.90	\$986.90	15,064
Food Service	\$215.70	\$14.70	\$230.40	3,493
Total for All Industries	\$3,162.20	\$1,706.30	\$4,868.50	30,213
Total for All Occupations Not Counted Above	\$514.50		\$514.50	6,086
Total	\$3,676.70	\$1,706.30	\$5,383.00	36,299

Stage	Expanded Employment (Jobs)	Current Wages and Salaries (\$M)	Wages and Salaries w/30 Percent Localization (\$M)	Expanded Wages and Salaries (\$M)
Production	4,323	\$2.90	\$6.40	\$9.30
Manufacturing and Processing	4,699	\$140.20	\$69.10	\$209.30
Packaging and Warehousing	664	\$25.20	\$2.20	\$27.40
Wholesale and Distribution	3,409	\$177.80	\$52.20	\$230.00
Grocery and Market	8,521	\$171.90	\$65.30	\$237.20
Restaurant/Drinking Places	20,797	\$245.60	\$95.40	\$341.00
Food Service	3,845	\$77.80	\$5.10	\$82.90
Total for All Industries	46,258	\$841.40	\$295.70	\$1,137.10
Total for All Occupations Not Counted Above	6,086	\$136.90		\$136.90
Total	52,344	\$978.30	\$295.70	\$1,274.00

Table L.9 Proportion of Requirements for Food System Industries in Wayne County That Are Satisfied by Food and Non-Food Industries in Wayne County, Currently and If 30 Percent of Non-Local Provision is Localized

3-Digit NAICS	Amount (\$M)	Satisfied In-Region (Percent)	Satisfied Out of Region (Percent)	Amount w/30% Localization (\$M)
111	\$131,096,899	6.00%	94.00%	\$44,835,139
112	\$324,007,700	1.00%	99.00%	\$99,470,364
113	\$6,435,453	1.30%	98.80%	\$1,986,946
114	\$11,334,325	1.70%	98.40%	\$3,531,209
115	\$3,799,925	20.50%	79.50%	\$1,686,331
211	\$2,617,579	2.60%	97.50%	\$831,997
212	\$3,555,913	2.00%	98.00%	\$1,115,561
213	\$19,050	0.10%	99.90%	\$5,730
221	\$68,375,500	53.10%	46.90%	\$45,946,968
236	\$4,404,980	49.00%	51.10%	\$2,830,860
237	\$2,935,478	31.10%	68.90%	\$1,518,875
238	\$10,748,930	61.30%	38.70%	\$7,839,302
311	\$675,740,639	14.50%	85.50%	\$271,404,470
312	\$67,377,580	50.00%	50.00%	\$43,804,860
313	\$2,135,460	9.70%	90.30%	\$785,486
314	\$2,361,293	15.60%	84.40%	\$965,580
315	\$573,782	13.80%	86.20%	\$227,401
316	\$11,297	6.80%	93.20%	\$3,929
321	\$11,372,350	6.80%	93.30%	\$3,949,049
322	\$90,645,983	18.60%	81.40%	\$39,014,938
323	\$16,027,073	14.50%	85.60%	\$6,429,260
324	\$54,142,188	81.60%	18.40%	\$47,168,674
325	\$32,609,726	20.00%	80.00%	\$14,339,149
326	\$149,179,786	33.90%	66.20%	\$80,102,086
327	\$22,038,866	33.50%	66.50%	\$11,775,146
331	\$104,954,332	0.80%	99.20%	\$32,059,350
332	\$60,871,701	28.80%	71.20%	\$30,541,767
333	\$13,357,547	11.70%	88.30%	\$5,103,117
334	\$21,484,507	2.40%	97.60%	\$6,804,788
335	\$9,737,651	6.40%	93.70%	\$3,354,134
336	\$21,440,839	54.70%	45.30%	\$14,635,946
337	\$3,572,318	7.50%	92.50%	\$1,259,492
339	\$7,069,838	9.80%	90.20%	\$2,603,963
423	\$138,821,125	37.00%	63.10%	\$77,552,421
424	\$87,616,404	39.40%	60.60%	\$50,461,792
425	\$55,134,989	49.80%	50.20%	\$35,756,694
441	\$7,348,382	68.80%	31.20%	\$5,745,039
442	\$1,354,107	51.40%	48.60%	\$893,345
443	\$2,038,557	39.30%	60.70%	\$1,172,945
444	\$3,406,742	67.20%	32.80%	\$2,624,077

3-Digit NAICS	Amount (\$M)	Satisfied In-Region (Percent)	Satisfied Out of Region (Percent)	Amount w/30% Localization (\$M)
445	\$6,479,219	62.40%	37.60%	\$4,772,528
446	\$3,490,766	73.80%	26.20%	\$2,849,826
447	\$1,583,363	42.60%	57.40%	\$947,389
448	\$2,817,789	58.10%	41.90%	\$1,991,331
451	\$1,372,484	63.80%	36.20%	\$1,024,793
452	\$6,622,532	74.70%	25.30%	\$5,448,291
453	\$2,830,036	60.10%	39.90%	\$2,040,201
454	\$2,890,527	13.80%	86.20%	\$1,146,990
481	\$9,540,739	91.10%	8.90%	\$8,948,355
482	\$20,659,874	31.00%	69.00%	\$10,681,155
483	\$901,490	4.80%	95.20%	\$300,485
484	\$79,074,336	61.70%	38.30%	\$57,868,971
485	\$1,153,727	48.70%	51.40%	\$739,020
486	\$162,851	45.10%	54.90%	\$100,222
487	\$532,262	6.80%	93.20%	\$185,052
488	\$15,592,900	52.20%	47.80%	\$10,375,516
491	\$71,574	100.00%	0.00%	\$71,574
492	\$24,889,513	76.60%	23.40%	\$20,809,126
493	\$33,815,062	67.30%	32.70%	\$26,074,794
511	\$15,354,599	64.70%	35.30%	\$11,564,777
512	\$6,059,774	35.20%	64.80%	\$3,309,364
515	\$33,929,583	40.20%	59.80%	\$19,717,159
517	\$26,937,992	41.40%	58.60%	\$15,880,485
518	\$9,180,487	19.00%	81.00%	\$3,975,151
519	\$3,511,912	9.40%	90.60%	\$1,284,412
521	\$226,872	89.00%	11.00%	\$209,403
522	\$68,584,157	45.90%	54.20%	\$42,587,332
523	\$9,155,866	16.40%	83.60%	\$3,795,930
524	\$51,002,702	37.20%	62.80%	\$28,574,774
525	\$197,199	40.40%	59.60%	\$114,969
531	\$185,586,968	40.00%	60.00%	\$107,666,424
532	\$10,666,879	47.10%	52.90%	\$6,717,680
533	\$44,426,052	10.00%	90.00%	\$16,437,639
541	\$232,763,568	58.40%	41.60%	\$165,031,697
551	\$197,018,281	71.10%	28.90%	\$157,175,274
561	\$109,576,095	65.10%	34.90%	\$82,814,325
562	\$12,621,608	76.10%	23.90%	\$10,509,129
611	\$2,865,116	44.20%	55.80%	\$1,745,601
621	\$478,546	65.90%	34.20%	\$364,150
622	\$522,130	91.60%	8.50%	\$491,246
623	\$103,323	79.80%	20.20%	\$88,713
624	\$17,846	80.50%	19.50%	\$15,409
711	\$16,324,447	55.60%	44.40%	\$11,249,666
712	\$37,798	29.60%	70.40%	\$19,169
713	\$1,707,865	44.30%	55.70%	\$1,042,327
721	\$11,038,346	56.80%	43.20%	\$7,697,259
722	\$21,873,280	68.90%	31.10%	\$17,105,342
811	\$18,223,127	59.30%	40.70%	\$13,036,461
812	\$4,147,932	74.60%	25.40%	\$3,411,010
813	\$9,039,782	55.30%	44.70%	\$6,209,969
901	\$31,839,671	90.00%	10.00%	\$29,610,894
Grand Total	\$3,581,257,641	34.10%	66.00%	\$1,927,966,941

APPENDIX M

DETROIT DEMOGRAPHICS AND CONSUMER SPENDING

Table M.1 Detroit Population

Population	Count
2000	951,270
2010	713,777
2012	693,697
2017	657,602 (forecast)
2012 Median Age	35 years

Table M.2 Detroit Race and Ethnicity: 2012

Race and Ethnicity	Percentage
White Alone	10.9%
African-American Alone	81.9%
American Indian/Alaskan Native Alone	0.4%
Asian Alone	1.1%
Other Race	3.2%
Two or More Races	2.4%
Hispanic Origin (Any Race)	7.1%

Table M.3 Detroit Households

Households	Count
2000 Households	336,424
2010 Households	269,445
2012 Total Households	260,857
2017 Total Households	250,488 (forecast)
2012 Average Household Size	2.6

Table M.4 Detroit Median Household Income

Median Household Income	Value
2012 Median Household Income	\$27,376
2017 Median Household Income	\$30,989 (forecast)
2012-2017 Annual Rate	2.51%

Table M.5 Detroit Housing and Occupancy

Housing	Count
2000 Total Housing Units	375,096
2000 Owner Occupied Housing Units	184,642
2000 Renter Occupied Housing Units	151,782
2000 Vacant Housing Units	38,672
2010 Total Housing Units	349,170
2010 Owner Occupied Housing Units	137,730
2010 Renter Occupied Housing Units	131,715
2010 Vacant Housing Units	79,725
2012 Total Housing Units	347,501
2012 Owner Occupied Housing Units	129,020
2012 Renter Occupied Housing Units	131,837
2012 Vacant Housing Units	86,644
2017 Total Housing Units	342,508
2017 Owner Occupied Housing Units	124,568 (forecast)
2017 Renter Occupied Housing Units	125,920 (forecast)
2017 Vacant Housing Units	92,020 (forecast)

The Table below shows the retail potential (Demand) and the retail sales (Supply) of food-related establishments in Detroit. Supply is an estimate of sales to consumers and Demand is an estimate of the anticipated spending by consumers. The Retail Gap is the difference between retail potential and retail sales and the Leakage/Surplus Factor represents retail opportunity. If the factor is positive, then there's a "leakage" of retail opportunity that could be picked up by outside markets, there's an excess of demand that the local market can't satisfy. If the factor is negative, then there's a "surplus" of sales and consumers are coming into the retail marketplace from outside areas. A value of +100 represents total leakage and -100 represents total surplus.

Table M.6 Detroit Food-Related Retail Demand and Supply

Industry Group	Demand (\$M)	Supply (\$M)	Retail Gap (\$M)	Leakage/ Surplus Factor	# of Businesses
Food & Beverage Stores	\$558.00	\$622.70	(\$64.70)	-5.5	865
Grocery Stores	\$467.30	\$289.10	\$178.20	23.6	436
Specialty Food Stores	\$26.20	\$48.80	(\$22.60)	-30.2	176
Beer, Wine & Liquor Stores	\$64.50	\$284.90	(\$220.30)	-63.1	253
Food Services & Drinking Places	\$409.40	\$405.20	\$4.20	0.5	776
Full-Service Restaurants	\$166.20	\$112.60	\$53.50	19.2	258
Limited-Service Eating Places	\$198.60	\$235.50	(\$36.90)	-8.5	255
Special Food Services	\$18.70	\$25.00	(\$6.30)	-14.4	69
Drinking Places-Alcoholic Beverages	\$26.00	\$32.10	(\$6.10)	-10.5	194

Table M.7 Detroit Food-Related Retail Expenditures

Category	Total (\$M)
Food	\$1,237.60
Food at Home	\$769.40
Bakery and Cereal Products	\$107.40
Meats, Poultry, Fish and Eggs	\$171.70
Dairy Products	\$79.80
Fruits and Vegetables	\$142.80
Snacks and Other Food at Home	\$267.60
Food Away from Home	\$468.20
Alcoholic Beverages	\$75.50
Nonalcoholic Beverages at Home	\$74.20

APPENDIX N

TAPESTRY SEGMENTATION OF DETROIT

Tapestry Segmentation is a system of market segmentation developed by Esri by which neighborhoods across the country are classified based on socioeconomic and demographic characteristics. This segmentation, or dividing up the country into "consumer markets" composed of people and households with similar tastes and behaviors, can help analysts and decision makers better understand consumer types, shopping patterns and product and media preferences.

The Table below lists the Top 3 Tapestry Segments in Detroit, followed by their descriptions from Esri and maps showing household distribution by census tract.

Table N.1 Top 3 Tapestry Segments in City of Detroit

Tapestry Segment	Percentage of Households
Family Foundations	27.3%
Modest Income Homes	25.0%
Metro City Edge	22.6%
Rest of Tapestries	24.1%

FAMILY FOUNDATIONS

Demographic: Family is the cornerstone of life in these neighborhoods that are a mix of married couples, single parents, grandparents, and young and adult children. The average family size is 3.3. The median age is 39.1 years, slightly older than the US median; 7 in 10 are aged 45 or older. Diversity is low; 84 percent of the population is African-American.

Socioeconomic: The median household income is \$38,460. Some workers are retiring. More than 20 percent of the employed residents work for the government. Approximately one-third of the households are on Social Security or public assistance. Although education attainment levels are below the US level, a slightly higher proportion of residents aged 25 or older have graduated from high school.

Residential: These small urban communities are located in large metropolitan areas, primarily in the South and Midwest. Because these residents tend to stay put, very little household growth has occurred since 2000. Sixty-eight percent own their homes. Most of their houses are single-family, built before 1970.

Preferences: Active in their communities, Family Foundations residents attend church, serve on church boards, help with fundraising projects, and participate in civic activities. They spend money on their families and home maintenance projects. Careful consumers, they watch their budgets. They eat at home, shop at discount stores such as Marshalls and T.J. Maxx, and take advantage of savings at Sam's Club. They're big TV fans; they watch courtroom shows, sports, and news programs. Viewership rates are very high; cable subscriptions are near the US level. Many households own multiple sets so they won't miss anything. They listen to gospel, urban, and jazz radio and read newspapers, Entertainment Weekly, and general editorial and newsmagazines. Basketball is a favorite sport; they play, attend professional games, watch games on TV, and listen to games on the radio.

MODEST INCOME HOMES

Demographic: Eighty-three percent of the residents in Modest Income Homes neighborhoods are African-American. Single person and single-parent household types are predominant; however, a higher-than-average proportion of other family households is also present. The median age of 36.1 years is a year younger than the national median of 37.2. Many adult children still live at home. More than one-fourth are aged 65 years or older and have retired. Many are caregivers for their grandchildren, demonstrating strong family ties in these neighborhoods.

Socioeconomic: Most of the retirees in Modest Income Homes rely on Social Security benefits for support. Slightly more employed residents work part-time than full-time, mainly in service and blue-collar occupations. The median household income is \$20,567. Thirteen percent of households receive Supplemental Security Income, and 10 percent receive public assistance. With little savings, home equity contributes the lion's share to a household's net worth in these neighborhoods. More than 60 percent of residents aged 25 years and older have graduated from high school. Eight percent hold a bachelor's or graduate degree, and 28 percent have attended college.

Residential: Most Modest Income Homes neighborhoods are in older suburbs of Southern metropolitan areas, with a smaller concentration in the Midwest. More than two-thirds of the housing is single-family dwellings; 15 percent are duplexes. Homeowners and renters are almost evenly divided. Seventy-one percent of the households own at least one vehicle. Because demand for housing is low, home prices are very moderate.

Preferences: Residents are big fans of daytime and primetime TV. They go to the movies occasionally and also like to watch movies on TV channels such as the Lifetime Movie Network and The Movie Channel. They also watch football and basketball games on TV. They listen to urban radio. The Internet is the least effective way to reach these folks. To save money, they shop at discount stores, limit their long-distance telephone calls, and restrict nonessential services such as Internet access and fitness center memberships. When they participate in physical activities, they might play basketball. Most drive used domestic sedans.

METRO CITY EDGE

Demographic: Married couples, single parents, and multigenerational families are the household types found in Metro City Edge neighborhoods. Grandparents are caregivers in 4 percent of these households, twice the US rate. The median age of this segment is 30.8 years because of the children, including adult children who still live at home. The average family size of 3.5 is slightly higher than the US average. Seventy-two percent of the residents are African-American; 17.3 percent are white; and 4 percent are American-Indian -four times the US level.

Socioeconomic: The median household income for this segment is \$29,269. Although 78 percent of households derive income from wages and salaries, 9 percent receive public assistance and 9 percent receive Supplemental Security Income. Nearly half of employed residents work in service industries. One in ten residents aged 25 years or older have a bachelor's or graduate degree; four in ten have attended college.

Residential: Metro City Edge residents live in older suburban neighborhoods of large metropolitan cities, primarily in the Midwest and South. Sixty-eight percent live in single family homes; 14 percent live in buildings with two to four units. The home ownership rate is 49 percent. Although home prices are relatively inexpensive, many families are young, unsettled, and still renting. Seventy percent of the housing units were built before 1970.

Preferences: Metro City Edge residents must spend their money wisely to ensure the welfare of their children. They tend to shop for groceries at Piggly Wiggly, Kroger, and Aldi but will go to superstores and wholesalers for bulk purchases of household and children's items. Some will have their vehicles serviced at auto parts chains. They eat at fast food or family-style restaurants such as Old Country Buffet or Ryan's. They watch sitcoms, movies, news programs, courtroom shows, and sports such as pro wrestling on TV. Accessing the Internet at home isn't important. They go to the movies and professional football games and play basketball. They read music and baby magazines and listen to urban and contemporary hit radio.

Figure N.1 Family Foundations Tapestry (Seg 34) Households in Detroit by Census Tract

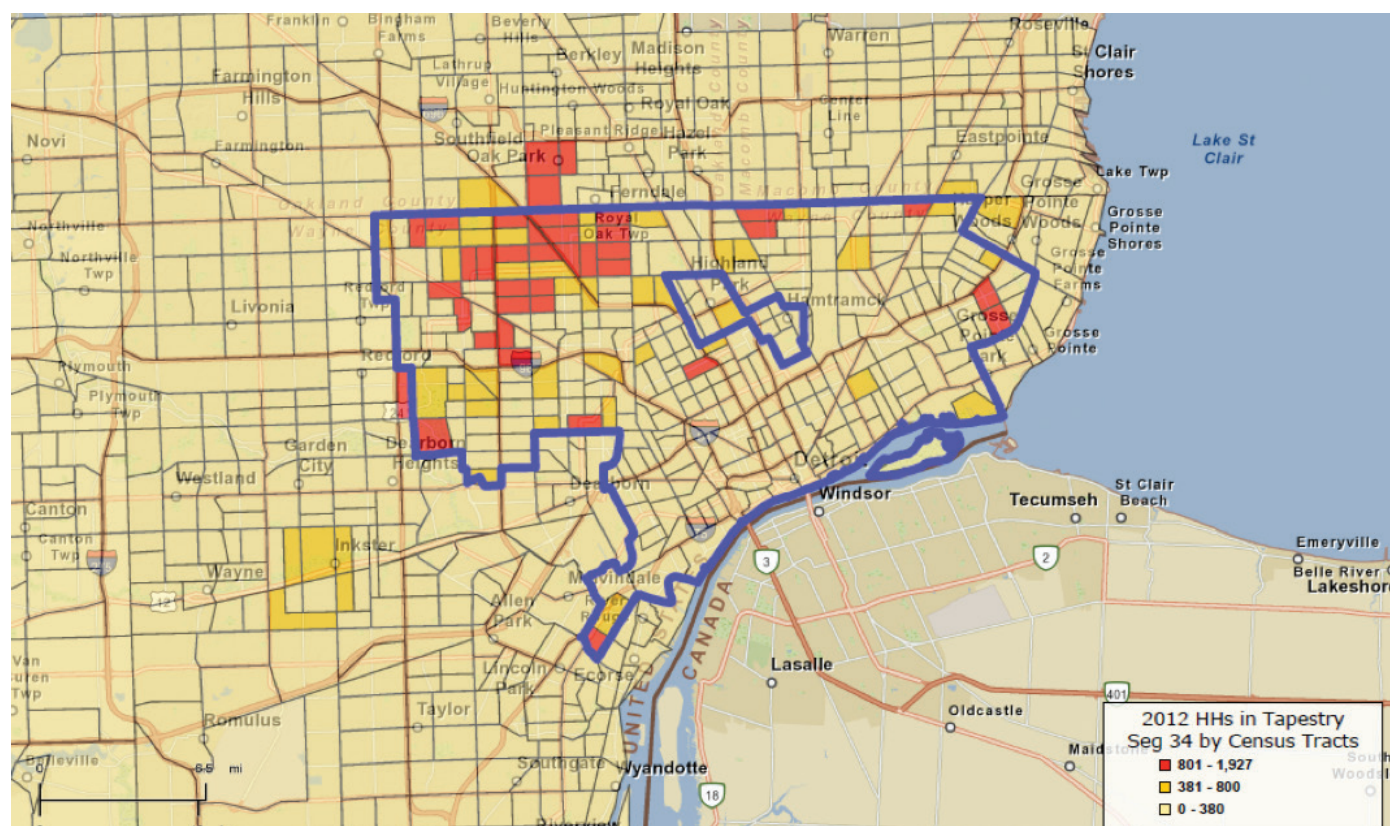


Figure N.2 Modest Income Homes Tapestry (Seg 62) Households in Detroit by Census Tract

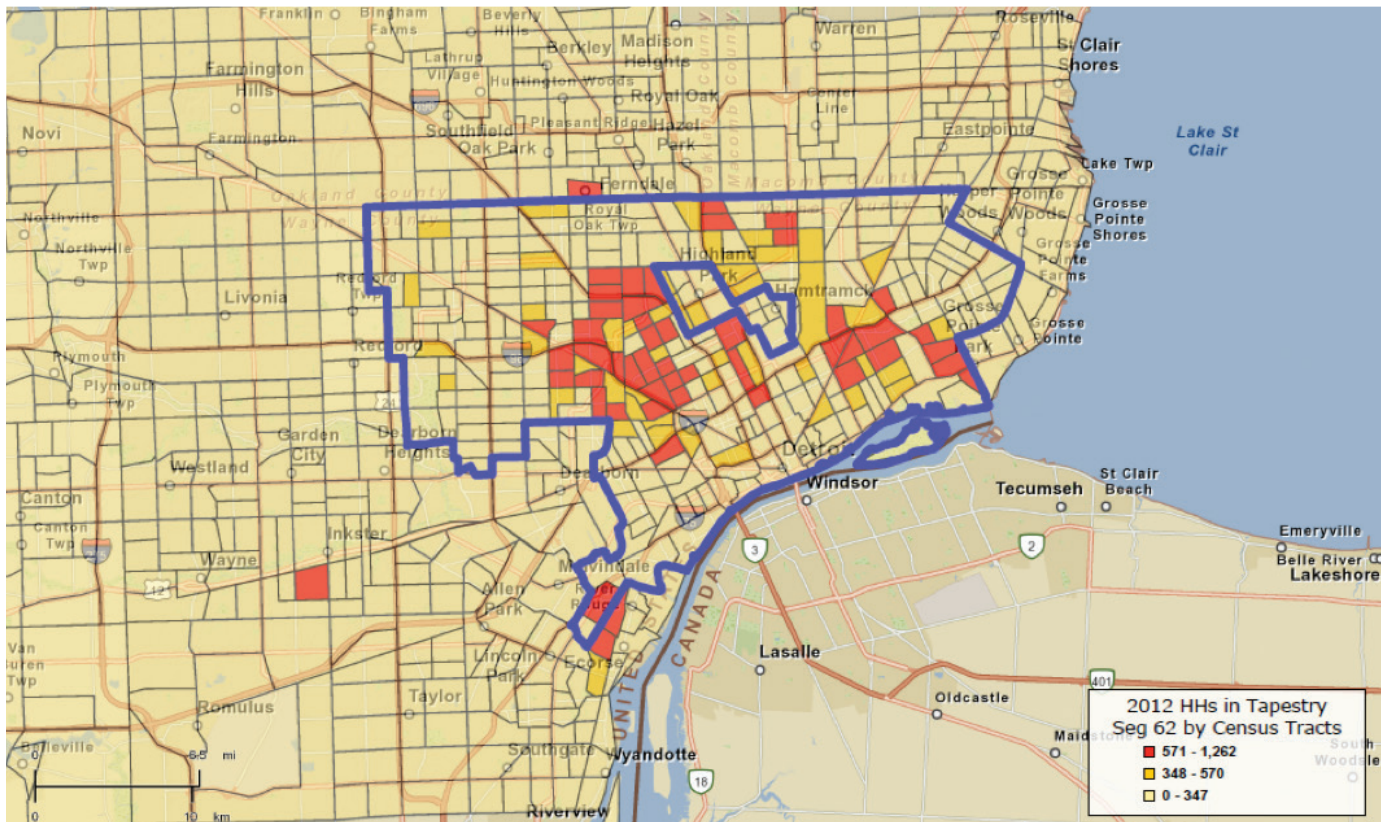
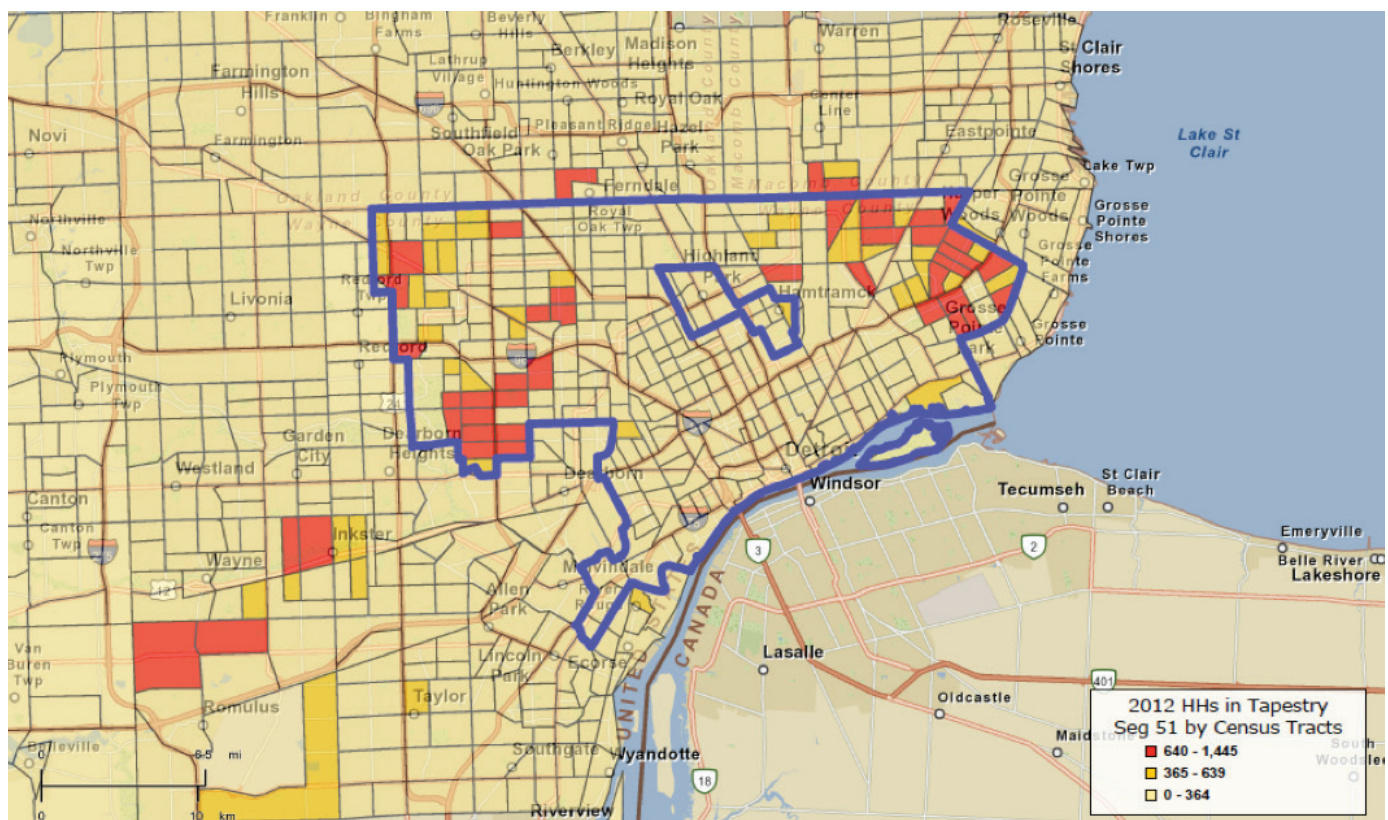


Figure N.3 Metro City Edge Tapestry (Seg 51) Households in Detroit by Census Tract





Detroit Food & Fitness Collaborative is a group of 40 organizations developing ways to ensure that everyone in Detroit— especially the most vulnerable children— has access to affordable, healthy locally grown food and opportunities to be physically active.