“*We’re like an illegitimate child for the city*”: Sustaining urban farming in 2019 Detroit

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Foreword

Joel Sternfeld, 1987 "McLean, Virginia, December 1978" in *American Prospects,* Time Books: Houston

Original: dye transfer print, National Gallery of Canada

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General Introduction

Introduction: What is the point gardening when the house is burning?

1,600 gardens and farms have been reported in 2018 in Detroit. More than 24,000 individuals and families feed themselves at least occasionally with fruits and vegetables grown in the city (KGD; 2018). Beyond splashy headlines and well-intentioned movies, urban farms and gardens have blossomed in neighbourhoods hardly hit by deindustrialization and depopulation: the city population has fallen from roughly 1.8 million inhabitants in 1950 to 677,000 in 2015. In 2012, 36% of the residents lived below the poverty line of $11,770/ year. As one of my interviewees told me once, "*If you want to grow vegetables for your own, it's an activity, there's nothing wrong with that. But in a city like Detroit with 40 square miles with surplus land without a purpose* [103,6 km², 28% of the city], *without a budget, the answer isn't 'Hey, we should all garden'*" (Mike; 22nd of January).

But some residents do. Moreover, they grow, process, distribute, sell their fruits and vegetables in restaurants, in farmers' markets, Community Supported Agriculture networks [AMAPs], organize themselves in cooperatives, engage in *food justice* movements, claims their right before City Council. What are these people trying to do, seriously? Let's take these people seriously. The following document is the result of a ten-months inquiry and a three-months qualitative fieldwork in the City of Detroit, Michigan, between January and April 2019. This research aims at understanding *how urban farmers financially and politically sustain themselves in 2019 Detroit*.

By 'sustaining themselves', we mean the farmers' capacity to provide themselves with resources vital for their economic activity (land, labour, tools, greenhouses, seeds) as well as their capacity to organize themselves collectively for advocating before city government, convincing new customers, creating alternative models of production. Remains the urban farming oxymoron (Smit *et al.*; 2001). Because urban farming covers a wide range of practices, we will limit ourselves to a descriptive approach for now: what is urban farming if not 'the production of food and non-food plant and tree crops, and animal husbandry, both within and fringing urban area' (OECD; 1998)? Although the terms of 'farming' and 'agriculture' have been discussed in international economics of food (Bernstein; 2010), they will cover the same reality here: they refer to the stages of growing, processing, distributing and selling food and non-food plants and crops in farms or gardens within city limits.

In order to get a sense of farmers' political economics, we investigated patterns of grant financing in Detroit between 2010 and 2015. Then, we combined these first insights with a

qualitative inquiry (26 in-depth interviews, multi-site ethnographies) realized during the fieldwork in the city.

The inquiry shed light on three findings. Firstly, we demonstrated that exchange networks in which some farmers are embedded are ruled according to non-market exchange principles. These networks are pools of material and financial resources for farmers, although they are rigorously selected by philanthropists for financing opportunities. Secondly, we demonstrated that urban farmers oppose a definition of urban farming as a truly viable activity to the common perception of farming as a 'landmark'. Local urban elites often perceive it as a tool for improving neighbourhoods' social and environmental conditions, at the expense of the farming's production capacity. To be clear, we do not contend to demonstrate that farmers fetishize urban farming, meaning that urban farming would be the only desirable option for city development. Finally, we ought to demonstrate how farmers' unequal access to land and grant financing is related to their vision of farming and exchange network embeddedness. We also contended to illustrate how some farmers both contest and deform traditional market institutions to ensure their financial stability.

The document is introduced by a literature review of urban farming as a research object, and then presents the specificities of such object in Detroit. It also presents our conceptual positioning as a justification of our research question: *How urban farmers financially and politically sustain themselves in 2019 Detroit*? The literature review is followed by a methodology section presenting our approach and hypotheses, our quantitative data cleaning and structuring, and our qualitative methods. We also assess the quality of our data and methods *per se* as well as their relevance regarding hypotheses.

Finally, our document is divided in three sections. ***Reciprocity, conflicts and evidences of exchange networks in Detroit*** introduces our first finding, the coexistence of two exchange networks: a philanthropic grant network and a bartering network. We identify rules presiding the exchanges by examining conflicts taking place in these networks and assess how interrelated the networks can be. Then, ***Contentious definitions of city decline and urban farming*** reviews the recent Detroit's history and sheds light on an elite coalition engaged in saving the city by land redevelopment projects. On the other hand, it presents how grassroot *food justice* activists and urban farmers gathered in the wake of the 2000's to promote urban agriculture as an economic activity. Finally, ***Urban farming in a shrinking city: the margins of markets*** assesses how each farmers' access to land and market financing is a consequence of their relationships to philanthropic and bartering networks, as well as their definition of urban agriculture. We also postulate that urban farmers *contest* and *deform* food market institutions to sustain themselves.

Urban agriculture and Detroit: a literature review and our conceptual positioning

The publication of the UNDP *Food, Jobs and Sustainable Cities* in 1996 and 2001 (Smit *et al*; 2001) is often presented as the seminal breakthrough of urban agriculture into the public and scientific debate (Lesher Jr; 2006; Brinkley; 2013). In this report, four themes have been introduced has a way to gather disparate publications related to urban agriculture. These themes are still nowadays structuring the research agenda in four directions: "1/ The global significance of urban agriculture, 2/ What is urban agriculture, 3/ Benefits, problems and constraints, 4/ The future of urban agriculture" (Smit *et al*; 2001). By far, the third theme is the most documented issue in the urban farming literature for the last twenty years. The benefits, problems and constraints of urban farms are indeed related to their capacity to interact with their environment and, at the end of the day, to assess their relevance for the society in general.

The city of Detroit on the other hand, has been often chosen as a case study for evidence-based inquiries related to urban farming. The breadth of the urban decline, the level of vacancy rates, the poor land management and the implementation of so-called 'rightsizing policies' (Anderson; 2011) have been the breeding ground for the emergence of food justice movements in the city. Since the city's bankruptcy in 2013 and the retrenchment of many public services, the role played by the private sector in providing those and in defining the public interest is from now on crucial. As of now, some food justice movement themes, urban farming alike, entered the city institutions (Detroit Food Policy Council).

This master thesis aims at taking an opposite stance to urban farming-related literature: rather than questioning how urban farming is beneficial to Detroit's social environment, we would like to unveil how this environment actually protect, sustain or threaten urban farming. Such proposition comes from the observation that the development of urban farms and community gardens in Detroit has reached outstanding proportions. Urban farmers and gardeners are now constitutive of Detroit's social landscape, they created relays in institutions and are sometimes organised collectively. Saying that is not affirming that urban farmers and gardeners constitute a homogeneous group: on the contrary, farmers started their activities for many different reasons and for very different goals, sometimes generating conflicts as we will see later on.

The following review is organized as follow: we will first introduce the assessments of urban agriculture intakes for communities, both as benefits and as perverse effects (1). Secondly, we will contextualize these studies in the specific case of Detroit's history of structural racism and urban crisis to understand why urban farming has become so important there (2). Finally, we will present our conceptual positioning and the development we propose in this master thesis (3).

1. What can urban farming offer to communities? Benefits and perverse effects of urban farming practices on a food system.

Before presenting the benefits and perverse effects of urban farming, it is worth noticing that these terms look morally burdened on the first sight. Indeed, the urban agriculture scholar field is closely linked to studies of food systems and their critiques. "*Because much of UA* [Urban Agriculture] *literature is advocacy-driven*" (Brinkley; 2013), benefits of urban farms are often presented as arguments in wider prescriptive statements about food system transition toward more local, autonomous, inclusive models of food production. This review will not discuss in depth the relevance of these wider statements on food-systems because they would move far beyond the question of urban farming in Detroit. However, they can help us to understand better how these categories of 'benefits' and 'perverse effects' in food systems have been interpreted in the literature (a). Secondly, we will present to what extent urban farming has procured benefits to the communities but also has generated many critiques (b).

a. On the categories of 'benefits' and 'perverse effects' of food systems on food security

In the 1990's an extensive literature has shown how the international food production system generated economic and hunger crises between world regions (Friedmann and McMichael; 1989, Friedmann; 1995; Bernstein; 2010, Sommerville *et al*; 2014). These authors defined 'food regimes' as "rule-governed structures of production and consumption of food on a world scale' (Friedmann; 1995) and the related dependence of former colonies to capitalist economies in food markets. On the other hand, critiques of conventional food systems in developed countries participated to the development of the *food justice* literature focusing on inequalities of race and gender within food systems (Campbell; 1996, Gottlieb and Fisher; 1996, also see Glennie and Alkon; 2018 for a recent review). In both of these literature streams, focus was made on the systemic inequalities induced by industrial organisation of food production such as neo-colonial dependences, racial and gender exclusion to food access.

On the other hand, systemic approach of food production can be traced from Hedden's *How Great Cities Are Fed* (1929) seminal book. Since food security concerns and their links to sustainable development goals were pointed out in the Brundtland report (WCED; 1987), scientists and planners put forward the importance of looking at the spatial organisation in conventional agriculture production. For instance, analyses of Hedden's regional 'food-sheds', rehabilitated by Getz (1991), defined the organisation of conventional food production according to its extension thorough spaces. In this literature, focus was made on the system's efficacy to allocate resources and technical solutions to improve it. These two streams of

literature share two important features. First, they define a food system as a chain of events (production, processing, distribution, consumption), offering interesting case studies for theories of global value chain (Dolan and Humphrey; 2004, Humphrey and Schmitz; 2000, Gereffi *et al.*; 2005). Secondly, they identify food security as the principal (un)observed and desired outcome of these systems. Food security can be defined as "when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life" (WFS; 1996)

In this context, Ericksen's (2008) formalisation and extension of food system as a concept to a social-ecological system marks a rupture. Previous definition of a 'social-ecological system' can be found in Redman *et al.* (2004) as "a coherent system of biophysical and social factors that regularly interact in a resilient, sustained manner". In her intent of "marriage of natural and social science akin", Ericksen posits that food systems are influenced by "global environmental change that encompasses changes in the bio-geophysical environment, which may be due to natural processes and/ or human activities." (Ericksen; 2008). Such reframing recognizes that food security is indeed the more important outcome to consider when analysing food systems. However, it takes into account not only the 'food chain' from production to consumption (Hospes and Brons; 2016) but also social, economic and environmental factors. The 'benefits' and 'perverse effects' of these factors are thus measured in the light of the food system's capacity to achieve food security.

This proposition has fuelled a vast, cross-disciplinary scientific field of food justice in which urban agriculture has often been taken as a case study.

b. The benefits and critiques of urban agriculture to its environment

Traditional urban agriculture literature has deep roots in the study of solutions to food insecurity in the developing world (Brinkley; 2013). Many researchers have demonstrated how urban agriculture can be used as a developmental tool in these countries from the field of geography, architecture or agronomy (Freeman; 1991, Egziabeher *et al*.; 1994, Atkinson; 1995, Binns and Lynch; 1998, Maxwell; 2003). Others also have developed this application in Northern countries in times of crisis, from generating property value to promoting civic engagement (Viljoen *et al.*;2005) but generally concluded that urban agriculture has a limited ability to supply food in these contexts (Theibert; 2012). Brinkley concludes that in Northern countries, "UA is relegated to social planning due to its numerous benefits in community development and neighbourhood improvement" (Brinkley; 2013).

However, new conceptions of food systems as social-ecological brought a new dimension to the study of urban farming. The growing literature on *food justice* has incorporated

knowledge provided by critical studies of food systems and "seeks to understand how inequalities of race, class and gender are reproduced and contested within food systems" (Glennie and Alkon; 2018). In the United States, this field of studies is organised around several axes which are social movement activism (Gottlieb; 2009, Crosley; 2014), the development of alternative food practices (Goodman *et al*; 2002, Kremen *et al.*; 2012, , Galt *et al.*; 2014) and inequalities in conventional and alternative food systems (Harrison; 2008, Lawrence *et al.*; 2013). Within this literature, the development of alternative food practices has primarily focused on empirical studies of urban farming. Indeed, urban farming has been generally considered as *a case of* alternative food system implementation. Researchers assess potential benefits of urban farming for communities and meeting local food needs (Vitiello 2008, White; 2011) But also criticized how urban farming practices reproduce race, class and gender inequalities (Guthman; 2008, McClintock 2013, Cohen and Reynolds; 2014).

In other words, recent studies have assessed the impact of urban farming on communities based on its capacity to favour sustainable models of food production (the 'food chain' dimension) and resist to wider economic and environmental inequalities ('the global environmental changes' dimension), concluding that urban farming was not necessarily the best way to improve food production, and was not totally able to guarantee the community protection from structural racism and other inequalities in U.S.. cities. On the other hand, as we will show, the development of urban agriculture has reached outstanding proportions in Detroit, paving the way for numerous case studies dedicated to urban agriculture in the city. Most of the conclusions presented above apply to Detroit, a city who suffered from economic decline and structural racism. However, as we argue, the size and magnitude of urban farming developments incite us to consider that urban farming has reached a rather different level than mere marginal initiatives and have become an important activity.

2. Detroit history and the urban farming world

The history of Detroit during the 20th century is remarkable on many respects. The magnitude of its development during the first half of the century is marked by the annexation of 22 neighbouring cities between 1906 and 1926 to fuel space for city's immigration, reaching a 370.08 km^2 footprint (3.5 times Paris inner city). By contrast, the magnitude of its population loss on the second half, from 1,850,000 in 1950 to 677,116 in 2015, has left a physical landscape of vacant land and brownfields.

However, in 2019, years of shrinkage policies aiming at reducing the share of vacant land in the city have profoundly changed this post-apocalyptic picture (a). This unused land has been

perceived by Detroit residents, entrepreneurs, city officials and sometimes foreigners not only as a burden but also as an opportunity for development, urban farming being one of those (b).

a. Detroit's decay and 'smart-shrinkage policies'

Detroit has a longstanding history of urban decline, losing more than half of its inhabitants in 30 years. The city came to the spotlight as one of the most affected by the economic crisis in the 70's and the following waves of deindustrialization (Downs; 1973, Sugrue; 1996, Downs; 1997, Beauregard; 2001). The city also cumulated high unemployment and crime rates, critical deindustrialization in the car industry, massive migrations to the suburbs and to southern Sun Belt states. Along with Buffalo, NY, Cleveland, OH, and Pittsburgh, PA, Detroit shed a dull light to the 'urban crisis' phenomenon (Moynihan; 1966). Research debates early focused on economical causes of urban decline only (Downs; 1973, Norton; 1978, Bradbury *et al.*; 1981) Recent inquiries however, integrated the racial dimension of such crisis, arguing that land abandonment come from deindustrialization, unchecked suburban growth *and* racial segregation (Sugrue; 1996, Hackworth; 2015), while others pointed out the worldwide its global dimension (Oswalt; 2006, Fol and Cunnigham-Sabot; 2010). The latter insists on the fact that cities do not 'shrink' (reduce in size) but rather expand while losing population, producing severe land abandonment. If causes of urban decline seem nowadays to create a relative consensus among scientists, debates are quite intense when it comes to operational dimensions of shrinkage and their outcomes.

Indeed, 'smart-shrinkage' or 'rightsizing' refer to two items: 1/strategies developed by local governments to manage population decline 2/instruments and tools to manage it. Rybcynski (1995) first formalized the issue of reducing city size as a concrete policy goal, arguing for a more qualitative vision of urban growth, as well as Popper and Popper who popularized the term 'smart decline' (Popper and Popper; 2002).

On the policy strategy side, debates focused on whether reducing expenditures while raising taxes or narrowing in scope the mix of public services (Eggers; 1996, Osborne and Gaebler; 1992). General strategies observed in shrinking cities were those of "moving from comprehensive re-planning of government services, to processing improvement tactics for existing responsibilities, to seeking land use reforms" (Anderson; 2011). On the instrument side, recent focus has been made on land management tools such as reducing the material city size by demolishing blight areas (Schwarz *et al.*; 2016) or developing comprehensive land management tools such as land banks (Schilling and Logan; 2008, Alexander; 2011).

Detroit is often taken as a notorious example in these literatures: Jason Hackworth for instance, comparing American and Canadian rust belt cities in his article *Why there is no Detroit*

in Canada?, presented the city in those terms: "The most extreme cases like Detroit experienced heavy doses of deindustrialization, suburbanization and racialization" (Hackworth; 2015). Years of shrinking policies led by the successive local governments with Federal program funds have nonetheless transformed the city's face (Anderson; 2011). Between 2014 and 2019, the Detroit Building Authority has torn down 17,577 buildings transforming brownfields into empty lots (DBA; 2019). Nowadays, Detroit's land emptiness is less and less seen as a burden but rather as an opportunity.

b. Detroit's Revival, urban land claims and the place of urban farming

Evidences of the "Detroit frontier, with its lawless appearance and broad opportunities" as if the city was the new Western frontier (Hand and Gregory; 2017) are found in the city's image pictured in national newspapers. Dozens of articles demonstrating Detroit's 'comeback' with entrepreneurial 'game changers' (Baltimore News; 2018, New York Times; 2018, Financial Times; 2018). All of them present the city as an opportunity for those who would like to start a new life from scratch. Urban farms have deserved a similar media treatment, from portraits of entrepreneurial farmers developing urban 'agrihoods' (Crain's Detroit Business; 2016) to French documentaries on urban farming alternatives (*Demain*; 2015), presenting farmers at the forefront of social and environmental innovations. In this regard, urban farming has received a specific reception in the form of a "mutual benefits*"* narrative described by Paddeu: "shrinkage is seen as an opportunity for urban agriculture, and urban agriculture as a beneficial tool for shrinking cities" (Paddeu; 2017). Authors posited that land availability in cities like Detroit would favour the development of innovative 'green uses' (Schilling and Logan; 2008, LaCroix; 2010). Moreover, the city has a long benevolent history with urban farming, from mayor Hazen S. Pingree's "*Potato Patch Plan*" of 1893, a city program opening vacant land for gardening in recession time, to 1975 Coleman Young's "Farm-a-Lot*"* project providing technical guidance and machine tillage to residents willing to garden their empty side lots (City of Detroit; 1975).

The other side of the picture has been presented by sociological inquiries in the field of food justice, showing how this new immigration resulted in new forms of gentrification (Lees; 2008, Dooling; 2009, Pride; 2016) or recalled ancient form of colonialism (Safransky; 2014). Urban farming, rather than being a neutral green alternative, has raised community concerns due to its outstanding scale of propagation. Concerns about land ownership and community land claims in Detroit have emerged as a key issue in this regard. Researchers demonstrated that in Detroit paradoxically, high rates of land vacancy do not lead to land availability for the residents or small-scale farmers (Paddeu; 2017, Pothukuchi; 2017) while some large-scale farms can negotiate directly with the mayor's office to acquire hundreds of acres (Crain's

Detroit Business; 2019). In this context, the conception, vote and implementation of the urban agriculture ordinance (UAO) between 2010 and 2013 has got our attention. The participative approach for policy formulation developed by Katheryn L. Underwood from the City planning commission gathered farmers in the Urban Agriculture Working group in order to draft the ordinance proposal, then submitted to diverse public outreach events for residents and farmers' meetings (Paddeu; 2015). As an outcome, urban farming was recognized as a possible land use within some regular zoning categories (residential and commercial), with limitations related to animals, tree and crop species (UAO; 2013).

The process at the origin of urban farming legalisation in Detroit gathered different farmers around the table and raised our awareness to the fact that today's Detroit farming community reaches outstanding proportions. It is evaluated that in 2018, at least 24,000 residents were involved in around 1,600 gardens and farms in the city with more or less commitment (KGD; 2018). These observations lead us to reformulate the question of urban farming in Detroit not only as whether or not it 'benefits' local communities and residents, meaning here that urban farms favour food security goals or not, but also as whether or not urban farmers organize themselves as a wider economic-political entity supported by these communities and residents.

3. Conceptual positioning

Given the development of urban farming in Detroit, the fact that some farms have lasted for at least fifteen or twenty years in the city, the city's vacant land management challenges, the urban farming legalisation perennating for a period their existence, *how farmers politically and financially sustain themselves in 2019 Detroit?*

We argue that urban farming economic inputs in Detroit do not rely only on formal-monetary supply and demand transactions but also on two exchange networks that are ruled by non-market principles (Section 1). We present the two networks: the first network connects foundations, non-profit organizations and farmers by philanthropic grants. The second connects community gardeners, low income cooperative farmers (1) Then, we argue that the grant-network relationships are organized around a principal-agent problem, foundations ensuring that their grantees spend philanthropic dollars according to their agenda. On the other hand, the barter-network relies on the prohibition of monetary exchanges (2). Then we introduce how these two networks interlock (3).

In the second section, we argue that urban farming definitions fairly coexist across two social groups in the city: an elite coalition and a group of farmers with relays in public institutions. We claim that an elite organized as a coalition promotes a vision of urban farming

as a tool for urban development, emphasizing its social and environmental benefits at the expense of its economic dimension. On the other hand, groups of farmers collectively advocate for integrating this economic dimension in the definition of urban farming (1). We demonstrate how these definitions emerged and stabilized through two collective writing processes occurring simultaneously between 2010 and 2013, the Detroit Future City Framework and the Urban Ordinance (2).

Finally, in section 3 we argue that low-income, cooperative farmers and community gardeners engaged in farming advocacy hardly access land and financing within market boundaries (1). Drawing on Fligstein's definition of market institutions (Fligstein; 1996, Fligstein; 2001), we illustrate how these farmers *contest* and *deform* market institutions to make a living (2).

To do so, we developed a methodology in order to unveil the rules presiding exchange networks, to understand actors' political stands and interpret farmers' behaviours. We used mixed methods based on interviews, multi-site ethnographies observations and participant observations, basic statistics, social network analysis. Their rationale and assessment is presented in the following section.

Methodology: Understanding relationships through exchanges of gifts and political attitudes

The following section provides a detailed review of the rationale and methods on which our research is based. It also assesses their relevance and adequacy to answer the research question. In a first subsection, we will explicit our preconceived categories of farmers and how we reformulated them throughout the inquiry. We will also present our approach based on observations of interactions and exchanges of material resources between farmers, non-profit organizations and foundations. In a second subsection, we will introduce some definitions on which we draw our hypotheses to answer our research question. Finally, we will present in detail our panel of methods and assess their relevance and adequacy for our research question.

1. **Critical reflexions on urban farmers' categories. Our approach: understanding urban farming activities through the exchanges of material objects and farmers' political visions**

We presented earlier an introductive definition of urban farming as the activity consisting in growing food or raising livestock in cities (OECD; 1998, Smit *et al.* 2001). If we remain so prudent, it is because beyond this description are deployed a wide array of actualized practices: small farms, community gardens or large agribusinesses all fit in this category. Typologies of practices often refer to standardized criteria such as farms' sizes, economic models, types of groups involved (Quon; 1998). Implicit in these definitions is that farmers are what they do: social categories of farmers are inferred from their practices. For instance, studies of small-scale farms in East Africa take for granted that households engaged in those are low-income families (Egziabeher *et al.*; 1994, Binns and Lynch; 1998). It is true that such overlapping is verified empirically in many studies (Brinkley; 2013).

However, our intent is to challenge these categories: in Detroit, urban gardeners, commercial farmers, agribusiness men and women may share common individual characteristics such as income and race. An important attention has been paid to the formulation of urban farmers' categories throughout the inquiry. In a first iteration, we based ourselves on farming categories as proxies for farmers' categories: we identified small-commercial farmers as those wo own a small-business activity, community farmers and gardeners as those who engage in community gardens and so on. We also met actors of the non-profit sector (community-based organisations, foundations) and city administrators categorized as such.

In a second iteration, we inferred categories of non-profit organizations and categories of farmers according to their capacity to be financed by philanthropic dollars. We identified professional farmers, with a limited capacity, and non-profit organizations with a greater

capacity to attract philanthropic grants. We also identified certain attitudes, interpretations of urban farming which helped us to categorize farmers as 'agribusiness' and 'radical' (McClintock; 2013). The last iteration is the result of dialogs between our different classifications: we categorized farmers as Low-income, Agribusinesses, Community gardens and Cooperatives (see section 3). An assessment of this classification-building and summary of these categories is available in table 4 at the end of the section.

We modified our classification throughout the inquiry due to our approach, focused on understanding the material needs of farmers' activity (land, labour, seeds, tools…) and the way they satisfy those needs. We also understood how farmers reflect on their own activity and define it. The result of these two interests constitutes our findings. Implicit in this approach is that urban farming is a relational activity as much as a production activity. Dozens of urban agriculture studies have shed light on social and environmental benefits of such practices but limit urban farming category lines according to their actualized mode of production when naming them. We do not contend to refute these classifications but rather to integrate social relations and political attitudes when drawing lines between farmers.

According to this approach, we developed methods by which we can identify these relations and attitudes. To identify relations, we relied on observable exchanges of goods, services and philanthropic grants understood as token for sealed alliances traded according to non-market rules (Malinowski; 1922 [1987], Mauss; 1923 [2007], Boas; 1966). Following Mauss, we posit that 'gift-giving' systems are forms of relationships based on obligations that do not comply with modern market rules[1].

To understand attitudes, we started from the analytical separation between 'neoliberal' and 'radical' farming models as proposed by McClintock (McClintock; 2013). Neoliberal farming models refer to "urban agriculture projects that serve subsidisation of capital or, more specifically, capitalist accumulation […] such food provisioning ultimately filling gaps left by the rolling back of the social safety net" whereas 'radical' models refer to "models of productions and distributions that are interstitial and subversive, by providing food where markets have failed. They attempt to subvert commodity form itself by viewing food as a public good" (McClintock; 2013, p148).

In these perspectives, our findings consist in shedding light to how these exchanges of goods, services and grants are ruled and what do these rules say about urban farmers. Similarly, unveiling Detroit farmers' reflexive conceptions of urban farming help to understand them

[1] « Nous décrirons les phénomène d'échange de contrat qui sont non pas privés de marchés économiques […] mais dont le régime d'échange est différent du nôtre » Mauss; [1923] 2007 p 65

beyond their traditional activity categories. To do so, we developed three hypotheses presented in the following subsection.

2. Definitions and hypotheses: reducing the scope of the inquiry

Several definitions would clarify this proposition and set up a vocabulary for our hypotheses. First, we identify actors as “urban farmers”, “foundations” and “non-profit organisations”. Secondly, we seek to explore farmers’ interactions between themselves in the form of “exchange networks”. Similarly, we seek to explore the foundations’ and non-profit organisations’ exchange networks. Finally, we present these interactions in two modes, “financially” and “politically”.

Urban farming and gardening refer to the practice of growing plants (vegetables, trees) and/or raising livestock within city limits. Urban farmers and gardeners are here understood as individuals doing regularly one or both of these activities. This category thus refers to a narrow scope of practices. However, a large spectrum of actors is engaged in these for hundreds of reasons: individual gardeners, non-profit volunteers, small-scale and large-scale commercial farmers are all engaged in them, with different methods and different goals. These actors do not constitute a homogeneous group sharing common norms and values. We identified four groups of farmers: Low-income, Agribusinesses, Community gardeners and Cooperatives. Low-income and agribusinesses and farmers are individuals engaged in commercial food production: they sell their product in the food market. Community gardeners are engaged in producing food for themselves collectively without engaging in market competition. Cooperatives are mixed farms, both coordinating themselves to sell products and integrating community gardens.

Foundations are philanthropic organisations providing mainly financial resources in the form of grants to other non-profit organisations. There are different types of philanthropic organisations: community foundations, family foundations, charitable trusts. These categories come from their fiscal status. Non-profit organisations are entities enjoying a “tax-exempt status” They provide goods and services to organisations or individuals without generating profit.

‘Exchange networks’ are defined as large interaction systems in which good, services and money are exchanged between the different stakeholders out of the market sphere. They are observable flows of items between different actors, whose rules for exchange are not based on market principles. These networks can be characterized by the type of items exchanged: on the one hand, good and services exchanges in non-monetary exchange networks (barter networks). On the other hand, cash flow in the form of grants, donations are called monetary exchange networks.

Finally, farmers' financial and political interactions qualify the mode on which they interact between them (in the exchange networks) and with other actors. Firstly, farmers' financial interactions represent their relations related to exchanges in the formal market (as commercial farmers with suppliers and customers for instance) as well as their participation to the farmer's exchange network. These interactions can be qualified as erratic or stable, depending on the actors' commitment to embed themselves or not in these relationships.

Farmers' political interactions on the other hand, refer to the farmers' capacity to voice political claims and defend their interest in the public sphere against other groups. Farmers can advocate or not for different causes such as the promotion of urban farming as an economic activity. According to these definitions, we developed three hypotheses:

Hypothesis 1: If farmers participate actively to a barter network, then they would enjoy lower access to foundations resources.

Low-income, Community gardeners and Cooperative farmers are engaged in a bartering network. Low-income farmers, due to their legal status, cannot apply for philanthropic grants whereas Community gardeners and Cooperative can. However, Low-income farmers do not engage in the grant-network because it provides resources and payback options that are not accessible through monetary exchanges.

Hypothesis 2: If farmers engage in urban farming advocacy, then they would enjoy lower access to foundation resources.

Radical and neoliberal forms of urban farms fairly coexist in the same city. However, foundations, as member of an elite coalition, promote a vision of farming that does not recognize it as a farming activity. As a consequence, farmers engaged in promoting it as an alternative mode of food productions are evicted from their grant.

Hypothesis 3: If farmers participate actively to a barter network and participate in urban agriculture advocacy, then they would enjoy a relatively as equal financial stability as those who engage only in one or none these activities.

Urban farmers' both engaged in bartering and promoting urban farms as an economic activity have coordinated themselves in the structuration of an urban agriculture economy relying on non-profit financial perfusion but progressively gaining influence.

Each section of the present dissertation will assess the validity of one of these propositions based on a qualitative inquiry. Different methods have been mobilized to verify them and will be presented below.

3. A qualitative inquiry informed by quantitative data: research design and methods

The research presented in this dissertation relies on different set of evidences that have been collected between August 2018 and April 2019. The data collection and analysis can be roughly divided into two periods, the pre-fieldwork and in-fieldwork inquiries. This chronological split is important because the discovery of the quantitative data in mid-November 2018 has reshaped profoundly the research design formulation, as well as the in-ground fieldwork between January the 15th and April the 15th, 2019.

Nonetheless these reassessments, the underlying rationale for qualitative inquiry is the following. We collected and explored quantitative data of grants rewarded to organisations in Detroit between 2010 and 2018. These first insights have served to inform, formulate problems and set beacons for the qualitative fieldwork. No statistical inferences have been performed with this dataset. In this sense, the data exploration resulted in observations of correlations that have been taken into account in the qualitative inquiry. By no means we determined causalities through quantitative methods.

The latter was composed of 27 in-depth semi-structured interviews, a multi-site ethnography in farms, public hearings, non-profit events. Qualitative work then rearranged and gave accuracy to the quantitative observations, helping to formulate new questions in an iterative process. In this subsection, we will present these methods and their relevance for assessing our hypotheses.

a. Pre-fieldwork inquiry: quantitative beacons

The pre-fieldwork inquiry has been dedicated to the quantitative data treatment of a list of grants rewarded to organisations between 2010 and 2015. These first observations allowed us to have an understanding of the different activities granted in Detroit, the place of urban farming among them and eventually providing a draft short list for targeting interviewees. We also represented this data in a bipartite graph and a derived 1-mode graph projection to visualise the relations between funders and recipients. Observations made have then informed the qualitative fieldwork.

i. The data

In November 2018, we discovered an Open Data Licence dataset on the *Detroit Ledger* website. The *Detroit Ledger* is a Detroit-based non-profit sharing a large dataset of 14,189 grants financing diverse organisation between 2010 and 2018 in the Detroit area. These datasets provide the following information for all of the grants: funder name, recipient name, amount ($), starting year and ending year (month and year), sometimes the organisation's address. The *Detroit Ledger* collected data from '990 forms' that can be found in the city registry (tax fillings

for 501(c) tax exempt – non-profit – organisations) and other sources (foundation's websites for instance). Information provided in this dataset are raw: no previous categories have been designed, there are several errors such as empty rows or typing errors. The data needed to be cleaned and structured according to my research question.

ii. First data cleaning and structuring

We define data cleaning as the process by which odd elements in the dataset are removed in order to ensure its compatibility with computational analytics such as Tableau, Excel tools and Gephi. They represent the two first steps of the protocol presented below. Data structuring corresponds the creation of categories and addition of information useful for analysis and are directly connected to the research question. They represent the third and fourth step of the protocol below. Data structuring will be assessed right after the presentation of the protocol:

- *Firstly*, we excluded the years 2008, 2009 and 2016 to 2018 that contained too few entries (less than 50) compared to the others who contained on average 2,000 grants per year.
- *Secondly*, we excluded the grants with an amount inferior to 100$, because lots of them contained typing errors such as '$1' or '$4' and we reasonably doubt that any funder would give 4$ as a grant for a non-profit: no information was thus provided with these rows.
- *Thirdly*, we assigned to each individual grantee (1,500) the features presented below. This work has been done manually based on the information provided by the organisations' website. Whenever the organisation's or foundation's website did not exist, we traced their roles in local newspapers articles.
    - an address
    - geographic coordinates of the headquarters
    - the recipient's sector (public/private)
    - the recipient's type (non-profit/business/ administration)
    - a 'farming label' (farming-related or not)
    - a recipient tag (42 categories ranging from administrative to youth empowerment, complete list available in annex-methodology, table 1)
    - the funder's sector (public/private)
    - the funder's type (administration/ foundation).

- *Fourthly*, we extracted a data subset composed only of "farming-related" grants meaning grants directed to organisations promoting urban farming. We used this dataset to create a network graph visualisation.

iii. Assessment of the data structuring per se

The eight categories we created have more or less valid features. Addresses and headquarters geocoordinates for instance, have served to visualise whether the recipients' location would be correlated with the number and type of grants received. Accuracy of this information resides on the websites' validity. We used the software QGIS to compare this information with others such as population and geographical data (Mean income, Race and ethnicity/ census block, vacancy rates) and public policy data (Economic opportunity zones, zoning features, Hardest Hit federal Funds target zones, Detroit Land Bank properties). No correlation has been identified between the localisation of grant recipient and them.

The second set of categories (recipient sector/type/tag, the funder sector/type, the farming label) is less reliable on many respects. Attempts have been made to make these categories valid, such as the tag category: we first sought to identify each recipient according to its NTEE (National Taxonomy of Exempt Entities: a code used to classify non-profit organisations according to their registered social sector such as education, community organizing…). However, a significant part of the organisations recorded were not necessarily non-profit organisations, or if they were, they sometimes did not exist anymore. In this case they did not have an attributed NTEE. We thus created our own classification, inspired from the NTEE nomenclature and simplified (42 categories instead of the 645 subcategories). A list of the tags is available in annex-methodology (table 1).

Both of these categories (geocodes and NTEE-related) relied on implicit assumptions. For instance, addresses and geocodes were thought as proxies for defining the non-profit area of intervention. This assumption is extremely fragile for a number of non-profit actions, in the field of education for instance. However, they were more accurate for the farming-related organisations as the qualitative inquiry later confirmed. NTEE-related categories are on the other hand way more subjective. They rely on our own understanding of a non-profit activity, and *by construction* limited it to one main activity. In the reality however, non-profit organisations have a wider array of intervention. For instance, the *Junior Achievement of Southern Michigan* has been categorised as an 'education' non-profit while it also provides day-care and training services. Nonetheless these limitations, the categories 'environment' 'urban farming' and 'food' on which the 'farming-related' label relies showed a certain robustness after the qualitative inquiry.

iv. Data basic quantitative observations

Based on these categories and because of the low reliability of most of the categories, we simplified the quantitative description to the place of 'farming-related' activities among the overall grant envelope. We thus compared their volume share and numbers in the general grant envelope between 2010 and 2015. These observations led to a more specific look to the differences of grant funding within the 'farming-related' categories and their projection as a graph.

v. Data visualisation in bipartite and 1-mode graphs

Based on the 'farming-related' grant subset, we generated a bipartite graph with the tools Table2Net and Gephi provided by the Sciences Po Medialab[2]. Table2Net is a software generating Gephi-compatible dataset from CSV files. Gephi is a network visualisation tool providing basic statistics tools for social network analysis (degree, diameter, community detection…). It also provides tools to project bipartite graphs into 1-mode graphs because few social network analysis algorithms are available in Gephi for analysing bipartite graphs. Gephi's algorithm is based on affiliation properties: it connects nodes who are indirectly connected to the same in the other subset. Actors of the same nature (recipients) are indirectly connected by actors of the other nature (funders). As a consequence, we can build a projection of these actors' connexion in a 1-mode non-directed network. In our case, this means that non-profit organisations are connected to each other if they have been financed by the same foundation. These specific networks are called affiliation networks and they share certain properties with regular social networks.

vi. Rearrangement during the fieldwork

A certain number of readjustments have been done after two months of fieldwork and a better understanding of the non-profit sector of Detroit. A certain number of organisations such as Midtown Detroit Inc. or Recovery Park have been added to the 'farming-related' labels for instance. Other organisations have indeed a relation to urban farming, albeit sometimes more indirect than what we would think in the first place. For instance, the Eastern Market Corporation (EMC) has an urban farm in its zone, which made us think that some of the grants they received financed it. However, this farm belongs to another organisation, Keep Growing Detroit. On the other hand, The EMC finances new-born businesses sometimes related to urban farming and is the main urban farmers' market in the city. Moreover, Keep Growing Detroit

[2] Tools available here: http://tools.medialab.sciences-po.fr/

has settled its office in the middle of the EMC zone and the organisations have very strong ties. In this case we decided to maintain the EMC in our dataset for instance.

vii. Assessment of the data for the research

The data collected through the *Detroit Ledger* has had a key role in our research in the sense that it helped to visualise and understand the relationships in the grant-network between foundations, non-profit organisations and some farmers. We identified a set of unexplained correlations and regularities. These findings have been then reinvested and questioned during in-dept interview preparation. For instance, we observed that a certain number of professional small-scale farmers have been funded by grants. When interrogating them on those, they recognize that they applied to certain grants albeit the fact they do not approve this financing techniques, such as Greg who explained to me very directly: "*I don't beg*" (Greg; 30th of January).

b. In-fieldwork inquiry: interviews and multi-site ethnography

The second period covers the three-month fieldwork in the City of Detroit. The fieldwork was the occasion to apply qualitative methods. We conducted 27 in-depth semi-structured interviews and around 15 observations and participant observation in a multi-site ethnography. In this subsection, we will present how we've been able to reach these interviewees, how their interviews were prepared and how their input was integrated to the research. Then, we will present the different dimensions of the multi-site ethnography and the behaviour we adopted in them in order to collect information. Assessment of these methods will be wrapped up in a final subsection.

i. Entering the fieldwork through interviews

We identified two major barriers for entering the urban farming world in Detroit. Firstly, the 'one-shot' opportunity window of our fieldwork, necessitating a long pre-fieldwork preparation to enter in contact with interviewees. Secondly, the popularity of Detroit urban farming as a master thesis fieldwork for students was potentially a threat to fieldwork access: the farmers' time availability as well as the necessity to distinguish us from other students in order to get these interviews was a potential limitation.

Regarding the short window of opportunity (89 days to interview at least 25 individuals valuable for our research question), we prepared during the pre-fieldwork a short list of potential interviewees based on newspaper readings and our grant dataset. Moreover, we contacted a French-based non-profit called *Learning from Detroit* in October 2018. After meeting their members, they authorized me to access to a private list of 45 Detroit contacts (cell

phone numbers, email addresses, addresses, type of organisation). We selected a primary short list of potential interviewees from these two sources (grants and list). We categorized them into 'farmers', 'local food sellers', 'urban agriculture advocate', 'city administrators', 'other'.

On the other hand, the winter period played in our favour. As a significant share of our interviewees would be urban farmers, it is worth noticing that they do not work as much on the January-March period than on spring and summer time. Many farmers we interviewed thus thanked us for coming on a winter time, since they usually receive demands between April and August, students coming to Detroit for in-farm ethnographies and participant observations. Farmers usually work almost every day in these seasons and usually do not have time to sit for 1h-interviews. We often asked our interviewees who would be valuable for our research at the end of each interview, according to snowball sampling methods. Sometimes, respondent refused to be recorded (2 individuals) or asked for guarantees (2 individuals). In these cases, I proposed them to also record the interview with their cell phone or promised to send them the raw material once at home. These strategies helped two of our respondants to gain confidence and finally accept to be recorded

ii. Diane, our key informant

In this subsection and below we will use the first-person singular pronoun to report facts and events in which we were directly involved, sometimes as active participants. The use of the first-person plural will reflect comments and *ex post* assessments of their benefits and limitation for our research.

I met Diane thank to a French researcher who got us in contact by email. Diane accepted to host me for the three months on the ground. She works as a real estate consultant and a solar panel seller in Midtown. Born and raised in Detroit, she is used to receiving young researchers and trades a shelter for the help with day-to-day chores and the organisation of a fundraiser for Keep Growing Detroit. There aren't enough words to recall how much Diane helped me during this research: she provided me with a car, indispensable in a large city with a very bad transit system in the winter. She also presented me to a number of individuals more or less involved in urban farming. Moreover, mentioning her name has sometimes facilitated opportunities for interviews.

In this reciprocal relationship, I was invited to help with day-to-day chores such as snow shovelling and taking care of the seven ducks (now eleven) and twelve chickens (now eleven). I also organised a fundraiser for Keep Growing Detroit, an important non-profit providing services to urban gardeners and farmers (see section 1). All of these elements recall that an

important part of our qualitative work, including interview targeting, are dependent of this relationship.

iii. *How these interviews were integrated to the research*

We interviewed 27 individuals who were identified as member of categories constructed *a priori*: commercial farmers (7), community farmers, (5) non-profit members, (6) City administrators (3), foundation members (3) and others (university members [1], architects [1], journalists [1]). A list of them is provided in annex-methodology (table 2).

We built different guidelines for semi-structured interviews, one for farmers, one for non-profit members and one for city administrators. Other interviews have been prepared according to the specificities of the interviewee: for instance, we asked precisions about urban farming projects (such as the Eastern Market, the Capuchin Soup Kitchen, the Greening of Detroit, whose member also have been interviewed) funded by the Erb foundation to its grant manager, grants we discovered thank to the quantitative dataset.

Interviews have served as a basis for collecting first-hand information about events and relationships between the actors. The also focused on day-to-day tasks such as how community farmers apply to grants proposals, what do they think about it. A specific focus has been made on the economic baseline of farmers' model, whether commercial farmers or community gardeners. The farmers' guideline is available in annex-methodology (figure 1). These interviews allowed us to contextualise and understand relationship between actors. For instance, they unveiled the farmers' barter network by providing examples of non-monetary exchanges. Interviews have been at the heart of the qualitative inquiry but have been completed by multi-site ethnography.

iv. *Multi-site fieldwork, diverse ethnographies*

Ethnographic methods are the touchstone of two dimensions underlying every social science fieldwork technique: the researcher's relationship with its respondents and the knowledge he or she can produce based on observing them. These two inextricably tied dimensions undermine the ethnographer's capacity to report 'facts' and 'events' objectively. In this regard, we based our understanding and application of ethnographic methods according to Florence Weber's "multi-integrative ethnography" proposal (Weber; 2001):

> The unfolding of a fieldwork, which tends to occupy the whole discourse of narrative ethnography, becomes, in multi-integrative ethnography, one tool among others for understanding the events observed. The ethnographer rarely works in a single milieu of mutual acquaintanceship […] More often she works at the intersection of several groups. Depending on the object of her study, she integrates herself into several of these groups or not. (p482)

In our case, ethnographic methods did not only serve to collect information such as 'facts' or 'events' or getting new ideas to reformulate problems. They rather served to bridge the gap between the researcher's position and the elements collected during the research object construction. Following Florence Weber, we did not presume farmers' acquaintances in the barter-network *a priori* nonetheless they told us they knew each other.

Implicit in our approach is that nonetheless actors' friendships and 'exchange networks' relationships often overlap, they do not necessarily do *always*, because no evidence we gathered would support such hypothesis. As mentioned earlier, I was tied to Diane by a 'service rendered' relationship. Other interlocutors also solicited me for such type of relationships, introducing me to different sites and offering me new opportunities for observations and participant observations. We understood these different opportunities as different 'doors' to different ethnographic fieldworks rather than one. The process by which we were accepted in these spaces are elements prone to analysis (see section 1).

Filling the metaphor, we were struck by how similar the 'door handles' were in all of these cases. In other words, means by which we accessed to evidences of the farmers' exchange networks have been based on these 'service rendered' relationships firstly between us and our interlocutors, then extended by observations and interviews to the relationships between our interlocutors.

A big objection to that would be to affirm that every researcher is confronted to such 'services rendered' relationships, especially when attempting to get an interview meeting for instance: the promise of a coffee or attentive hears traded with one hour of the interviewees' time can also fall into those. Furthermore, extending to a more general 'exchange system' would be a methodological error because researcher-respondent relationships cannot be considered on the same footing of those between respondents. We argue that the comparison between the different fieldwork unfolding processes, completed by interviews, unveiled such relationships. To justify it, we claim that albeit the fact the researcher-respondent relationship is often based on 'service rendered' relationships, nothing allows us to presume that these relationships would be similar between respondents. However, we observed such similarities during our fieldworks. As an example, the time, money and energy spent to get an interview with Ashley for instance, goes far beyond the promise of a coffee cup (see section 1).

v. *Multi-site ethnographies and their integration to the research*

Ethnographies have been made in different modes (observations and participant observations) and different contexts (meetings, hearings, volunteering sessions) as reported in the following table 3:

Table 3: ethnographic observations during the fieldwork *Source: the author*

	Meetings	Hearings	Volunteer sessions
Observation	- Sister Pie Community Outreach (1) - DFC Work with Lot session* (1) - KGD beekeeping community meeting	- CDBG/NOF hearing at the City council (1)	
Participant observation	- Detroit Food Summit (2 days)		- Earthwork volunteering sessions (every week for 2 months - 8 sessions) - KGD seed-packing sessions* (2) - Food field volunteering (1)

*Observations with Diane

From this table was excluded the fundraiser's organisation for Keep Growing Detroit. As part of the agreement deal with Diane, I organised a fundraiser in the form of a French dinner (French recipes) cooked with local products. The entrance was based on a suggested $35 donation to Keep Growing Detroit. The fundraiser raised around $1050, with around 32 guests showing up. I assumed most of the financial costs of the cooking products. I also collected food donations from former interviewees (commercial farmers).

About the observations referenced in the table above, they were sometimes realized with Diane who wanted to attend them or simply accompany me. I usually sat at the back of the meeting/ hearing room in order to take notes. I sometimes enjoyed the end of the meeting to collect documents, interview promises and cell phone numbers. About the participant observations, I always had access to the places thank to a volunteer status. I applied to the Detroit Food Summit as a volunteer and served as a cook. I used the rest of the day to attend conferences and observe. I also participated to workshops without hiding my student-in-fieldwork status in this summit.

Overall, ethnographic methods have been hardly integrated to the research. At the beginning, we engaged in observations and participant observations without specific target, mostly as a mean to get interviews. We identified regularities in fieldwork unfolding and integrated them as collected data *a posteriori,* based on our fieldwork notes, during the writing process. Because we did not prepare a common guideline for observation analysis and were sometimes dependent on our key informant to access the fieldwork, it is the least systematized method we have applied in this work. However, ethnographies have been decisive in

understanding how the actors we met, sometimes used to the presence of students in their farm, behaved in my presence. In some observations, I rather preferred leaving pen and notebook in the pocket and record myself at the meeting exit, when I felt that my presence was too disturbing.

c. On the relevance of the methods regarding our hypotheses

In the previous subsection, we have assessed systematically how the data collection and treatment has been useful for the overall research. In this section, we will assess how these data participated to the creation of categories that have been reused to build our hypotheses. Some categories have been built *a priori*, without previous knowledge of the fieldwork. Their robustness has been tested with the qualitative inquiry and some of the categories have been rejected.

The categories have been first drafted during the quantitative data structuring. These descriptive categories have been created intuitively, based on no scientific knowledge but the understanding of organisations' websites. They also have served for the categorisations of actors in interviews. The categories are: commercial farmers, community farmers, non-profit members, City administrators, foundation members, and others. These categories have met echoes with the categories created from the network visualisation, categories based on the observations of grant financing patterns (see network in figure 2, annex-methodology). The categories are: large non-profits, small non-profits, local foundations, other foundations, professional farmers. Finally, these categories have been tested during the qualitative inquiry and redesigned, integrating the political-advocacy dimension of the actors in a third iteration.

Table 4: different iterations of category definition *Source: the author*

Iteration 1	**Iteration 2**	**Iteration 3**
Commercial farmers	Professional farmers	Low-income farmers
Community farmers	Small non-profits	Agribusinesses
Non-profit members	Large non-profits	Community gardens
City administrators	Local Foundations	Cooperatives
Foundation members	Other foundations	
Others		

Our methods, with quantitative data used for squaring a qualitative fieldwork, have been decisive for shaping these categories. Nonetheless technical difficulties (quantitative data structuring, ethnographic systematization), they have generated coherent classifications making

possible their comparison and tests during the inquiry. In the light of this category-building and testing process, we would like to affirm their relevance for the general research question and hypothesis building. They nonetheless remain opaque and very static categories. Further inquiry, or a fourth iteration, would necessitate to emphasize the farmers' status more dynamically, understanding for instance how farmers evolve from one category to another. The research design and the methods developed in this study remain silent on all of these questions, proposing a synchronic 'picture' of relationship rather than their diachronic 'movie'.

In this section, we presented how the research design and the methods chosen to answer our hypotheses and provide insights for our research question. We also specified how our data have been collected and structured after quantitative and qualitative inquiry. Now, we will answer our hypotheses in the following three sections.

Section 1: reciprocity, conflicts and evidences of exchange networks in Detroit

"There's kind of a good network of farmers, we have a lot of farmer friends so, if a grant comes up we share the information very well among people, and, I should say, I should tell you about that because yes of course we apply, but also we're very conscious of the fact that we've gotten some grant money, and we're white transplants in the city." (Britney; 3rd of April)

Evidences of Detroit's economic downfall are related since the 1970's (Downs; 1973, Norton; 1978). The automobile industry, after having carried millions of African-American workers from southern states during the Great Northward Migration in the first half of the 20th century, was no longer able to provide jobs and promises made for newcomers: "African American workers bore the brunt of economic change, their options limited by discrimination, and their tenuous hold on factory jobs threatened by deindustrialization" (Sugrue; 1996, p155). Even in the wake of the 21st century, Metro-Detroit lost 60% of its automobile jobs between 2000 and 2009 (Eberts and Erickcek; 2009). Recently, Detroit workers were employed in government offices (23%), Retail, hospitality, arts and recreation (15%) or education and health services (14%), manufacturing jobs representing only 8% of the employed workforce (CSW; 2015).

In this blight picture for Motor City, it is worth noticing that the non-profit sector employs 181,000 workers in the metro area, far above the State average of 43,000 workers per region (CSW; 2015). As an informed foundation worker explained to me, Detroit's specificity goes far beyond the State borders: "*Detroit has a lot of foundations. There is a lot of old money from auto companies, lumber companies […] Detroit is particularly rich in foundation, there are a lot of foundations in NYC, a lot in California, quite a few in Chicago, and a lot in South East Michigan, most often, it is somebody who makes its wealth in some kind of industry and decides that they would transfer a portion of it to an endowment. There are tax incentives to do it*." (Christine; 4th of April).

On the other hand, few quantitative evaluations of urban farming employment sector have been made in Detroit, notably due to the lack of formal-legal activity's status: there is no dedicated zoning for urban farms (UAO; 2013) and no tax category for vegetable growers, as an interviewee explained to me: *There's not even a tax bracket for vegetables growers, if we have to say what kind of farm we are, we have to say that we are melon farming, it's the closest case that matches what we grow, we grow melons sometimes but not enough to call ourselves melon growers. But that's what they told us to put"* (Britney; 3th of April). A recent study has evaluated the number of urban agriculture businesses at 487 in 2009, and 1295 in 2014 (Nolan; 2017). Similarly Keep Growing Detroit, one of the major non-profit organisations supporting

urban agriculture development, revendicated that 1,600 gardens and farms have received their support, helping roughly 24,000 residents to grow food. (KGD; 2018).

These two sectors look to coexist fairly independently. Urban farming, however, has been often relegated to social policies and dependent of the non-profit sector (Brinkley; 2013) which make us think that some bridges must exist between these two worlds. In this section, we will see how each of these sectors can be represented by networks, both based on exchanges of grants, goods and services that are not necessarily market based.

On the one hand, foundations and non-profit organisations are tied by a 'grant-network', a flow of money from foundations to non-profit organisations with specific modes of circulation, the grant application process. Some of these foundations actually finance projects related to urban farming or urban gardening. On the other hand, urban farmers are connected to each other through a myriad of services rendered, exchanging goods and services in the 'barter-network' (1). Both of these networks are not exempt of conflicts shedding light on some rules presiding these exchanges (2). Moreover, these networks sometimes overlap, providing insights on how urban commercial farmers are excluded from grant financing circuits (3).

1. Two coexisting networks: grant and barter exchanges revealed

Patterns of grant financing and bartering have in common that they can be recorded or explained in interviews. This fact-based approach lies in the assumption that we cannot pretend *a priori* that foundations, non-profit organisations and different farmers are tied together and how. These material grants, goods and services exchanged provide an interesting standpoint for asking further questions such as how these exchanges are decided for instance.

This section will present who exchanges with whom and what do these actors exchange together. Firstly, we will present the farming-related 'grant-network' and its place in the wider picture of grants exchanged in Detroit (a). Secondly, evidences of the urban farming 'barter-network' will be presented with examples of our personal experience in ethnographies and confirmed in interviews (b).

a. Foundations, non-profit and urban farming in Detroit: a grant network highly polarized

We identified 650 farming-related grants in the 13,552 available in *the Detroit Ledger* dataset, representing 4.75% of all the grants allocated in Detroit between 2010 and 2015. This share is relatively stable over the period. Regarding the $60 million distributed for farming-related activities, the picture is bleaker: they represent only 1,47% on average of the overall grant nominal value distributed. Moreover, this share decreases from 2.1% in 2010 to 1.1% in 2015.

However, their figure value has increased over the period (+7,8% on average) with a peak in 2013 ($14,4M distributed). All figures mentioned above are reported in table 1 (Annex 1). Overall, we observe that while the general number of grants distributed has increased, the share of urban farming grants remained stable during the period (figure 1 Annex 1).

Some general insights can be drawn from these observations: urban-farming-related projects represent a small, albeit significant share of the overall grant pool, and their funding is relatively stable throughout the years. The concomitant facts of a decrease in grant amounts shares and the increase in their numbers and overall value requires further inquiry. Several options can be envisaged: 1/ There are more grants of less nominal value (philanthropic dollars are more evenly distributed across the grants). 2/ Few mega-grants concentrate the bigger share of the nominal value at the expense of smaller ones. To test these propositions let's look more specifically at who benefits from the farming-related grants.

As showed in figure 2 (Annex 1), almost 81% of the money is directed to 10 recipients. Eastern Market and Gleaners Community food bank cumulate 36% of the funding envelope for instance. This is also true if we look at the number of grants they received: Gleaners, Greening of Detroit and Eastern Market Corporation received 278 grants out of the 650 over the period. Clearly, few non-profit organisations have the capacity to attract foundations' grants.

One explanation to this concentration lies in the fact that grant rewarding is based on a procedure factor of exclusion. Foundations have standardized processes to reward non-profit organisations with grants. The so-called '*grant application process*' consists for non-profits to submit a long list of documents: a financial audit made by a third party, a list of their board members, a cover letter signed by the executive director and their board chair, their IRS form 990 justifying their non-profit legal status, an internal budget balance and a narrative letter (a project overview). Grant managers in these foundations review these documents before submitting to the decision board, as one of them explained to us: "*We help the president to have an informed decision: we show why this grant is important for the bigger picture*" (Danielle; 27th of February).

This process of selection is based on principles of the what Lester M. Salamon calls the 'new frontier of philanthropy': "Where traditional philanthropy brings charity perspective to its work, focusing exclusively or at least chiefly on social return, actors of the new frontiers bring an investment orientation, focusing on social and financial return and seeking to build self-sustaining systems that bring permanent solutions"(Salamon; 2014). One of the underlying principles guiding new foundations' action is the concept of leverage. Salamon defines leveraging as "a mechanism allowing limited energy to be translated into greater power" (*ibid*). For foundations, this means that they now seek for a more rationalized form of intervention.

Grant application processes are in line with these principles: based on a wide array information they are attempts to neutralize subjective factors for grant attribution.

On the non-profit organisations' side, this new approach is a source of trouble as some non-profit leaders explained to me: "*Grant money is not free money, it's a load of work. They want us to make lemonade out of lemons"* (Ashley; 11th of April). The time they spend in writing proposals is often seen as a loss of time: "*I wish I didn't have to do it, it's time consuming, and I wish I'd rather be engaged in the work than engaged in getting the money to do the work"* (Malik; 4th of April). Even members of foundations recognize that this process, even if required for guaranteeing the grant's best allocation, excludes a certain number of potential grantees, as an interviewee from the Skillman foundation proposing alternative solutions explained to me: *It's a lot of documents, that's why we have the smaller grant portfolio that Mary is in charge of and the Community Connexion small grant program, we do have other vehicles for organisations that don't have financial statements*" (Danielle; 27th of February). On the other hand, a certain number of farmers organized themselves in order to exchange goods, services and information without monetary mediations.

b. The farmers' barter-network'

Farmers and non-profit organisations are also embedded in a large barter network in which good and services exchanged are often non-monetary on purpose. The first weak signals of this assumption came from the reciprocity duties I experienced during my own interactions with non-profit workers and farmers (i). This assumption was then confirmed by interviews and observations (ii). Moreover, a certain number of non-profit organisations play an important role by providing volunteer labour and staging moments in which this exchange-network can be deployed and theatricalized (iii). The following subsection contains a number of facts reported from ethnographic experiences of 'fieldwork unfolding' (Weber; 2001). For the sake of clarity, these narrations will be reported at the first-person singular all along the section. *Ex-post* analysis will however reintroduce the first-person plural. This separation might help the reader to distinguish fairly elements of narration and interpretation.

i. Reciprocity duties when doing qualitative research: Ashley, Noah and the first evidences of an exchange system

Ashley is the co-director of an important and non-profit organisation in Detroit. Keep Growing Detroit (KGD) claims serving 1,603 gardens and 24,362 residents throughout the city with its *Garden Resource program*, the main non-profit's instrument for providing goods (seeds, transplants…) and services to their adherents (KGD; 2018)

I first met her on Monday, February the 11th at the door of the WorkGroup community meeting for KGD. She didn't let me enter the room albeit the fact I was accompanied by my key informant, used to these meetings, adherent of the non-profit's programs and a friend of her. She apologized and explained to me that protecting community members from external observers (especially with notebooks) in these meetings was the guarantee for the openness of discussions. We headed back home, and my key informant explained to me in the car that Ashley was very 'protective' with community members and this always has been the evidence of her commitment to her work, indeed guaranteeing a certain respect and trust from the them.

Later in February and March, I participated twice to 'Seed packing sessions' proposed by KGD. For two to three hours, residents and community members are invited to weight and pack seeds in bulk seeds to individual bags. These bags are then redistributed to non-profit adherents during one of the five 'Seed & Plant pick ups', huge one-day events in which all of them converge to get seeds, transplants, information. As I participated as a volunteer to one of them, on Thursday, 21st of March, I can testify that dozens of gardeners and farmers showed up to pick up theirs. KDG used to buy prepacked bags from their providers, but they discovered that internalizing these tasks by buying seeds in bulk and mobilizing volunteers to pack them was an opportunity to offer year-round community gatherings, especially on the winter period and save some budget. Ashley was not necessarily present to these events (except the 'Seed & Plant pick up') and did not witnessed my commitment to help her organisation. She didn't answer my several interview requests anyway.

On March the 28th, I organised a French dinner fundraiser for KGD as part of the arrangement with my host. With the help of another student doing her master thesis in Detroit, we raised around $1,000 during the dinner. I worked with Ashley to make this fundraiser happen: we exchanged few organisational emails before the due date. During the dinner, she told me that she would find some time for an interview. On the 11th of April we met at her office, and she explained to me that she has more than five requests a week and giving this time to each student coming at her office would represent a consequent loss of time and money she couldn't afford.

Between the 11th of February and the 11th of April, our research work thus also consisted in building a reciprocal relationship based on material exchanges. Offering coffees and the promise of attentive hears weren't definitely enough to make her consider that the exchange was equitable. However, the provision of time (volunteering), goods (the dinner) and money (the fundraiser) were the proof of our commitment. Not all of the individuals we interviewed required such commitment, but they often sent signals in this sense, like Noah.

Noah runs a 4 acres commercial farm in the North End of Detroit since 2011. I interviewed him at the end of January. I recalled him in March for my fundraiser: as the 'French dinner' was the opportunity for cooking local food products, I sent a bunch of emails to my previous interviewees, asking for food donations with the promise of a free-entry to the dinner. Noah was one of the few respondents. He offered me 4 pounds of salad mix. During the dinner, he evoked his need of volunteers for a few hours. I naturally proposed my services and helped him to clean a culture bed and transplant cucumbers a few weeks later.

The question of reciprocal exchanges of little goods and minor services between the researcher and the respondents in qualitative inquiries is nothing new (Malinowski; [1922] 1989) but in Detroit's farming world such exchanges are constitutive of interpersonal relationships between individuals in communities. Another evidence of these day-to-day reciprocities emerged from my interviews with farmers and community gardeners.

ii. Day-to-day exchanges between farmers

As mentioned in earlier, studies of the impact of urban agriculture practices on poor communities emphasize their benefits on individual collective well-being. On the latter dimension, some scientists have demonstrated their benefits in terms of social network building both in Northern and Southern countries (Duchemin *et al*; 2008, Dunn; 2010, Olivier and Heinecken; 2017). They underline how urban farming helps the formation of supportive networks for sharing "knowledge, produces, meals and even money" (Jacobs; 2009).

Evidences of such supportive networks can also be found in Detroit. A slight look at the online branch of this network, the 1,510 members' *Detroit urban farmers* private Facebook group provides a good picture of what is exchanged by the farmers: tools, lumber, vegetables, information are shared, given for free or traded with minor services[3] (see figure 3 below):

Figure 3: Examples of Farmers' giveaways in *Detroit Urban Farmers* Facebook group (anonymized) *Source: Detroit urban farming Facebook group*

[3] Detroit Urban Farmers; Facebook: retrieved on the 29th of April 2019 on https://www.facebook.com/groups/detroiturbanfarmers/

Small-scale farm owners and community gardeners we met often reported how this solidarity was important for their farm stewardship, like Britney who ties this solidarity to friendships : "*There's kind of a good network of farmers, we have a lot of farmer friends so if a grant comes up we share the information very well among people"*. (Britney; 3rd of April). She is not the only one: Michael explained to me that he offered his truck to Mark, another interviewee for instance: "*So you've seen Mark's truck? I gave it to him a while ago, that's how it works here sometimes*" (Michael; 21st of February). The same Mark whose garden is based on food free giving:

> *"The fruit trees are over here, and then we have a hoop-house on that side, we grow over here, that's mostly a community garden* (and the neighbours can just come to the garden and…) *the neighbours can come and pick up whatever they want, over here* [pointing the other side of the street]. *There, it's more an education garden, so if they want to pick something from this specific garden, they have to come to me and say "hey, I wanna pick collard greens." It's a way for us to be able to teach them how to pick… Like if you come over here on the summertime, it looks crazy, yeah, they come with knives and cut the plants, stuff like that."* (Mark; 23rd of January).

iii. Non-profit organisations and the barter-network: a decisive support and a theatricalization

More extensive examples of this barter-network are found in the non-profit organisations' support by providing volunteers. Moreover, they regularly stage this barter-network during community events. Every community gardener we met relies on the participation of volunteers for garden stewardship, like Patrick's community farm, created in 1998: "*During the summer we host volunteers on Wednesday, Thursday, Friday and Saturday, so we have four days a week when we have folks working with us, and it varies day to day, some days there are only 3 people working, but the next day it can be 35*" (Patrick; 22nd of February) or Michael's community garden in Hamtramck who developed a strategy to ensure their regular presence : "*Volunteers come from everywhere, but the majority comes from the neighbourhood, because the private parcels you've seen, you can access them only if you come often on volunteer days, you have to be involved*" (Michael; 21st of February).

Secondly, some non-profit organisations set up community events in which this barter-network is staged and emphasized: Keep Growing Detroit Seed & Plant pick up sessions for instance, pace the farming season in March, April, May and July with huge gatherings in which every program partner is invited to collect seeds and transplants for their gardens. As I participated to one of these gathering in March, I saw two hundred farmers coming to pick those. In order to

protect community members, no pictures were allowed, in the spirit of community protection mentioned earlier.

Before these meetings, a scenography is set up: volunteers are briefed by organizers and regular volunteers for logistical purposes. They wear yellow jackets to be easily identified in the crowd. A pathway is designed around the tables on which the different seeds are installed, groups or two or three volunteers are assigned to each table. Flyers and other information bulletins are presented in a table at the end of the pathway. When the doors open, community members are invited to follow this pathway and they generally engage in conversations with volunteers to discuss about the seeds proposed, ask for advices. They are invited to pick the seeds in the boxes by themselves, the volunteers stepping back and engaging conversations or answering to questions. These "*social bonding ceremonies* [cérémonies de creation du lien social]" (Duvoux; 2015) are key strategic moments for the non-profits because they picture non-profit members as a solidary community and replay the day-to-day exchanges of the barter network.

However, both of these exchange networks are not exempt from conflicts. When the terms of the exchange are not met, conflict can emerge and help us to unveil certain rules presiding them in these two networks.

2. "Ce que donner veut dire"[4]: conflicts and rules presiding exchanges

Conflicts related to grant rewarding and conflicts related to services rendered are not of the same nature, they do not unveil the same principles tying foundations to non-profit organisations, tying farmers between them or to non-profit. In the following section, we will present two examples of conflicts for each network. These stories show how the actors felt wronged because the alliance sealed by the exchange of goods, services or grant money was betrayed. On the one hand, grants reveal a principal-agent problem (Rees; 1985). Grants are indeed agreements in which a powerful principal (the foundation) delegates to an agent (a non-profit organisation) the use of a given resource for a given task. In this relationship, the grant application process represents a necessary step for neutralizing perverse effects (a). On the other hand, barter exchanges reveal how farmers *prohibit* monetary flow in the circuit, and how the irruption of monetary concerns pervades barter-network's nature (b).

a. Giving for 'making people act': grants and the power relationship they seal

Many non-profit workers have underlined why grants wouldn't be a reliable source of funding for urban agriculture projects for different reasons. Jerry Ann explained for instance how foundations' short-term strategic orientations would undermine a long-term project like her community farm: "*Foundation support is not given. Right now, foundations are not looking so much at food system work, their interest change*" (Jerry Ann; 6th of February). Ashley was more direct: "*The foundation has 100% of the power, the grantee 0%*" preventing the non-profit from the capacity to allocate its budget autonomously (Ashley; 11th of April). Others also emphasized that foundations' expectations are very high during the grant application process, like Michael: "*Do you know the rule of twelve? Every twelve grants maybe you might get one*" (Michael; 21st of February).

However, the whole foundations' capacity to make grantees act according to their agenda is best found when grants are the artefact of an underlying conflict. In the two stories narrated below, two huge non-profit organisation managers have witnessed such conflicts and have concluded similar observations: foundations' power is best expressed when they threaten not to transfer a promised grant.

i. The City's dilemma and the Eastern Market Corporation

Dan received me on a Saturday morning, a market day. We already met a month ago, when he was giving a lecture at the *Seed Wayne Seminar Series* about the Eastern Market history and future. Dan is the president of the Eastern Market Corporation (EMC), the 501c(3) non-profit

[4] M.A.U.S.S; 1993

in charge of the historic city market operations. Created in 2006, the EMC manages the business improvement district around Eastern Market area with a threefold mission statement: strengthening the Eastern Market district as the most inclusive, resilient and robust regional food hub in the United States, fortifying the food sector as a pillar of regional economic growth, improving access to healthy, green affordable and fair food choices in Detroit and throughout Southeast Michigan (EMC; 2018). The board of director is composed of 21 members, 7 appointed by the City of Detroit, 7 represent the market vendors and the last third represents organisation who give money for programs, such as foundations. Since 2012, two district residents also have a seat.

This joint organisation has been created at a time when the city wasn't able to support the market's financial burden. The market was indeed under the umbrella of the Recreation department. Local vendors engaged in discussions with the city to save the market from financial difficulties and one key recommendation coming out of them was the creation of this non-profit. However, the City, has Dan reported to me, did not validate the non-profit incorporation without a little nudge in 2006:

> "*In fact, it was a $2M gift from Kresge foundation to, at that time, the city of Detroit, that, if the city, it took the threat of losing that $2M for the city council to vote to support the creation of the non-profit to, basically to reward the non-profit. We operated a room agreement with the city of Detroit so that agreement, flattering, sitting on the table with no action, and then Kresge showed up and said: if you don't validate on Tuesday, we're taking the check back on Wednesday, that's was pushed it over the top"* (Dan; 23rd of February)

Albeit the idea of incorporating a not-for-profit to manage the City market wasn't the foundations' one, the threat of potentially losing a 2 million dollars 'gift' did trigger the actual process of formal incorporation and the beginning of the Eastern Market as it is today. This story illustrates how much financial gifts are never free: the foundation used its whole financial power to make sure it would be listened to by the city officials.

ii. Midtown's Tale of Two Cities

AnnMarie is the special project officer in Midtown Detroit Inc. This non-profit is in charge of the planning, community, real estate and economic development of the Woodward Corridor from Midtown Detroit to Renaissance Centre. It is a huge 501c(3) organisation carrying philanthropic dollars to urban projects on one of the most dynamic neighbourhood of the city. In 2009, she developed one of the firsts community gardens in central Detroit, the North Cass

Community Garden (NCCG) with a $150 000 budget from foundation grants. When I asked her if this kind of project would be doable again nowadays, she answered me this:

> "*No, absolutely not, different city, the foundations, their mission is very different, I don't think we could get funded. The reason why is that these foundations are redirecting their funds to the neighbourhood, Midtown is not viewed as a neighbourhood which is ridiculous. But it's viewed as the greater larger downtown and, we're so well-funded, the neighbourhood is already done, it doesn't need any more help. Different city, different type, different narrative out there. The narrative that everyone is buying into is the "Tale of Two Detroits", the Downtown and Midtown against the neighbourhoods. It's the biggest bullshit ever. Seriously*.
> (Why?) *Because! It's ridiculous to put the areas against each other […] They say this area is very gentrified, even though it's not true…*". *They try to push us more North and West* [the foundations]
> (So do foundations have a big say in your activities?). *Well you either get funded or you don't. You know, I mean if you don't have funding you have to adapt.*
> (But what kind of say do they have?) *They have a lot of say! I mean we have only ever done… First thought, yes, we have our own mission as an organisation that we have to be true to. Yes. At the same time if you don't have funding to be true to your mission you sometimes have to grow in these other areas to stay alive as an organisation."* (AnnMarie; 15th of March)

AnnMary's critique of the "*Tale of Two Detroits*" expresses a concern: her organisation, due to its location, is excluded from the narratives developed by the foundations. Plus, she remarks that not buying this narrative is also a factor of exclusion from the access of philanthropic dollars. She thus concludes that non-profit organisations have to sometimes twist their program frames in order "*to stay alive as an organisation*".

iii. Grant network: Foundation patronage and community feedbacks

Two main features of the grant-network can be inferred from our observation's relationships between foundations and non-profit organisations. Firstly, grants are the material form of a foundation' patronage, a principal-agent problem (Rees; 1985). Secondly, foundations set up mechanisms for collecting community feedbacks, through the mediation of non-profits. The principal-agent relationship is best illustrated when grant rewarding becomes an argument for influencing non-profit organisations' action, as mentioned in the conflict stories above.

Mediatized community feedbacks are visible in the grant application process mentioned earlier: foundations, by setting up criteria for grant applications, ensure the grants' channelling toward the communities and ask non-profit organisations to provide outcome reports when

rewarded. Outcomes reports consist of providing pictures, a narrative story telling of how grant money was allocated, as Jerry Ann explained to me: "*You do a report of your outcomes, so you have to submit a report of what you did, what the impact was, you do pictures, thinks like that.*" (Jerry Ann; 6th of February).

b. Giving against money: monetary prohibition in barter-network

Small-scale farm owners, community gardeners and non-profit organisations engaged in the barter-network also meet difficulties when the terms of their exchange are not commonly understood. Here also, exchanges are the material form of alliance-sealings engaging stable relationships between them. In the following stories, Greg the professional farmer (i) and myself (ii) both have dealt with tensions whose commonality resides in the irruption of money in the exchange equation. In fact, this irruption is often the object of the conflict because these farmers are subject to financial precarity: spending money then becomes not only an issue of disagreement, but a real threat for their situation.

The barter-network, by providing resources out of the monetary sphere, does not assign fixed prices to exchanges. It ensures the farmers capacity to pay off with commensurable goods or services. For instance, Britney was looking for someone to run a section of her farm and when we asked if this person should pay a rent, she answered: "*Like, if somebody wants to put bees here, bees are so beneficial to the farm that that's the payment. I don't want money from them because that would be so beneficial to me and my orchard*" (Britney; 3rd of April). In situations of conflicts, exchanges are revaluated in the light of monetary stances, and the barter-network terms of the exchange collapse.

i. Greg's dog

Greg is a white "*peasant, a proud peasant*" as he likes to present himself. Aged 50, he has met many students like me and got used to the exercise. He has been engaged in environmentalist activism and talks to me about the role of structural racism and white supremacy in the city's decay after only 2 minutes of interview. He bought a house in Corktown Detroit (Near West Side) in 2004 and gardened there from the beginning. After having been an English teacher in public schools for 15 years, he decided to leave his activity in 2008 due to the *No child left behind* reform of 2001, "*making teachers' life worse*". He now dedicates his time to his 1-acre family farm growing mainly salad mixes and has side-kick activities such as snow removal and AirBnb rent in his house. He nowadays earns between 30 to $45,000 a year, which is little less than his former activity ($48,000/year as a teacher). He loves the advantages of being a farmer, because he feels freed of the State oversight as he told me: "*farmers, it's a cash economy*" However, his situation remains sometimes financially uncertain as he warned me:

"*You gotta be careful you know? You can make one bad decision and it can cost you. I was helping out with this not-for-profit and they had fieldtrip on my farm, and they sent a kid into my house, without permission, and I wasn't in the house, I was picking up tour. And the kid got bitten by my dog, and the kid wasn't really that hurt. But it's a law in Michigan that if a dog bites someone, they could order to kill it. But they took me to court, the parents. And the not-for-profit, we have a saying here, they threw me under the bus, you know what I mean?*
They didn't support me at all, and I still will not talk to this non-profit now. Because, you don't send, in Detroit especially, a kid to someone's house without the owner. They didn't compensate me, I had to spend $10 000 in legal fees, just for the judge to say: "you know what you're right, you are not legally liable for anything" and that not-for-profit ended up paying $30 000 in damages for the family.
And even the mother of the kid was "hey, I'm really sorry", because Michigan law says my name has to be on that lawsuit because I'm the dog owner. So even the mother she was fine with me, she wasn't angry with me at all. But that year was rough, we don't have $10 000, we managed, we got through here. In a way that whole incident made us more careful." (Greg; January 30th)

This short incident has had big consequences for Greg, who had a hard time to financially recover from this unexpected expense of one fifth of his annual budget. The fact that a non-profit sent, without warning him, a kid on his property has broken the trust relationship between him and the organisation. Albeit the actual help they provided by sending regularly volunteers to his farm, he decided not to call them anymore to mobilise volunteer labour. The fact that the non-profit "*threw him under the bus"* by avoiding blame and not helping him financially has led the end of their relationship.

ii. Luis' email

Luis is a Latina woman who own a 2-acre farm in Mexican Town (Near West side) for 6 years. Her family comes from Mexico: they first settled in Chicago and then she moved to Detroit in 2003. She runs her business with the help of her 5 children, all boys between 17 and 6 years old. Farming is a full-time and year-round activity for her: she only has two weeks of holidays in February. I met her in a Burger King next to her house at that time, and her oldest son was present, working on a computer: "*he doesn't like me to talk to stranger people, he always says "they should mind their own business!" But I like to talk about it*" she explains to me.

One month and half after our meeting, I organised French Dinner fundraiser for Keep Growing Detroit. I sent an email to most of the professional farmers I've met to ask them some food donation: I wanted to label the event as 'local food only'. Farmer's participating by giving

food would be exempted of monetary donations during the fundraiser. I received few answers, two positives, and this email from Luis:

> *"Thank you for the information!*
> *We are smaller farmers and we need help too if you can do a fundraiser for us can be better and appreciated. KGD* [Keep Growing Detroit] *is a non-profit and they get money, we don't, and we need help too I need a tractor, and everyone needs something too"*

I understood my mistake quite easily but too late: I was asking food donations in order to raise money. Moreover, I was asking this to farmers who sometimes struggle to make a living from growing food. Noah, as mentioned earlier, accepted to give some food for the fundraiser, but he engaged me to help him for several hours at his farm as a volunteer. The monetary expectations of the fundraiser engaged Luis to recall that food donations are not free but must be inserted in a transaction.

iii. Barter network: informal exchanges and prohibition

Two features of the barter network can be inferred from our different observations of the relations between farmers, and between farmers and non-profit organisations. Firstly, farmers' exchanges rely on a non-monetary understanding of them. Secondly, these exchanges are staged and nurtured by non-profit organisations.

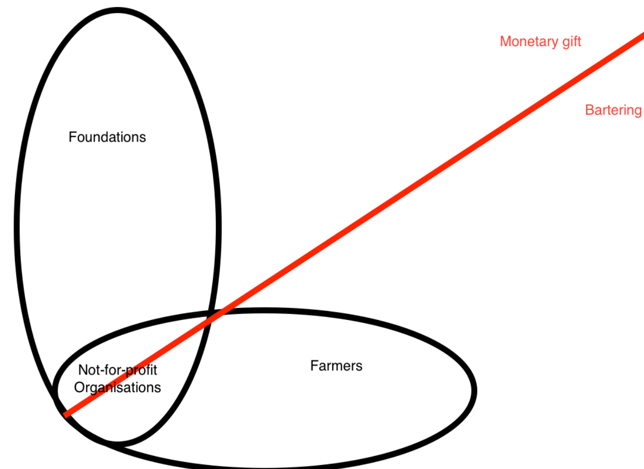
The non-monetary value of exchanges flats the value of the items traded and prevents conflicts from emerging. The irruption of a price, an assigned monetary value would either generate conflicts or displace the exchange out of the barter-network, as presented in the conflicts above. The network is also sustained by non-profit organisations who mimic barter-network exchanges during social bonding ceremonies and use this context to collect information about the community members.

The grant and barter networks' features presented above characterize relationships not based on market principles. However, they cannot be combined in one model of relationship defined negatively. They indeed rely on different understanding of what the act of giving means has we saw earlier. This has consequences for farmers, who directly or indirectly rely on these two systems to sustain themselves. In the following section, we will present how these two networks, far from being strictly separated, are connected by specific actors (non-profit organisations) and sometimes porous beyond those. This network interrelation has consequences for the farmers' capacity to sustain themselves.

3. Two interrelated networks, two visions of giving

The two exchange networks and some of their features have been presented in parallel so far. However, non-profit organisations are coexisting fairly in the two of them: as grantees in the grant-network, as barter-network members, as illustrated in the following figure:

Figure 4: Exchange networks' overlap *Source: the author*



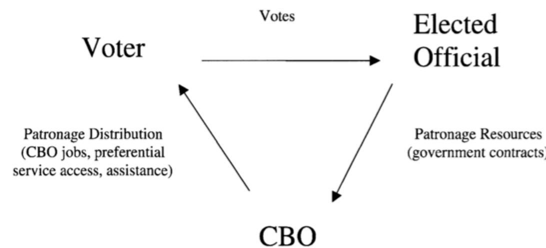
Individuals at the head of these organisations must play with these two identities, as grant seekers on one side and barter providers on the other, as Jerry Ann who runs a 15 years old community farm explained to me: "*executive director is meaningless to me, it's just a label we use to say we're community leader, in some organisations it comes with a certain degree of power, I don't accept that power because the position I hold is just to fill the forms but I see myself as a person who helps people, to influence people to do things*" (Jerry Ann; 6th of February).

Nonetheless Jerry Ann refuses the 'power' her function carries, preferring the term 'influence', non-profit organisations like hers benefit from powerful positions at the interstice of these networks (a). However, non-profit organisations' bridges between these two networks are not exclusive: a tenuous porosity exists between these networks without their mediation (b). These two propositions will help to assess whether farmers engaged in barter-networks are less able to access to the grant resource or not (c)

a. The non-profit organisations' interlocking position

In 2004, Nicole P. Marwell identified a triadic relationship between voters/residents, elected officials and community-based organisations (CBOs) in the welfare service provision system (Marwell; 2004). To her, the transformation of American welfare system has led to a devolution of state social service provision to private actors such as non-profit organisations. Unlike income transfers, based on individual statutory eligibility criteria, social service provision is supported by government spending and thus more dependent on political changes. In this context, she argues, CBOs enjoy a greater capacity of political influence because they have the ability to channel their clients' votes toward elected officials who then reward them with government resources (see figure below):

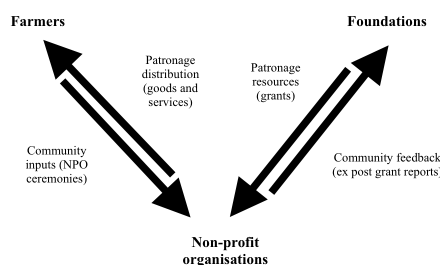
Figure 5: Triadic Exchanges *Source: Nicole P. Marwell; 2004, p278*



In 2019 Detroit however, we cannot presume this situation between non-profit organisations, farmers and foundations for evident reasons: foundations are not elected by constituent, they represent private, albeit philanthropic, interests and are not formally held accountable through voting procedures. However, Marwell's framework provides a good starting point for characterizing the triad between Detroit residents, non-profit organisations and foundations. This assumption relies on the fact that urban farming, when promoted by non-profit organisations, has is often presented as a social policy (Brinkley; 2013).

To characterize the urban farming triad, four relationships must be envisaged: the foundations' patronage of non-profits, the non-profits' community feedbacks, the non-profits' distribution of services and the community inputs to non-profits as presented in the figure below:

Figure 6: Detroit triadic exchanges *Source: the author*



Evidences of foundations' patronage have been mentioned earlier, in the form of a principal-agent relationship between foundations and non-profit organisations, as well as community feedbacks integrated in the grant application process. Similarly, community inputs and patronage distribution have been presented with the examples of social bonding ceremonies like KGD Seed & Plant distributions in which non-profit organisations distribute goods and hear about community members' feedbacks.

By comparison to Marwell's triadic configuration, our observations show that non-profit organisations control information by producing situations of community inputs and translation into feedbacks. Non-profit organisations have then an important role in translating financial grant resources into goods and services then available in the barter-network. This interface role is decisive for accessing foundations resources, but it is not the only one, as some professional farmers also have had the opportunity to access the grant network.

b. Evidences of network porosities beyond the non-profit mediation

By law, foundations are entitled to finance 501(c)(3) organisations as defined by the IRS code. For-profit activities such as professional farming ae thus prohibited from accessing foundation grants. However, foundations may, in few cases, finance for-profit activities with a strong social mission. In Detroit, a consortium of foundations has created a program rewarding small for-profit businesses called New Economy Initiative in 2007 (NEI; 2019). Through this program, a number of small-scale farmers have accessed grant money despite the prohibition. Such arrangements temperate the idea that the two networks are mutually exclusive beyond the non-profit organisations' mediation. In other words, bridges between small-scale farmers and foundations are more complex than the hierarchical grant flow presented earlier.

In the following network visualisation (figure 7 annex 1), we can observe our four actors who witnessed conflicts in the grant and barter networks: The Eastern Market Corporation, Midtown Detroit Inc, Luis' Dulce Diamante garden and Greg's Brother Nature Produce farm.

Such network depicts indeed how non-profit organisations concentrate the flow of grants. Their size is proportional to their degree, and their degree equals the number of grant they received from the foundations present in the network visualisation between 2010 and 2015: Eastern Market received 16 grants, Midtown Detroit Inc. 7 grants, the NEI 10, and the farmers one each. Albeit some mechanisms at the margin of the grant-network, there are little evidences of direct grant circulation from the foundations to the farmers, and if they are, they remain mediatized by *ad-hoc* programs.

Conclusion and Transition: Are farmers engaged in bartering-network struggling for access philanthropic grants?

In the Section above, we identified two pools of resources: the grant-network and the barter-network. These two networks differentiate themselves by the type of item exchanged. On the one hand, the grant-network organizes the flow of monetary grants whereas the barter-network depicts good and services circulation. These two networks rely on different sets of actors, with the specificity of non-profit organizations in which these two networks overlap. Beyond the non-profit organizations, there are few evidences of porosities. This is due to legal limitations, as for the commercial farmers, however this explanation does not explain fully why the latter are sometimes reluctant to be financed. Grant-network and barter-network rules however provide a good understanding of these. Commercial farmers "*don't beg*" (Greg; 30th of January) to avoid the constraining principal agent relationship and simultaneously access resources with less constraining rules in the barter-network. These observations engage us to think that indeed, urban farmers engaged in bartering are less inclined to invest time and energy in seeking grant funding. We do acknowledge that legal restrictions exist, but foundations found opportunities to avoid them, as the NEIdeas program illustrates.

Moreover, foundations do finance urban farms: volume of grants allocated for farming-related activities in Detroit (around $60 million between 2010 and 2015) engage us to reconsider this proposition and question why these farmers cannot access these resources to finance their activity. In the second section, we will present how the foundations, the non-profit and the different types of farmer assign a value to urban farming, and how their different understanding of urban farming has led to the unequal access to financial resources in Detroit.

Section 2: Contentious definitions of city decline and urban farming

"*The city needs to establish a value for all of that work that the people have put into the land*" (Katheryn; 4th of March)

Between 2009 and 2013, the bank entrepreneur John Hantz engaged in negotiations with the municipality to acquire 140 acres of land, then 180 (1,931 parcels, 0,5% of the Detroit's properties [Loveland; 2019]) in Near East side Detroit in order to create "the world's largest urban farm" ever (Michigan Live; 2013), Hantz Woodland. "Creating truly liveable neighbourhoods, one square mile at the time": the project's catchphrase presents the tree farm initiative as an opportunity for redeveloping a neighbourhood hardly hit by years of decay, the farm being the first building block of this challenge.

Mike Score, the Hantz Woodland's CEO, explained to us how this project was financed: "*Our parent company is Hantz financial services it's an integrated financial company* […] *that company has been very profitable for the last 25 years, it has generated enough income to not only reward the investors but also to fund Hantz farms, so we have no debt we're all funded by internal funds"* In the meantime, "*John Hantz started a family foundation* [Hantz Foundation] *and he is partner with donors and other businesses to build an endowment, and that foundation is focusing in improving the schools in the neighbourhood*." He also explained that this project was a tool for improving urban development: "*We use our trees as a magnet for development.* […] *Real estate, that's all agriculture is"*. (Mike; 22nd of January). Is Hantz Woodland an urban farm? Few interviewees answered positively. Most of them actually criticized the initiative, pointing out how this project goes far beyond the question of growing trees and redeveloping a neighbourhood, as a famous *black food just justice* activist explained to me:

> *"You've talked to my friend Mike Score, and although he is my friend, and I have great respect for him, I have significant differences with the project he works for. In fact, I was one of the most vocal critics of that project. That project represents a disturbing trend […] the disturbing trend is that the people who have that kind of wealth to implement those large purchases of multiple parcels, are white men. And so, it continues the historical trend of concentrating landownership in the hand of wealthy white men which is really the continuation and legacy of imperialism and colonialism.* (Malik; 4th of April)

Radically different meanings of urban farming fairly coexist in 2019 Detroit. In this section, we will present the processes by which these meanings have emerged. Rather than continuously contesting each other, we argue with Nathan McClintock that "urban agriculture, in its many

forms, is not radical *or* neoliberal but may exemplify *both* forms of actually existing neoliberalism *and* simultaneous radical counter-movement arising in dialectical tension."

In the first subsection, we will present two groups of actors who organized themselves politically in order to promote solutions for fighting against urban blight. The elite coalition composed of corporate actors, officials and foundations see in urban redevelopment the key for Detroit Revival. On the other hand, grassroots activist opposed a vision of the city based on an ideal of *food justice* (1). In a second subsection, we will present two events occurring between 2010 and 2013, events by which each group stabilized its own definition of urban farming: the release of the *Detroit Future City Strategic Framework* and the enactment of the Urban Agriculture Ordinance (2).

1. The elites' and the farmers' coalition: fighting decline with a vision for the city

The subsection below introduces a number of actors of Detroit's recent history. Detroit has suffered from an 'urban crisis' (Moynihan; 1966) for more than half a century: the city's economic, demographic, fiscal conditions indicators shrunk dramatically from 1950 onward. The population has fallen from roughly 1.8 million inhabitants in 1950 to 677,000 in 2015. In 2012, 36% of the residents lived below the poverty line of $11,770 annual income. In 2017, The city's crime rate is of 20.55 per 1000 residents in 2017, while the national median is 4 (NS; 2018). However, forms of the urban crisis diverge from one actors' perception to another: urban decline for instance refers to eco-demographic shrinkage, including ideas of depopulation and deindustrialization for instance (Norton; 1970) while urban decay would rather refer to the physical degradation of the urban environment and the poor living condition they engender (Skifter-Andersen; 2003) Detroit's material city suffered from blight, house demolitions and the multiplication of vacant parcels, the re-emergence of nature (Millington; 2013) captured by professional photographers like Yves Marchand and Romain Meffre (Marchand and Meffre; 2010).

In Detroit, both dimensions of the urban crisis expressed themselves in outstanding proportions. Residents, community leaders, non-profit organisations, local officials, foundations leaders, corporate actors have witnessed both of them for years without being able to reverse the trend. They, however, did not emphasized similar dimensions of the urban crisis when attempting to do it. On the one hand, an elite coalition composed of corporate, municipal and foundation representatives attempted to solve decline by developing land (a). On the other hand, residents and activists identified an 'urban crisis of living' integrating race, class and environmental inequalities in their daily life and fought against food desert propagation (b).

a. The elites' coalition: the progressive integration of the non-profit sector in decision-making spheres

It is worth noticing how the urban elite worked together to put in place large-scale real estate projects in Detroit. Actors of the corporate, philanthropic, municipal sector have coordinated themselves to put in place such giant projects, understanding land development as the key solution to prevent urban decline. Iit is also worth noticing how foundations play a specific role in this coalition. Southern Michigan foundations leaders, rather than merely banding the gaping wounds of American urban capitalism in a shrinking city, have been, are or have become active entrepreneurs of Detroit's perpetual revival for a long time.

Legacies of their intervention can be traced from the Renaissance Center (the '*RenCen*', the '*city within a city'*), a seven-skyscrapers complex constructed between 1973 and 1977. Initiated by Ford and a non-profit development organization called Detroit Renaissance, the operation was qualified as "the world's largest private development with an anticipated 1971 cost of $500 million" (WSM; 2013). Presented as an opportunity to revitalize Detroit economy (Gallagher; 2011), the 'RenCen' has been purchased by General Motor (GM) in 1996 to establish their headquarters.

Evidences of the philanthropic sector intervention in urban projects is not only obvious in Detroit, it is a specific characteristic of the city's development we must not overlook: even recent core development projects such as the reorganization of Eastern Market (2006-2007), the redevelopment of Midtown (2000-2010), the redevelopment of the Riverfront area (2001-2012) have often involved the active participation of the non-profit sector and flows of philanthropic dollars (Wooddell; 2014). However, a question remains: are these foundations and non-profits the armed wings of corporate interests and public decisionmakers or do they play a specific role in framing and implementing these urban projects?

i. Analyzing the elites as coalitions in an urban regime

Seminal analyses of Clarence Stone on social production model of power ('power *to'* rather than 'power *over'*, 1980) and their extension to urban regimes (Stone; 1989, Stone; 1993), coupled to Harvey Molotch's growth machines (Molotch; 1976, Logan and Molotch; 1987) have provided a robust analysis framework for American urban politics, replicated in dozens of empirical studies in US cities during the following decade (see Mossberger and Stoker; 2001 for a review).

This framework posits two decisive assumptions. Firstly, coalition-building between urban elites goes beyond formal-institutional boundaries and is characterized by internal hierarchies based on individuals capacity to serve the coalition, as Clarence Stone states :

“Instead of the power to govern being something that can be captured by an electoral victory, it is something created by bringing cooperating actors together, not as equal claimants, but often as unequal contributors to a shared set of purposes.” (Stone; 1993). Secondly, these coalitions are based on the agreement that economic growth is the key factor of urban development as Harvey Molotch states: “The desire for [economic] growth provides the key operative motivation toward consensus for members of politically mobilised local elites, however split they might be on other issues, and that a common interest in growth is the overriding commonality among important people in a given locale – at least insofar as they have any important local goals at all.” (Molotch; 1976)

Based on these hypotheses, social scientists attempted to identify Detroit’s urban regime during the 1990’s (McIntyre Hall and Hall; 1993, DiGaetano and Klemanski; 1993, Orr and Stoker; 1994, Kilburn; 2004). They generally agreed on the existence of coalitions during the Coleman Young era (1974-1994) in which the African-American mayor was the keystone, due to his solid electoral support and his special relationship with the President James E. Carter (1977-1981) and Michigan governor William G. Milliken (1969-1983).

They also underlined the overwhelming importance of automobile industry players in these coalitions: McIntyre Hall and Hall (1993) demonstrated for instance how General Motor traded the creation of a 6,000 jobs, 1 squared-mile auto plant - the Central Industrial Park Project (CIPP) - with the expropriation of “1,400 homes, 144 businesses and sixteen churches in Poletown” in 1980, while the City redirected $200 million Community Development Block Grant (CDBG) dollars for land acquisition, relocation, demolition and site improvement for the CIPP. As the authors emphasize, even future CDBG funds also served as guarantees for loans and outright expenditures contracted by the city. In other words, the City of Detroit siphoned off neighbourhood redevelopment funds for decades to ensure GM’s resettlement in the City. Similarly, Orr and Stoker describe the role of Henry Ford II in the funding of the Renaissance Center development between 1973 and 1977: “Ford coordinated the fund-raising for the project, using personal contacts and networks to put together what was at the time the largest private investment group ever assembled in the United States for an urban real estate project.” (Orr and Stoker; 1994).

However, they do not find evidences of the persistence of such mayor-automobile industry coalition after the mid-1980’s. They claim that other corporate sectors such as banks and utilities have taken a more prominent role in the coalition, promoting a “human capital regime” from 1987 onwards. By human-capital regime they mean the development of a service-based economy in the City rather than the maintenance of the automobile industry. These new corporate actors found room to voice their agenda because traditional automobile interests in

the Detroit area flowed back: "key downtown interests and other standard elements of a growth machine have been conspicuously absent in Detroit" (*ibid,* p57) paving the way for a new agenda with new actors, despite the remaining influence of the automobile industry. In this case, we can identify three main actors involved in the new coalition: The mayor, the Big Three, the emerging service-based industries.

ii. The integration of non-profit actors in the coalition

Among the new actors brought to the civic arena, not-for-profit and foundations emerged as potentially important actors. The Detroit Economic Development Corporation (DEDC) for instance, was established by Coleman Young in 1978 and helped implementing projects such as the GM Poletown plant (CIPP [McIntyre Hall and Hall; 1993]). On the other hand, the Detroit Renaissance, founded in 1970 in which large corporation representatives had a seat, was created in order to incentivize the economic transformation of Detroit. However, Orr and Stoker do not recognize them as autonomous entities:

> "Boldly stated, it can be argued that New Detroit and the Detroit Economic Development Corporation are seen as the structures for the articulation of black elite preferences and, in the latter case particularly, the mayor. Detroit Renaissance and the chamber represent the white corporate community, with the former dominated by the Big Three auto companies and others of the old corporate 'nobility' and the latter with a regional perspective and influenced by the banks, utilities, and rising service-based industries" (Orr and Stoker; 1994, p64).

Seminal works on urban regimes like Stone's analysis of Atlanta also emphasized the role of non-profit actors (Stone; 1989). He explains for instance how the Central Atlanta Progress (CAP) incorporated in 1966, formerly the Central Atlanta Association, played a role of a platform in which elites from different background can gather in one institutional entity in these terms: "Within CAP, the elite can discuss issues, formulate plans, and monitor policy performance with the assistance of a staff employed to promote their particular shared interests*"* (Stone; 1989, p169). Non-profit organisations are thus instrumental for the coalition for two reasons: they are the elites' platform for exchanging information and their spokesperson in the public debate.

In Detroit, this argument has been tested by Michelle Wooddell for the 2000-2010 period (Wooddell; 2014) in which she questions whether the involvement of an active non-profit organization in an economic development policy initiative lead to more successful policy outcomes or not in Detroit. She argues that "actors from the non-profit sector can participate significantly in areas of urban economic development, whether they are leading the project or

supporting efforts of an ongoing policy alliance". Based on six case studies of large-scale urban projects implemented in the city between 2000 and 2010, her enquiry demonstrates that non-profit staffs have played a key role in determining the goals, scopes and the implementation framework of these projects. On the Eastern Market case and the role of the EMC chief of staff Mr Carmody she reports that "his role in moving the EMC forward during the time period of study appears critical to its success and most of my interviewees had difficulty separating Carmody's actions from those of the organisation he governs." (Wooddell; 2014, p108).

Indeed, corporate, philanthropic and municipal actors have coordinated themselves in order to develop urban land. The CIPP, the Renaissance Center, Eastern Market area, the Riverfront are all megaprojects reflecting how the elites' coalition defined land redevelopment as the key solution to prevent urban decline. On the other hand, groups of residents, farmers and activists promoted alternative solutions to fight against blight

b. The farmers' coalition: *food justice movements* and the rise of urban farming in Detroit

Consequences of economic and demographic changes have marked profoundly Detroit landscape. House demolitions, reduction of public general services (grass cutting, tree trimming), *scrappers*[5] thefts, drug houses are evidences of material deterioration of urban infrastructure.

Degradation of the urban landscape and observations of objective inequalities have led some residents and farmers to identify what Flaminia Paddeu calls 'an urban crisis of living' [une crise urbaine de l'habiter] (Paddeu; 2015): a perception of how race, class and environmental inequalities interplay shapes material conditions of living in Detroit's neighbourhoods (i). As an answer to these issues, a certain number of activists and residents organised themselves around gardening and farming activities, promoting them as factors of neighbourhood improvement (ii). Primarily marginal, the movement became important in the 2000's and structured itself around a number of non-profits and a para-municipal food council for advocacy purposes(ii).

i. Perceptions of an 'urban crisis of living'

Detroit's urban 'crisis of living' covers three dimensions: "material disorders, environmental nuisances and a lower accessibility to environmental amenities and alimentary resources[6]"

[5] Scrappers are individual stealing illegally empty house materials (windows, cables…)

[6] "*des désordres matériels, au poids des nuisances et pollutions environnementales et à une faible accessibilité aux ressources environnementales et alimentaires*"

(Paddeu; 2015, p 36). Such definition integrates subjective dimensions experienced by the residents and has been presented in various ethnographies of deprived neighbourhoods in Detroit (Draus *et al.*; 2014, Safransky; 2014, Paddeu; 2015).

One specific issue of Detroit, however, is the lack of access to regular grocery and convenient stores for buying food: in 2011, "over half a million Detroit residents live in areas that have an imbalance of healthy food options. They are statistically more likely to suffer or die prematurely from a diet-related disease, holding other key factors constant*"* writes Mari Gallagher for instance (Gallagher; 2011). Entire neighbourhoods are categorized as 'food deserts' (Cummins and Macintyre; 2002), areas in which low-income residents have limited access to affordable and nutritious food. For Detroiters, this means that not only they have a difficult access to retail food stores, but also, they must rely on 'fringe retailers' (Gallagher; 2011) such as gas stations, liquor stores or dollar stores to buy their food, these places usually selling bad quality food. As one of my interviewees recalled me: "*In Detroit, the specificity is the lack of food shops. For five years they come again but it wasn't the case ten years ago. Liquor stores and gas stations were selling food, it was more convenient, but it was processed food and not healthy food. It created health issues. Some people call this area a food desert*" (Jerry Ann; 6th of February).

ii. Early developments of the urban farming movement in Detroit

Evidences of urban farming are attested in Detroit since the 19th century, when in 1893 the mayor Hazen S. Pingree opened the city's empty lots to garden farming, called the "Potato Patch Plan". During the 20th century and the great migrations, many African-American from Southern States moved to Detroit to fuel the auto-industry labour demand. They often brought with them their gardening practices as Jerry Ann told me:

> *"We're from Tennessee and Tennessee is South! Both of my grandfathers were sharecropper, my father was an engineer, so we moved North to get a job. But in the South, people grew their own food, they had tree apples, peaches. We never have been under food assistance, or if we had the family didn't talk about it: People shared, we never think about not having food"* (Jerry Ann; 6th of February).

In the 1992, activist Grace Lee Boggs who was engaged for the promotion of sustainable jobs for fighting city decline, created Detroit Summer, a multicultural movement promoting the importance of self-reliance for communities. The program gathered youth and elder peoples, called the "Gardening Angels" who promoted urban gardening as a way for communities to

work together and improve their physical environment by beautifying neighbourhoods with murals and gardens (Paddeu; 2015, Pothukuchi; 2017, White; 2011). In 1998, the Capuchin Soup Kitchen, a church in charge of a soup pantry, opened Earthwork Farm, the first and only USDA-certified organic farm in Detroit. Urban gardens and farms spread in the city and a first organisation, the Detroit Agricultural Network gathering 700 community gardens at the beginning of the 2000's.

The spread of community gardens throughout the city favoured the development of organisations who structured the initiatives during the 2000-2010 period.

iii. Structuration and political claims

A certain number of grassroot organisations and community gardens were created during the decade such as the Detroit Black Community Food Security Network (2006), Seed Wayne and Oakland Avenue Farm (2008), Georgia Street Community Collective (2011). A number of commercial farms also opened in this period like Brother Nature Produce (2008) and Food Field (2011).

Many of the individual behind these organisations define themselves as *food justice* activists: food justice movements are grassroot initiatives emerging in response to food insecurity and critiquing "structural barriers communities of colour face to accessing local and organic food" (Alkon and Agyeman; 2011). An extensive literature reports how these movements have emerged (Allen; 2008, Gottlieb; 2009, Crosley; 2014), assessing their alternative food system initiatives, (Goodman *et al*; 2002, Kremen *et al.*; 2012, Galt *et al.*; 2014) and pointing out the inequalities of regular food systems (Harrison; 2008, Lawrence *et al.*; 2013). Interestingly, this literature has nurtured the social movement to the point reciprocal transfers occurred, activists or non-profit workers writing hand-in-hand scientific articles to shed light to the benefits of urban agriculture: a 2019 article co-authored by A. Beaver from Michigan State University and A. Atkinson, codirector of Keep Growing Detroit evaluated the positive effects of gardening in Detroit on the participants' diet and food values (Beaver *et al.;* 2019).

The actors of the spread of urban gardens, supported by grassroot movements and scholars advocated firmly for an institutional reconnaissance and concrete policy related to food access before the city. In 2008, the Detroit Food Policy Council (DFPC) incorporated as a non-profit organisation providing advices to the mayor's office: members of the local university Wayne State Dr Pothukuchi, of the Detroit Black Community Food Security Network and other non-profit workers had a seat in this organisation.

In this first subsection, we briefly descripted the two groups in presence in Detroit: On the one hand, an elite coalition made of corporate, municipal and philanthropic actors who found in large non-profits a tool to implement land development projects. On the other hand, grassroot movements and non-profit organisations caught-up on a trend followed by racialized residents in deprived neighbourhoods and advocated for an institutional recognition.

The following section will however concentrate on how these two groups eventually defined the term ‘urban agriculture’ through parallel processes of collective writing. First, the elite coalition impulse the creation of a strategic vision plan for the city, the Detroit Future City Strategic Framework. Second, grassroots movements, with the help of a key actor in a city, developed quasi-zoning status for urban agriculture throughout the Urban Agriculture Ordinance writing process.

2. *Detroit Future city Framework* and *Urban Agriculture Ordinance* (2010-2013): contentious definitions in-the-making

When Mariana Valverde (2011) distorts James Scott's famous title "Seeing like a State" (1998), she doesn't claim that the State and the cities have the same gaze. James C. Scott has criticized the 'high-modernist ideology', the State's strong belief that "the rational design of social order commensurate with the scientific understanding of natural laws*"* (Scott; 1998). According to Scott, from this belief emerged a new way of governing space based on objective rules, derived from the field of natural sciences. He also claims that these spatial techniques of government helped to constitute modern disciplinary powers and knowledges.

Valverde, however, argues that when cities attempt to govern conflicts related to the use of space with objective rules, "these rules undermine themselves in a dialectical process that results in the return of older notions of offensiveness" (Valverde; 2011). It is not a misinterpretation to read 'older notions of offensiveness' as synonym of nuisance laws. Indeed, she draws on the constitution of modern North-American zoning laws to demonstrate how technologies of governance can be separated from rationalities of governance and how these different rationalities may shape government tool's constitution and maintenance.

In other words, she claims, "'Seeing like a State techniques' [objective, scientific based rules] coexist fairly easily with much older, more embodied and relational ways of seeing urban problems". She goes further than just demonstrating their coexistence, she argues that modern city tools of governance embody the older nuisance-logic as she states:

> "Seeing nuisance as proto-zoning is certainly accurate in many respects, but it prevents the observers from being attentive to the ways in which the failures and contradictions of modernist governing technologies have the effect of reviving older, embodied logics of nuisances and offensiveness*"* (Valverde; 2011, p308).

We would like to take Mariana Valverde's warning seriously when analysing two documents. On many respects, they are hardly comparable because the *Detroit Future City Strategic Framework* (DFCSF, the strategic plan) and the *Urban Agriculture Ordinance* (UAO, the ordinance) are of different nature. The DFCSF is a mayor' initiative to gather a wide array of actors (corporate, philanthropic, municipal, communities) in order to produce a strategic development city plan on different time scales (5, 10, 20 and 50 years), with no legal binding. On the other hand, the UAO is a zoning amendment, initiated by a member of the City commission, Katheryn L. Underwood, aiming at making urban agriculture operations legal in Detroit. The DFCSF is thus a *vision* plan, determining desirable goals for the city, whereas the

UAO is a regulation legal document, aiming at arbitrating litigations between farmers, the residents and the municipality.

Valverde's insights strikingly meet echoes with these two documents because, as we will demonstrate, they exacerbate antagonistic conceptions of the city, conceptions derived from instruments by which the city is interpreted. In other words, the Strategic plan has been conceived thanks to scientific tools of government, 'seeing like a state' techniques, whereas the ordinance *by construction* relies on nuisance logics. Both of these documents carry a definition of urban farming and urban agriculture that infused from 2013 onward. In this subsection, we will first present the writing process of the *Detroit Future City Strategic Framework* (a) and then the writing process of the ordinance (b). These two documents are the outcomes of two collective writing processes occurring between 2010 and 2013, year of the City Bankruptcy. Chronologically, the DFCSF was published in late December 2012, the UAO voted in December 2012 and implemented since March 2013 and the City filed Chapter 9 bankruptcy in July 2013.

a. The *Detroit Future City Framework*

Looking at the rationale behind the *Detroit Future City Strategic Framework* (DFCSC) is instructive for several reasons. Firstly, this case has been studied in different scientific articles (Anderson; 2011, Safransky; 2014, Akers; 2015, Clement and Kanai; 2015, Schindler; 2016) providing a valuable basis to understand on which concept the DFCSC steering committee based the framework: the city's "*rightsizing"* necessity (i). Secondly, steering committee produced key documents illustrating how they interpreted the city as a sum of market, in a process of 'simplification' (Scott; 1998) (ii). Finally, we argue that the vision plan promoted a vision of urban agriculture as a 'landmark': urban farming is praised as a tool for further development in its capacity to generate social and environmental benefits, at the expense of its economic production dimension.

i. The Strategic Plan inception

In mid-2010, Detroit's former basketball player and recently elected mayor David Bing has to deal with a massive economic, demographic and political crisis. The shrinking forces at stake were multiplicated by the subprime crisis, the city loosing almost a quarter of its population in a decade, with 237,530 inhabitants leaving the city between 2000 and 2010 (US census; 2010). Unemployment rates rose from 9.2% to 17.2% between June 2008 and 2009 (BLS; 2019). Bing himself was elected after the resignation of former mayor Kame Kilpatrick convicted of perjury and obstruction to justice in corruption scandals.

The eco-demographic challenges faced by Bing administration has reinforced a city in financial distress. Between 2008 and 2013, the Municipal revenue decreased by 19.73%. Between 2011 and 2013 only it decreased by 14.79%. (Tuberville; 2013, detailed figures available in table 1 annex 2). The other major problem face by the City was legacy expenses (i.e. principal and interest bond payments, pensions and healthcare benefits for employees) which increased by $62.8M between 2008 and 2013. As a consequence of these financial difficulties, the city had to cut operating expenses by $419.1M on the same period (Tuberville; 2013).

The mayor's political strategy to allocate the remaining resources at the time has been called 'rightsizing'. Differing from traditional cutback management methods (Anderson; 2011), rightsizing policies in Detroit have "have moved from comprehensive re-planning of government services, to process improvement tactics for existing responsibilities, to seeking land use reforms" (*ibid;* p230). In other words, rightsizing policies aim at adjusting the mix of services available to citizens by clarifying the role and responsibilities of the different city departments and reallocate the service provision spatially according to the urban context. The most important question raised for the leaders is thus the following: which neighbourhoods are going to benefit this restructuration of public provision? Based on which criteria?

Requiring political support from both his constituents and the corporate sector to implement 'rightsizing' policies. Bing initiated the *Detroit Work Project*, an assemblage of public agencies and private actors working together in a 14-members steering committee he appointed himself. In the so-called *Detroit Works Advisory Task Force*, four members come from the local corporate, non-profit and governmental sectors, and one from religious and educational communities. Other seats are occupied by city department members, international consultants and representatives of famous architecture and design firms like Toni Griffin (Clement and Kanai; 2015).

The project was mainly financed by a Kresge foundation grant of $150 million from the beginning. Other organisations financed the project: Ford Motor Co., Hudson Webber Foundation, The John S. and James L. Knight Foundation, the Fred A. and Barbara M. Erb Family foundation and the Community Foundation for South East Michigan (Michigan Live; 2013). The steering committee's goal was to produce a strategic framework, the *Detroit Future City Framework,* a 50-year development plan accessible to different sectors from companies to civil society. In September 2010, the project kicked off with five large meetings gathering 5,000 people "which proved to be logistically challenging and inhibited the interactive dialogue and community learning that could take place" (Griffin *et al.*; 2014, p716).

The project's lack of community engagement capacity and the residents' frustrations it generated engaged the mayor and project leaders to reframe the *Detroit work project*. The initiative was split in two distinct tracks, the *Short-Term Actions* and the *Long-Term Planning* (DCDC; 2012). The first track involved residents of three "*demonstration areas*", local non-profits and the mayor's office in the improvement of city services: distribution of Home Fund subsidies, grass cutting, lighting, code enforcement, blight elimination, improvements to the city infrastructure and beautification (DWP; 2012). The second track was led by the steering committee with the aim to write the *Detroit Future City Framework*. This split was indeed organisational: on the one hand, residents, small non-profits and the city would work on emergency issues allowing "connexions with people 163,000 times and over 30,000 conversation" (Lacy; 2013). On the other hand, representatives of the corporate sector, foundations and the city would develop a long-term strategy with community inputs.

This split had however important consequences for the development and writing of the *Detroit Future City Framework*. Only a few numbers of non-profit organisations were invited to participate to the framework formulation while others were, at most, considered as respondents for the *Short-Term Action* plan and, at least, invited to serve as relays for citizens' voices as a *Detroit Works* consultant Toni Griffin explained for local media: "We've always felt that the goal of the work should not be top-down process exclusively, nor grassroots process exclusively, but should try to find a way to get those two ends work in the middle. It's very important for us to have meaningful exchanges and work sessions with grassroots organisations that are doing work on the ground" (Michigan Live; 2012).

The elites' coalition, composed of representatives from the Big Three, the emerging service-based industries, the mayor's office and the foundations were thus in charge of *Detroit Future City Framework* writing through the steering committee. The committee based its insights from technical knowledges. Among them, the import of the market-value analysis has been decisive.

ii. *The Market Value Analysis: the city as a sum of land markets*

The Market value analysis has been developed for the first time by the The Reinvestment Fund (TRF) in 2001 in Philadelphia. The MVA is, boldly stated, "a data-based tool to inform community revitalisation and manage neighbourhood change: it identifies different types of markets, and those places where strategic intervention can stimulate private market activity or capitalize on larger tends*"* (TRF; 2019). MVA is thus a tool aggregating various indicators as an input, providing market opportunity zones as an output. Many MVA tests have had different objectives depending on the cities: in Baltimore, Philadelphia and St Louis, they were used for comprehensive planning. In Milwaukee, it was used to coordinate local government and

philanthropic actions for instance (Goldstein; 2001). In Detroit, the Kresge foundation commissioned the TRF for developing an MVA in 2011 with the goal of reconfiguring "the boundaries of areas targeted for millions of dollars in federal neighbourhood stabilization funds [Hardest Hit Funds], guiding infrastructure investment and rerouting federal grants. It also serves as a baseline for land use and development proposals in the 50-year planning framework funded by the Kresge foundation [the DFC]." (Akers; 2015 p1848).

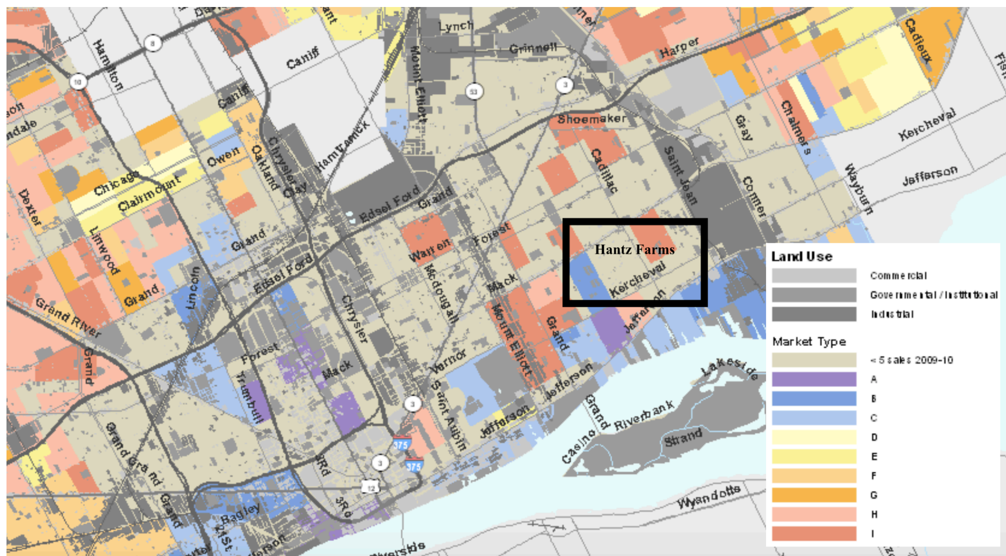
If we look at the content of the MVA, we understand that most of its indicators are based on land property assessments such as property median sales prices, percent of low-income housing units (full list available in table 2 annex 2). A synthetic indicator then builds market blocks groups from A to I, then categorized from "Regional choice/ High Value" to "Distress" markets. (MVA; 2011). These categories have been used to determine both the short-term action plan 'demonstrations zones' and the opportunity zones for the long-term strategic plan. Sarah Safransky (2014) argues that in Detroit "*the value of the MVA to the state lies in its abstraction and simplification (Scott; 1998)"* (p244). In other words, the reduction of entire neighbourhoods to land market categories in the eyes of the municipality has produced a partial understanding the city's distress.

Consequences of neighbourhoods' reduction to land markets are of decisive importance in Detroit. Categories of 'high value' and 'distress' markets have indeed channelled Federal Funds for blight demolitions [Hardest Hit Funds] (Akers; 2015), but also been used to determine which neighbourhoods would be prone to public service delivery in the mayor's 'rightsizing' policy, and even served as benchmark for investors, like Hantz Woodland. In her 2014 article, Sarah Safransky wrote for instance:

> The Bing administration's use of the MVA to make decisions was part of a broader effort to depoliticize the planning process by making it data-driven. In a November 2012 interview, a city planner told me*, "As resources get limited and we look for greater impact, everyone is moving to a targeted strategy. You can't have targeting be a political decision"* She showed me a document of service delivery with the MVA zones*: "It has to be driven by empirical data. That is our reality here"* (Safransky; 2014).

Mike, CEO of Hantz Woodland, agrees with the fact that the farm' location has been chosen at the intersection of the stable neighbourhood of Indian Village (in blue) and a distressed market (in red): " *The ultimate purpose of the trees is to show that there's a place here that has been overlooked*" (Mike; 22nd of January). The following figure presents the farm location in the MVA map.

Figure 1: Hantz Farm location on the MVA map *Source: Detroit MVA; 2011*



"It is widely admitted that neoliberalism is intensified in times of crisis" explains Seth Schindler (2016) when analyzing Detroit's post-bankruptcy. The rationale is that a certain number of free-market policies are enacted as supposed emergency solutions to crises. (Klein; 2008, Peck; 2012). Albeit the definition of neoliberalism remains an open question (Ganti; 2014), a number of studies of food systems refer to neoliberalism as what David Harvey called:

> "A theory of political economic practices that proposes that human well-being can be best advanced by liberating individual entrepreneurial freedoms and skills within an institutional framework characterized by strong private property rights, free market and free trade. The role of the state is to create and preserve an institutional framework appropriate for such practices" (Harvey; 2005, p71).

The deployment of property rights, free market and free trade institutions as the goal of public policy-making have become *the* explaining factor for understanding economic restructuring in this literature (Schindler; 2016). In the urban context, researchers have interpreted neoliberal policy regimes (Newman and Ashton; 2004) and austerity urbanism (Peck, 2012 Tonkiss; 2013), as forms of this neoliberal restructuration in cities in distress. They argue that policies of urban renewal or urban revitalization are indeed based on seeking measurable economic growth, generating gentrification and exclusion processes. In Detroit however, years of shrinkage policies and the city's financial collapse of 2013 questioned the mere possibility of the return of economic growth (Schindler; 2016; Béal *et al.*; 2016). Instead, Detroit has been perceived as an 'emerging market city' (Akers; 2015) composed of a series of micro-markets, durably marking the approach of policing the city, even with a new mayor elected in 2014. Mike Duggan has indeed claimed that the DFCSF would get a legal binding after he was

elected, and even if it didn't happen due to administration's pushbacks, the legal city plan he developed remains a "*piecemeal approach*" as a lot of interviewee confirmed (Gregory; 4th of February, Katheryn; 4th of March, John; 18th of February). In this conception of the city, the definition of urban farming becomes narrowed to a 'landmark' approach, or a 'long-term temporary use of land'.

iii. Urban farming as a landmark

The term 'long-term' temporary use of land' was coined by one of our interviewees, a long-time observer of Detroit's urban development journalist (John; 18th of February). In this conception, urban farms are considered as landmarks, market signals for potential developers, exactly like Hantz's trees: "*We're using trees to capture the attention of the developers: the land value increased because we cleaned up our properties and we planted trees*" (Mike; 22nd of January).Such conception of urban farms has been best described by Flaminia Paddeu coining the term 'mutual benefits' narrative of urban farming: "shrinkage as an opportunity for urban agriculture, and urban agriculture as a beneficial tool for shrinking cities*"* (Paddeu; 2017). Implicitly in this narrative it that the return of economic growth would signify the end of urban farming, replaced by more interesting (and taxable) economic activities.

Because urban farming does not represent an economic opportunity in such understanding, especially for the municipality: firstly, it is complicated to tax the farmers, as a interviewee reported: "*There's not even a tax bracket for vegetables growers, if we have to say what kind of farm we are, we have to say that we are melon farming, it's the closest case that matches what we grow, we grow melons sometimes but not enough to call ourselves melon growers. But that's what they told us to put."* (Britney; 3rd of April). Secondly, Detroit property and roughly calculated according to the neighbouring market corresponding to the property's zoning category. Most farms are categorized as residential in very empty neighbourhoods, with leaves the tax collector with few expectations of raising high taxes for such activity.

Stated boldly, urban farming is not better than gardening on a large scale in this interpretation. It carries few opportunities of development besides its magnet effect. Any possibility of creating value *per se* is thus excluded. However, a radically different definition of farming has emerged from the urban farming ordinance writing process.

b. The Urban Agriculture Ordinance (UAO)

The three-year process of the ordinance writing has been marked by the decisive role of Katheryn L. Underwood, senior planner at the City Planning Commission and long-time activist in the groups and communities (she co-founded the Detroit Agricultural Network and Detroit Black Community Food Security Network) who first gardened the city in the 1980's and has followed the urban farming policy for a long time. Some key elements of the urban gardening programs are recalled below as well as the UAO, which draftin process extended from 2010 to 2013, involving a wide range of actors deliberating in a committee (i). The key issue raised by this committee was nuisance concerns (ii). As an outcome, the definition of urban agriculture emerging from this process rather focused on its economic potential *per se* (ii).

i. A collective process of writing

Katheryn has followed the development of urban farming policies since Coleman Young Era. In 1975, the mayor created a "Farm-a-lot" (FAL) program whose blueprint abstract is:

> Farm-A-Lot will enable hungry Detroiters to supplement their food budgets by helping them to grow/or preserve significant amounts of nutritious food in home or community gardens. Experience gained by FAL staff during the summer 1975 suggests that a family can produce up to $,1000 worth of food per year through a carefully planned and managed home garden program (FAL; 1975)

According to Katheryn, the city was providing tools and seeds and program clients were mostly African-American women. Unfortunately, the program stopped in 2002 due to budget reduction and no other city policy directed toward urban farming and food system improvements was developed until 2008 with the creation of the Detroit Food Policy Council. As we mentioned before, the Food Council was an important voice in urban farming advocacy, reclaiming the integration urban farming as a zoning category of the City zoning ordinance (DFPC; 2010). Katheryn went before the Detroit City Council and asked for developing a 'catching-up' policy, "*Something that would make sense in Detroit* […] *I didn't want a top-down approach for this project*" (Katheryn; 4th of March) to follow the residents' growing interest in urban agriculture. She created the *Detroit Urban Agriculture Work Group*, a committee in charge of the writing of the policy. Members of the work group included representatives from Keep Growing Detroit, Hantz Farm, Recovery Park, local universities (Wayne State University and Michigan State University), the Michigan Department of Agriculture and City departments. The 3-years writing process went back and forth between her writing and inputs from the committee and summaries of community meetings. Firstly, she wrote an ordinance draft in 2010, then reviewed

by the committee. Then, they collectively presented the draft during community meetings "*with pictures, post boards, to show to the people what urban agriculture would look like"* (Katheryn; 4th of March).

During the time of my fieldwork, Katheryn was engaged in drafting a new version of the ordinance, which would include the right to raise bees, the Animal Ordinance (AO). Albeit she explained to me during the interview that the AO writing process was a little bit different, I attended one meeting in which she explained to urban farmers and residents the first draft content and witnessed how pedagogical these meetings were. The meeting took place in a community center and was organised by Keep Growing Detroit. Everyone was sat in a chair circle; some food was provided in a room corner. Documentation, including Katheryn's first draft was provided to each of us. The two-hour session was divided between Katheryn presenting the document draft page by page. Then, attendants were invited to ask questions and raise their concerns. In the room, few residents were present (5) contrary to the farmers (15). During the Q-and-A time, a farmer explained: "*we shouldn't have this ordinance passed, we are wasting our time, we want goats, pigs and chickens, bees are not necessarily our priority*". To answer that,, Katheryn explained further her approach to draft the policy: "*my challenge as a planner is to facilitate and protect everybody's voices: if we can get the bees, then we might be able to get more the next time we draft an ordinance. But the feasibility of having goats and chickens in the ordinance is very weak in the current situation*".

In this extract, we see how Katheryn engages in developing an iterative and collective process of drafting a policy. By multiplying community meetings, by going back and forth between an *ad-hoc* committee over a long period of time, she wants to ensure not only the ordinance's vote, but also the correct comprehension of the policy goals by the constituents: "*To me, it's not sacred. It's a living policy that changes as you get feedbacks*", she explained to me (Katheryn; 4th of March). When I raised the question of the difference between the UAO and the AO, she answered: "*Oh, it is complicated. They are a lot of grey area here, because the people in communities have mixed feelings. Farmers feel they have a right to it, while other residents think that animals cannot be present in urban areas, and that's their value, and animals can't fit to what they call urban."* (*ibid*; 4th of March).

Rather than merely ensuring the constituents' comprehension of the policy draft, Katheryn also introduces the question of their value in the equation. In the animal ordinance case, some residents showed little interest, if not expressed great concerns about having animals next door: "*When people buy a house, they buy a neighbourhood and a lifestyle, and for some people the neighbourhoods changed a lot since they settled: some old people coming from the south for instance, they left the south to get away with farming and animals, so they certainly*

don't want it back next door" (*ibid*; 4th of March). Integrating people's concerns and fears into zoning policies is the heart of nuisance laws in the United States. In the following subsection, we will see how these concerns have been translated into arbitrages during the UAO writing process.

ii. "Good neighbour provisions" and the nuisance in question

In the United States, zoning instruments "evolved from a popular demand for community stability, not from a well-established body of law" (Fischel; 2015). Indeed, zoning ordinances were first published in cities such as Los Angeles and New York in the 1908-1916 period, in a context of land use conflicts between landowners, tenants and local authorities (Weiss; 1987). Furthermore, US zoning history has been about the progressive transfer of States' police powers to smaller government units, American cities, conflictual transfer confirmed after the *Village of Euclid, Ohio v. Ambler Realty Co.* in which the Supreme Court officially recognized zoning as a '*necessary tool'* for municipal governments and equipped municipality with comprehensive zoning (Euclid v. Ambler; 1926).

Euclid v. Ambler was a US Supreme Court landmark case (i.e. modifying forever U.S. jurisprudence), which bolstered the propagation of zoning ordinances nationwide and in Canada. It also set the stage for the development of zoning as an arbitrage of nuisances. The case was filed by Ambler Realty Company against the City of Euclid, OH: the company sought to develop its properties for industrial uses. The municipality, fearing the growth of industry as detrimental for the village, wrote a zoning ordinance and zoned the company's land for different uses. Ambler consider its liberty aggrieved and thus sued the municipality, claiming that "the land has been taken without due process" (Euclid v. Ambler; 1926). First ruled for Ambler in State court, the appeal in Supreme Court decided the other way. Lawyer Alfred Bettman sought a rehearing and filed an *amicus brief*[7] justifying Euclid's case with a legal argument on the merit of rights. The argument was a legal analogy:

> Zoning has same fundamental purposes and justification as all other property regulation, including law of nuisances; but zoning is not mere suppression of nuisance; it is constructive planning for prevention of developments detrimental to public health, convenience, safety, morals and welfare (Bettman; [1926] 2006).

Since its inception, comprehensive zoning is geared with nuisances' law. In our 2019 Detroit case, the Urban Agriculture Ordinance writing has been also a long process of compromises

[7] Literally "friend of the court", an *amicus curiae or amicus brief* is when someone not engaged in a trial sends an information/expertise bearing with the case, in the form of a brief

between farmers' claims, individuals' fears and concerns and due processes of law. As Katheryn states:

> *"Part of what zoning does, is that it facilitates and protects, so we have to figure out a way for facilitating growing* [vegetables] *happening and protecting the neighbourhood from something that might be harmful* […] *it can cause a nuisance to the neighbourhood. So, we have to come up with provisions* [amendment details], *I call them 'good neighbour' provisions, and they're not excessive. We decided of setbacks, you can't have your squash plant growing on the sidewalk, we don't your soil to run into the sewer…"* (Katheryn; 4th of March).

A last key element to understand zoning instrument is rits elation to the *rule of law*. In the United States, cities are 'mere creatures of the State' (Frug; 1980), they cannot have stricter laws than the federated state. Michigan, as an agricultural state (1st producer of cherry, 6th of dairy (DARD; 2016), has set up a dense legislation to protect farmers from being pushed out by urban sprawl called *Right to Farm* bills. The rationale is that if farmers respect a certain number of principles listed in *Generally Accepted Agricultural Management Practices* (GAAMPS) related to their activities, they are protected from nuisances complains by claiming their right to farm. In other words, GAAMPS have been designed to protect farmers from being repelled by urbanization (Hans and Gregory; 2017). However, GAAMPS have never been designed for protecting cities from farming settlement in their realm. The compromise found for writing the ordinance was thus to add exemption provisions in every GAAMP documents, in order to prevent any urban farmer for claiming their right to farm:

> This current GAAMP does not apply in municipalities with a population of 100,000 or more in which a zoning ordinance has been enacted to allow for agriculture provided that the ordinance designates existing agricultural operations present prior to the ordinance's adoption as legal non-conforming uses as identified by the Right to Farm Act for purposes of scale and type of agricultural use. (GAAMP; 2017)

Katheryn had in fact to arbitrate between the farmers' claims, the residents' concerns, and the rule of law. Such work has however been done collectively, with the help of a committee. At the end of the day, the ordinance was enacted in December 2012, allowing 'new agricultural uses' (UAO; 2013) in the zoning. The ordinance allowed both small- and large-scale operations, non- and commercial farming, and has set standards for urban farming. It defines 'urban gardens' as operations smaller than an acre, and 'urban farms' as bigger as one.

In 2019, farmers have had mitigated feelings about the ordinance. Mark is quite vocal about the form-based regulation albeit he understands why it exist:

> *"Yes, but I understand a little bit, I've become an environmentalist, so I understand like, you don't want invasive plants that kind of stuff taking over you know… But to tell me that I'll need to plant flower to buffer between… And again, you know there are gardens you go through you cannot know they are gardens. Some people don't care about beautification they just want to grow food and eat healthier, but we are in a city, it should look a certain way. But to tell me the herb should be 2ft by 20ft, planted with flowers that kind of stuff it's like "what"?"* (Mark; 23rd of January)

Mike from Hantz farm is also critical albeit he participated to the committee: *"In 2013 they passed an urban agriculture ordinance, and it was written to really exclude businesses like ours. In Detroit, there are a lot of urban gardeners, and about 10 years ago, they started calling themselves urban farmers. But a lot of them had a garden of 20x20 ft."* (Mike: 22nd of January)

The collective writing, the nuisance logic and the remaining frustrations at the heart of the urban agriculture ordinance process of enactment have shed light to another vision of farming which has been constructed by the farmers throughout the process: the recognition of urban farming as an economic activity.

iii. Urban farming as an economic production unit

The collective process by which different urban farmers (Agrobusinesses, low-income, cooperatives, community gardeners) were invited to work together in drafting the zoning ordinance reveals how seriously such activity has been taken. In order to create "create "*something that would make sense in Detroit"* (Katheryn; 4th of March), reflections have been made of what urban agriculture should look like in the urban space. Food justice activists, far from fetishizing urban farming as the only desirable model for sustaining the city, communicated their need to cope with the city's huge challenges like the lack of access to nutritious food and the necessity to reuse abandoned land.

In this context, urban farming was presented as an economic unit and claims about land and financing access for developing commercial farms have been discussed collectively. We argue that albeit this definition is not necessarily shared by *all* the farmers, urban farming as an economic production tool is in 2019 a serious option for reemploying workforce, sustaining neighborhoods with good food and develop the city's attractivity.

Conclusion and Transition

Drawing on McClintock's insights on neoliberal and radical forms of farming (McClintock; 2013) we observed that two visions of urban agriculture have emerged in Detroit: one the one hand, urban farming as a development tool, on the other hand, urban farming as an actual production unit. These two dimensions did emerge in "a dialectical process of tension" (McClintock; 2013, p148) but rather than the conflicts crystalizing on urban agriculture itself, they focused on the possibilities of development for the City in the aftermath of the crisis. Urban agriculture, as a landmark or a production tool has been presented as an argument on both sides for promoting antagonistic visions of the City.

As we demonstrated, foundations are active players of the elite coalition promoting urban farms as a landmark. This puts the community gardeners and cooperatives in an ambivalent situation: these actors, both promoting urban farming as a landmark and an economic tool for development, must adapt their grant proposals accordingly. Indeed, commercial farmers advocating for urban farming as an economic tool are relegated further away from grant financing.

In the following section, we will present how the different farmers (Agribusinesses, low-income farmers, community gardeners, cooperative farmers) provide themselves with key elements for developing their activity: land and formal infrastructure financing. We will show that their unequal access to these key resources can be explained in part by their insertion in one or the other network we identified (grant and barter) and their vision of urban farming (landmark or economic).

Section 3: Urban farming in a shrinking city: the margins of markets

"*Oh, look at it like this: yes, we are farmers but there is a much bigger picture than this*" (Jerry Ann; 6th of February)

Few researchers have investigated urban agriculture as comprehensively as Jac Smit, 'the father of urban agriculture' (Brinkley; 2013) in his book *Urban Agriculture: Food Jobs and Sustainable Cities* ([1996]; 2001). In this seminal book, the author and colleagues posited the activity as just as 'growing food in a city' and then deployed vast ranges of practices, from individual gardens in South Africa to Agribusinesses in the United-States.

At the two extremes of urban farming practices, McClintock's analysis of their radical and neoliberal forms, engages to think of them as tokens of an endless confrontation between these two poles: "urban agriculture *has to be* both: indeed, contradictory processes of capitalism both *create opportunities for* urban agriculture and *impose obstacles to* its expansion*"* (McClintock; 2013, p148 [italics from the author]). Implicit in this proposition is that the capitalist environment shapes existential conditions of urban agriculture: radical farmers are condemned to be marginals, and urban farming activities condemned to be emerging initiatives forever. In Detroit However, years of economic crisis and demographic decline show radically different conditions: vacant land rates are among the highest in the United States, the philanthropic sector is able to develop land at a large scale, and the network of radical farmers use relays in institutions to make their voice heard (Detroit Food Policy Council, City Planning Commission).

Drawing back on our interviews of eleven commercial farmers, community garden/farm presidents, farming entrepreneurs and non-profit workers engaged directly in urban farming, we argue that we observed inequalities in access to land ownership, to financial resources and to food sales opportunities, confirming McClintock's intuitions (1). However, the growing number of farming activities relying on barter exchanges and philanthropic dollars in the city interrogates us on the actualized form of urban farming. Drawing on Neil Fligstein typology of market institutions (*property rights, governance structures, conceptions of control* and *rules for exchanges* [Fligstein; 1996, Fligstein; 2001]), we will introduce how farmers gradually contested each of those (2).

1. **"True Detroit Hustle": inequalities in farming inputs (land, financing) and food sales opportunities**

The information related below refer to eleven interviews conducted with individuals engaged in food production. Their mode of production (industrial, traditional), their legal status (commercial, non-profit), their farms' sizes differ greatly from one to another. Categorizing urban farming practices requires reliable criteria for comparison. In the scientific literature, Jac Smit *et al.'*s framework, inspired from Soonya Quon's *Planning for Urban Agriculture: A Review of Tools and Strategies for Urban Planners* (Quon; 1999) has proven a great adaptability across countries and period. They developed seven measurable elements on which farmers' categories can be inferred (Smit *et al.* 2001). Based on these elements and our previous findings, we will identify different farmers in Detroit (i), observe their capacity to access to land ownership (ii) and financing from the formal market (iii).

a. **Categorizing our farmers**

Smit and his colleagues have defined seven criteria for determining a farmers' typology composed of agribusinesses, low-income farmers, medium income farmers, farmer cooperatives and community gardens. The criteria for determining their category's belonging are the farm's *location*, the *type of activities*, *legality and type of land tenure* under which urban farming occurs, *stages of production* included in the farm, *scale* of urban activities, *purposes* of food production and *type of groups* involved. (Smit *et al.* 2001). These criteria are very general and created for standardized quantitative comparisons (Quon; 1999), thus they provide us with a draft basis for comparison. A list of the original criteria definitions can be found in figure 1 annex 3. However, some criteria have been slightly modified to fit the specificity of Detroit, and we completed with information about race and gender. Firstly, we will present the criteria we took for granted, then those we adapted and added to Detroit's specificity and explain why. Then, we will present how we categorised our interviewees based on these criteria.

Among the criteria we took for granted, we find the *type of activities*, specifying the type of culture (food production vs. non-food production, plants or animals, gathering vs. production). There are also the *activity's legal status* and *land tenure types* (for-profit vs. non-profit, ownership vs. tenant vs. squat), the *stages of production* included in urban agriculture (growing, harvesting, marketing and distribution), and the urban farm *scale* (area size). Secondly, the *location* criteria distinguish urban and peri-urban farms, as a proxy for the land availability and landscape openness. Since all farms reported are located within Detroit limits, themselves inserted within Metro-Detroit such element is not relevant for our case *per se*.

Besides, these farms are not located in urban fringes but within a city whose landscape has been marked by years of blight and depopulation. To determine whether these locations reveal land availability and openness or not, vacancy rates in the surrounding neighbourhood will give us precious information regarding the presence of buildings in the area. On the other hand, *purposes* are hardly standardisable: there are no ex ante categories proposed by Smit *et al*. We decided to keep them as understood during interviews: they are highly dependent on the interview situation and thus cannot be read as comprehensive lists of goals.

Finally, Smit's *types of groups involved* encompasses both the farmers' revenue from the farm and their category. In order to determine low- and medium- farmers' revenues, we consider both the mean and the median income of an average Michigan farmer in 2017. If the revenue reported is under both, then it would be a low-revenue. If between, it would be a medium-revenue. We also added the race and gender categories of our actors: there are strong correlations between the farmers' categories and their individual characteristics. The table reporting each farmers' characteristic is available in table 1 annex 3. We obtain the following categories of farmers in table 2:

Table 2: Interviewees by category *Source: the author*

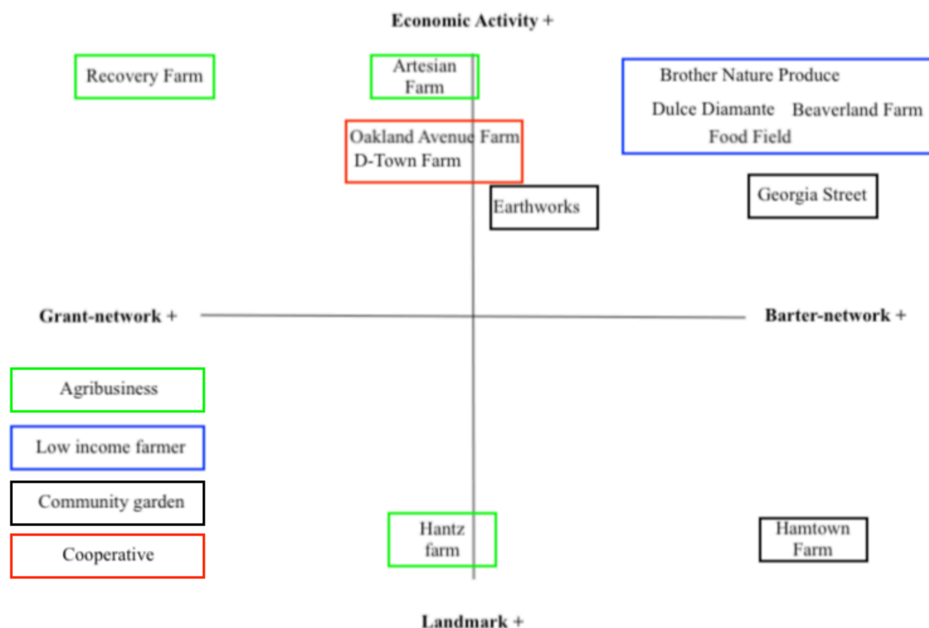
Agribusiness	Low Income Farmer	Community Garden	Cooperative
- Artesian Farm - Hantz Farm - Recovery Park	- Food field - Brother Nature Produce - Beaverland Farm - Dulce Diamante Garden	- Hamtown Farm - Georgia Street Community Collective - Earthwork Farm	- Oakland Avenue Farm - D-Town Farm

Moreover, we established throughout interviews whether farmers relied on philanthropic grants or exchanges of goods and services. We also inferred their vision of agriculture as a landmark or a viable economic activity. To do so, we questioned them about their relationship with foundations, how often they applied for grants and were rewarded. We also asked them questions about how many times they offered their services, welcomed volunteers and received gifts from other farmers and/or non-profit organisations. Similarly, we asked them how involved they were in the writing of the urban agriculture ordinance and what do they think about the current trends of urban agriculture in Detroit. All of these questions are reported in the farmers' guide line in annex-methodology.

Based on these complementary insights, we draw this visual representation of their attitudes (visions of urban farming) and practices (embeddedness in one or the other network).

In abscises are represented their vision of urban agriculture, in ordinates their embeddedness in either the grant or the barter network. Here is the visualisation:

Figure 2: Visualisation of farmers' attitudes and practices *Source: the author*



Two things can be concluded while looking at this visualisation: some previous categories of farmers remain robust, such as the low-income farmers and the farmers cooperatives. On the other hand, other categories are less reliable: Agribusinesses do not necessarily define urban farms the same way and some do rely on philanthropic dollars. Similarly, community gardens' visions of urban farming are sometimes ambivalent, sometimes encompassing both of them like Georgia Street Community Collective. Farmers' categories, nuanced by our findings, provide a good framework to analyse how they access to key resources for farming: land and infrastructure financing. In the two subsections below, we will see how the different categories of farmers have access those.

b. An unequal access to land

A key question regarding vacant land availability in Detroit is: is vacant land for sale? Huge amounts of parcels have been abandoned either by residents, retail sellers or large companies for decades, some of them collected by the City of Detroit through foreclosures. However, clear land ownership is often unclear in shrinking cities and generates management hardships for the local authorities (Pothukuchi; 2017, Paddeu; 2017 Meenar *et al.*; 2017).

In Detroit, The Detroit Land Bank Authority (DLBA) has been incorporated as an independent entity in 2008, with very limited financial capacities. Land banks were firstly created in the third half of the 20th century in cities suffering from high land vacancy and poor

policy instruments to manage them, like St Louis (1973), Cleveland (1976), Louisville (1989) or Atlanta (1991). Land banking refers to "the process or policy by which local governments acquire surplus properties and convert them to productive use or hold them for long-term strategic public purposes" (Alexander; 2011). Land banks are public authorities or non-profit corporations who manage land banking. They collect properties thank to the process of tax-foreclosures: in Michigan, tax-delinquent properties are automatically granted to the county treasure after a few years. Then, the 2-years aftermath of the subprime crisis smashed very hardly the city: "the number of mortgage loans in the foreclosure process reached a high of 5,090 in 2009, accounting for 8.3 percent of all outstanding mortgages." (Urban Institute; 2017). Dozens of thousands of properties became county owned in a very short period, generating huge expenses for managing them.

In 2014, new-elected mayor Mike Duggan gave significant powers to the DLBA by hiring dozens of employees and transferring city-owned property titles of vacant land (Dolan *et al.*; 2015). In 2018, the DLBA owned 96,343 properties throughout Detroit (Loveland; 2019) making it the biggest landowner in the city (25% of the parcel total): "*We're the mayor's baby*" once told me a DLBA worker (Gregory; 4th of February). The DLBA developed different ways for reselling land, addressed to different public: auctions for newcomers or residents, Side-Lot Program (SLP) for residents desiring extending their properties and the Community Partner Program (CPP) for community-based organizations (DLBA; 2018). Parcels are on paper sold at a $1,000 price for auctions and $100 price through programs. In the reality, part of the land sold through programs is sold at market prices, varying between $500 and $2500 (Gregory; 4th of February). To be allowed to enjoy the SLP programs, residents must justify owning a parcel on either side of the desired lot, with a limit of two lots.

On the other hand, the CPP is tailored for small non-profits: "Detroit location, 501(c)(3) status, to serve a geographic area no larger than five square miles" are the criteria for eligibility (Pothukuchi; 2017). Once registered in the DLBA list, community organizations enjoy preferred prices as a DLBA worker confirmed me: "*Community partners have preferred prices, like, for instance if the lots represent two grands* [2 thousand dollars], *the organization will pay only $250-$300. Officially it's a 20% reduction but for vacant land that nobody wants it can be much more, 60 or 70% discount*" (Gregory; 4th of February). Georgia Street Community for instance, has become a community partner two years ago: "*We have a privileged contact with the land bank, like, if someone wants to buy a lot in our area, they would tell us first. It also makes easier for us to buy lots, because before that, the city wouldn't tell us"* (Mark; 23rd of January).

For commercial farmers, acquiring land through the land bank is more complicated. Besides the SLP, they cannot enjoy discounted rates for buying, since their status excludes them from the CPP. Moreover, there is a limitation of buying capacity per year: only 9 lots can be bought without City Council review. Land prices become unclear for buyers: a regular parcel costing $100 can be side-to-side to a $1000 parcel, because of the land bank policy, as a farmer reported me: "*The house was $10,000 with no associated land, and then we bought eleven lots for $1,100 through the Side Lot. And for the other lots across the street, the Side Lot doesn't work so we bought it from the Economic Development Corporation, and we ended up paying $8,000 for 10 lots, it's insane*" (Britney; 3rd of April).

Large agribusinesses we met bought the land through direct agreements with the city: Hantz Woodland for instance, negotiated in 2013 with the Bing administration and the emergency managed during the bankruptcy to buy 180 acres or 1,900 parcels. In 2018, they re-negotiated with the current administration to buy 450 extra lots. the Recovery Park negotiated with the current administration in 2015 to firstly lease and then buy the land. Estimated prices[8] are reported in the table below.

Table 3: Agribusiness land purchase prices

Farm	**Area**	**Price /acre**
Hantz Woodland	In 2013: 180 acres In 2018: 20 acres	In 2013: $2,770 /acre In 2018: $3650/ acre
Recovery Park	40 acres	$105/year for lease, then $3,553/ acre

Large-agribusinesses did not enjoy a price rebate for buying land. They have however been able to access large amount of land through negotiations with the local government. Their access to the land in Detroit is easier than average low-income farmers or community organizations, by paying a premium price reflected in the land purchase.

From our observations, we see that access to land is not equally easy for the different groups of farmers: Agribusinesses engage in long negotiations with the local government to acquire huge amounts of land at once, whereas low-income farmers struggle to access more than 9 lots per year at a preferred price. Non-profit organisations on the other hand have access to land through privileged links to the land bank within the limits of 9 lot per year. On these observations, Pothukuchi concludes: "DLBA policy implicitly, therefore, is to sell vacant parcels in only limited and restricted ways to current residents and community-based organizations in the city. Many observers read this as reluctance" (Pothukuchi; 2017, p1172).

[8] Sources: CityLab; 2013 Crain's Detroit; October 2015, Crain's Detroit; April 2019

We would add that the DLBA's reluctance reflects the Mayor's vision of urban farming as a landmark. The Mayor's office, trough land deals concluded with agribusinesses and indirectly through DLBA policy, limits land access to low income farmers, offers sales opportunities to community-based organisations. As a DLBA worker summarized, the Mayor's vision to the city does include urban farming, but excludes some practices:

> *"It's kind of frustrating we don't have a master plan; they chose a piecemeal approach now for some neighbourhoods. For others, we don't have a master plan reflective of realities on the ground. So, if someone comes to me and say I want to do urban agriculture I don't know where to put that. Because that does happen with people who want to do commercial urban agriculture, and I don't usually have place to put that.*" (Gregory; 4th of February).

Land sales policies also put non-profit organizations in an ambivalent situation; it forces them to promote urban farming as landmarks rather than an economic activity: "Instead, urban farming is relegated to social planning, due to its numerous benefits in community development and neighbourhood improvement" (Brinkley; 2013). In Detroit, this is partly verified due to the land sale policy. Moreover, sustaining urban agriculture also depends on access to dollars for financing infrastructures such as greenhouses, hoop houses, seeds, tools. Here again, inequalities are visible between farmers categories.

c. A differentiated access to financing

When we asked to our interviewees what their financing model was, we observed strong regularities (see table 4 annex 3). Some of them are due to the farms' legal status: non-profit organizations for instance rely greatly on the grant-network and donations. In some cases, these donations reveal how arbitrary this financing is:

> "*We have a lady; she lives in Arizona and she donates to us every month. She started that. She started to send us money, the first check she sent was $10k, that was in November 2009, we were in an article in the Guardian, she saw that online and she sent to me an email saying she wanted to help fund our project. […] She said, "I want to sign this $10k check", and then she said "in December I'll send another $10k check and we'll sit down and see how much more you'll need" […] "She's been signing the check every month ever since, she never missed the check"* (Mark; 23rd of January)

Or also: "*We get different amounts. We have an anonymous donor that I haven't heard from him for this year, they usually give 7.5* [$7,500]. *I cannot say who they are because they don't want to be identified*" (Jerry Ann; 6th of February). We also presented in section 1 how non-

profit organization cope with grant financing, financing mean marked by the importance of showing the grants' social outcomes, emphasizing further the image of urban farming as a landmark triggering neighbourhood development.

On the low-income farmer side, financing is marked by a difficult access to grant-network, due to their commercial status, albeit porosities exist. They thus rely mainly on their own savings, sometimes borrowing money from friends or family to start their businesses. Their strategy is thus to cut spending and diversify their activity rather than looking for investments. Greg for instance, developed a snow removal and AirBnB rent activity in the neighbourhood to ensure financial continuity between two growing seasons: "*We make 30 grand a year, sometimes 45 with snow removal and our AirBnB*" (Greg; 30th of January). They also rely on the barter-network to get access to smaller resources as demonstrated earlier.

Agribusinesses then, have very different means for financing. Hantz Farm has internalized the process but also relies on an arbitrary investment from John Hantz company. On the other hand, Recovery Park developed a fundraising strategy through its non-profit to get started and he is now seeking equity investment to match a government loan, for a total of $12 million. Artesian Farms also coupled foundations' grants with a pool of investors to raise $200 thousands to get started.

Huge differences in amounts and methods differentiate these financial models. Again, inequalities in financing follow the farmers' categories lines, agribusinesses enjoying easier access than low income farmers. These observations tend to validate McClintock's intuition on the separation between 'neoliberal' and 'radical' urban farming practices (McClintock; 2013). However, philanthropic dollars perfuse both of them by one way and another, and land availability, albeit vigorously regulated by the municipal government, remains reachable for both agrobusinesses and low-income farmers. This specificity of Detroit leads us to think that progressively, an original economic sector of urban agriculture, with its own inputs and market sales opportunities, is being constructed in Detroit.

2. Detroit's Urban farming movement: contestation and deformations of markets

"*We see us as a movement. We're not competing between each other; we're competing against Mc Donald*" once said one of our interviewees (Greg; 30th of January). The importance of the 'movement' trend has been best summarized by the Eastern Market Corporation president who explained to us how the non-profit organization articulated its traditional goals of neighbourhood and regional economic development with urban agriculture inputs:

> *"You know, the world of food in the city changes rapidly, in 2010 the good food movement kicked in and was a sort of a critique of Richard Nixon and Big Ag […] There were two forms of work that we began in the Market. One was addressing food insecurity in the lack of the distribution of healthy food throughout the city, and then promoting agriculture and food as an economic development opportunity for the city from growing all the way to processing, distributing, as well as keeping"* (Dan; 23rd of February)

In Detroit, deindustrialization and depopulation left giant holes in a 'perforated city'. In these these interstices, we found evidences of urban farming proto-forms of market institutionalization in the sense of Neil Fligstein's political-cultural definition (Fligstein; 1996, Fligstein; 2001). Fligstein defines four institutions at the basis of markets*:* property rights, governance structures, conceptions of control and rules of exchanges. *Property rights* are defined as "social relations that define who has claims on the profit of firms [..] they are a continuous and contestable political process". *Governance structures* are "the general rules in a society that define relations of competition, cooperation and market definitions of how firms should be organized". *Conceptions of control* refer to "understandings structuring perceptions of how a market works and allow actors to interpret their world and act to control situation". *Rules of exchange* finally, "define who can transact with whom and the condition under which transactions are carried out" (Fligstein; 1996).

Our intend is not to expose how these institutions comprehensively deploy themselves in Detroit, nor to demonstrate that an urban farming structures itself as a parallel market in the city, which would go far beyond the scope of this master thesis. Our far less ambitious program consists in referring to Fligstein's institution categories for *naming* what we observed in Detroit, informed by scientific literature and after the inquiry. All of Fligstein's definitions insist on the assumption that even extremely stable institutions such as property rights and governance structures are, in final analysis, prone to dynamics of contention (McAdam, Tarrow and Tilly; 2004). However, betraying Fligstein's insight would be to avoid role of the State in shaping these institutions. The State, here represented by public actors such as the Federal and local governments, have enabled rules and mechanisms for allocating land and philanthropic dollars

for instance, rules that, in part, allowed institutions to emerge. In other words, public actions and inactions have allowed Detroit urban farmers to engage in contesting such market institutions. We will present these institutions in the following order: property rights (a), governance structure (b), conceptions of control (c), rules of exchange (d) and then conclude (e).

a. Property rights: 'commons' in the interstices

Fligstein's definition of property rights assumes their fragility: "the constitution of property rights is a continuous and contestable political process, not the outcome of an efficient process". (Fligstein; 1996). Such definition leaves open their form and their regulation by the state. By their form, we mean their actualization in a given society, like constitutional right in the American society. By their regulation by the state, we mean the rules that limit them and organize their transfer: eminent domain for instance, statutes on the relation between the general interest represented by the state and a private ownership (US Constitution; Vth Amendment).

Understanding property rights as a contentious political process leaves open opportunities for contestations to their constitutions, as alter-globalization movements did in the 1990's the by putting at the forefront the slogan "reclaiming the commons" (Klein; 2001, Della Porta; 2008). At the same time, the work of Elinor Ostrom and colleagues presented the 'commons' as an empirical research object (Ostrom; 1990, Hess and Ostrom; 2007). Their empirical work aimed at demonstrating that in many places, collective governance of natural resources did not necessarily comply with market rules and how these collective organizations had proved capacity to last throughout time (Ostrom; 1990, Bollier; 2003).

In her 2015 thesis, Flamina Paddeu drew on the 'commons' scientific literature to demonstrate how urban farming in Detroit was a form of 'land reclaiming' ("réappropriation du territoire"), consisting in a simultaneous movement of land reclamation and land transformation of the urban space. She concludes that "land reclaiming constitutes a decisive aspect of the grassroot communities involved in urban agriculture in Detroit[9]" (Paddeu; 2015, p379). During our fieldwork, we also observed a barter-network whose rules for exchange did not comply with standards of market: the prohibition of monetary exchanges was a mechanism for preventing conflict emergence (section 1).

Based on these insights, we conclude that albeit the hegemonic influence of property rights as understood in the US constitution (individual, natural), interstices of contestation have emerged in some communities of farmers in 2019 Detroit: low-income farmers, community

[9] « La réappropriation du territoire apparaît comme un aspect essentiel de la stratégie des acteurs de la communauté grassroots de l'agriculture urbaine à Detroit. »

gardens as well as cooperatives have created physical ‘common spaces’. challenging the definition of individual property regarding both land ownership and material objects prone to bartering. Urban farmers have challenged land ownership in two modes: first, by creating community spaces in which perceptions of land ownership are blurred by the public access opportunity and the collective transformation of the physical space (Baker; 2004, White; 2011, Tornaghi; 2014) They also contested land ownership through practices of urban farming squats, albeit this practice remains limited according to a DLBA worker: “*Some people occupy building illegally, but if the neighbourhood is very bad [blighted] and even non-profit don’t want it, we just leave people doing rather than making them homeless. It’s the same for farming, we know that some people farm on our land but if there is no problem, the Land Bank is too busy*” (Gregory; 4th of February).

b. Governance structures: no evidences of challenges

Fligstein’s definition of governance structure refers to “the general rules in a society that define relations of competition, cooperation and market definitions of how firms should be organized”. He insists on the two actualized forms they take: laws and informal institutional practices (Fligstein; 1996). Here again, Fligstein explains how both of these forms are contestable: laws are prone contention in their voting, enactment, enforcement and judicial interpretations. Informal institutional practices on the other hand, deploy themselves within organizations in the form of routines and across them through imitations (DiMaggio and Powell; 1983).

In Detroit, evidences of such contestations remain limited. A hypothesis for explaining this non-event would be that the Urban Agriculture Ordinance process and the DLBA Side Lot Program for instance, would have rather canalized potential contestations of these institutions by providing rules acceptable for most of the farmers, contestations then relegated to few individuals or groups.

c. Conceptions of control: defining prices for vegetables

Conceptions of control are “understandings that structure perceptions of how a market works and allow actors to interpret their world and act to control situation,” (Fligstein; 1996). We propose a narrow understanding of this institution, as the consequence of the two precedent: property rights, as well as governance structure, shape actors’ perceptions of how market works, and these actors develop strategies to evolve in this market. Following Fligstein’s insight, we interpret “conceptions of control can be thought as ‘local knowledge’ (Geertz; 1980)” (Fligstein; 1996).

Commercial urban farmers are perpetually generating local knowledges in a hostile food market. However, the specificity of Detroit is that a non-profit organization coordinated them for defining a selling price for vegetables, based on their understanding of a real market: the farmers' market. Commercial farmers are engaged in the food market to sell their products: they organize themselves in Community-Supported Agriculture, cooperatives, they sell their products in farmers' market, they create durable relations with restaurants and so on. "*It's really hard to make money growing food. Food is cheap, and there are many variables you can't predict: weather, security"* deplored one of our interviewees (Noah; 28th of January). Indeed, food markets are saturated by traditional farms highly subsidized by Federal government (39% of US farms receive subsidies each year from a $20 billion portfolio [Edwards; 2018]) and price-makers in processing and distribution industries (Gereffi *et al.*; 2005). How to establish a fair price for urban agriculture produce in this context?

In Detroit, the construction of food prices for urban farming products is organized around a Keep Growing Detroit's program which sets up regularly prices that are practiced by many of our interviewees in farmers market. Like Luis for instance: *"I use KGD prices, that way we don't compete, I don't want to sell lower so I don't undercut their produces"* (Luis; 22nd of February) or Britney: "*We pretty much use the keep growing Detroit prices everywhere, our full-sale prices are a little bit lower, but it's not significant. KGD price is our baseline. They're fair*" (Britney; 3rd of April). Why would these farmers use prices defined by a non-profit organisation? Why are they considered as 'fair'? Answers to these questions can be found in explaining what this program is about and the process by which it defines prices.

Keep Growing Detroit runs different programs such as the Garden Resource Program, providing material seeds, transplants, trees to urban growers. It is through this program that they organize the Seed & Plant distributions mentioned in section 1. The non-profit also organizes another program called Grown in Detroit: created in 2006 this program was formed by a group of growers who had vegetables surplus and wished to sell them in the Eastern Market. They coordinated themselves as a cooperative, the *Farmers Market Workgroup* to sell their products at Eastern Market on a weekly basis. The cooperative works as an incubator: members are not encouraged to stay but rather to develop their own activity and then open stalls by themselves in the market. On the other hand, it provides market opportunities for small growers of low-income families who cannot afford spending time selling at the market.

With inputs from the codirectors, they developed a list of prices applicable for farmers (a 2017 grid example is available in figure 3 annex 3). Every Saturday in the morning, any grower can bring its own surplus and give it to the market coordinator. The market coordinator evaluates prices for the day according to other sellers' prices: prices are adapted according to

those and the quantity of each products coming from Grown in Detroit sellers in the morning. In the following interview abstracts with the KGD market coordinator, we observe how prices are made from previous estimations and variables according to the market day:

> *So, a typical day I start at 6:00, I arrive at the office, I get cash, boxes, tables and bring it to shed 3. [...] Growers can come with their produces and put them on the table as early as 6:30. They have until 9:30 to bring their produces, I don't accept produces after that time it affects the numbers.*
> *So, let's say we're trying to do a 100% [product sold] and at 10 O'clock we sold all the kale, we know by numbers and data that we've collected what our threshold is for kale, how many units we can sale, approximately.*
> *And so, if someone comes in and brings 30 units and we know that between 10:30 and closing that we're not going to sell this kale that affects the percent. We were almost at a 100% sold out, this comes in and that drops it to 80%. So, it just not fair especially for the smaller growers because 80% of 5 units is very different from 80% of 30 units so that affected all the pricing and hurting the smaller growers.* (Imani; 5th of April)

Prices proposed by the Grown In Detroit program are actually a little cheaper than regular prices on the market day, as the market coordinator explained to us how she 'navigates through prices':

> *I take a look around the market always, to see what are our, I wouldn't call them competitors because we're not competing, we're coexisting I don't want to undercut the prices made by different gardens who used to work with Keep Growing Detroit and are now independent, and a lot of them will charge slightly more than what we do because based on all of the various vegetable stalls, we're coexisting.*[…]
> *It would be foolish of us to charge $6 a bag of spinach, when down in shed 5 its $5, and from California you can have two huge bags for like $3. So I gotta navigate in a way that you're going to make profit, but not so much to drive the customers to our stall.* (But how do you navigate through prices?). *What I do is go first, and then take a look at some of the growers who were in Grown in Detroit and see what they're charging. And then, I'm not going to lower my prices, so let's say you sell regular tomatoes for $2 a chord, and another grower who might have been with us at one time, they wanna sell it $4.*
> *I'm not gonna play that game. I go to all the stalls, look at certain produces like salad mixes, leafy greens, and see what everybody is charging, if it's per pound, per ounces whatever and then I look at how much we sold at a price the previous season. If we sold over the season 80 or 90% of our products at that price, then we keep it, if not, we adapt it.* (Imani; 5th of April)

Not all small urban farmers make their prices in line with the Grown in Detroit Program. However, Grown in Detroit prices definitely serve as a baseline for other farmers. This 'price-making solidarity' emphasizes how farmers coordinate themselves in order to guarantee fair prices, at the expense of traditional market rules. Indeed, supply and demand equilibriums play a role in determining prices on the day of the market, but these prices are also determined by considerations about the suppliers' social needs, like low-income families or small gardeners.

d. Rules of exchanges: granting and bartering against markets

Fligstein's definition of rules of exchanges refers to "rules that define who can transact with whom and the conditions under which transactions are carried out. Rules must be established regarding shipping, billing, insurances and the exchange of money…" (Fligstein; 1996). In section 1 we identified some rules presiding the economic sustainability of urban farmers: in the grant-network, exchanges are ruled according to principal-agent relationships, philanthropists directing their grants toward non-profit organizations committed to implement the foundations' agenda. In the barter-network, successful exchanges are met because monetary concerns are excluded from the equation: the geometrical variability and reciprocity of transactions preventing the emergence of conflicts.

In the enforcement of these rules, the role of the State (both Federal and local government) is decisive. On the one hand, the foundation support to non-profit organizations has reached outstanding proportions in the United States. Due to the tax-credit policy enacted by the Federal government, wealthy individuals have invested massively in charities, favouring the development of the third-sector (Salamon; 2014). Such development his even greater in South-East Michigan which concentrates a large share of the foundations in the US as one of our interviewees working in a family foundation us: "*Detroit has a lot of foundations. There is a lot of old money from auto companies, lumber companies […] Detroit is particularly rich in foundation, there are a lot of foundations in NYC, a lot in California, quite a few in Chicago, and a lot in South East Michigan, most often, it is somebody who makes its wealth in some kind of industry and decides that they would transfer a portion of it to an endowment. There are tax incentives to do it*." (Christine; 4th of April). On the other hand, the barter-network enjoys a lack of public intervention, because these exchanges are informal on purpose. They exclude the intermediation of money as well as state's oversight and limit themselves to bartering little objects: there is no written accounting of these exchanges.

e. Conclusion: contesting markets with the market institutions

Fligstein's typology of market institutions has provided an interesting reading key for interpreting Detroit's urban farming world. Urban farmers indeed *contest* property rights and rules of exchanges, while they *deform* established conceptions of control. However, few evidences of contestations or deformations of governance structures have been found.

Moreover, public actors's actions and inactions participate in this movement by creating interstices in which urban farmers step into: they find original ways of financing through charitable foundations, they reclaim leftovers of urban capitalism in the form of vacant land, they distort prices to integrate social needs, they refuse monetary systems as the unique way of exchanging items and services.

Paradoxically enough, what we understand from emergence of these contestations is that they recreate *derived* forms of market rather than 'anti-markets': redefining property rights as 'commons' does not erase property rights, as well as internalizing social needs in vegetables prices does not prevent from market price formation. On the contrary, we understand farmers contestations and deformations of market institutions as attempts to produce an alternative market. Such hypothesis would require further inquiry to demonstrate whether or not Detroit urban farmers actually organize themselves as an industry, capable of challenging the traditional agricultural sector but there are no evidences of such proposition so far.

General Conclusion: urban farmers, the "illegitimate children of a city"

"Far from it being the object that antedates the viewpoint, it would seem that it is the viewpoint that creates the object" F. de Saussure; [1913] 1983

At the end of the day, we cannot conclude firmly that urban farmers sustain themselves autonomously, neither financially nor politically in 2019 Detroit. Powerful actors such as foundations, the Big Three, bank entrepreneurs like John Hantz exert a control over urban land, over channels of financing that farmers cannot balance frontally. However, urban farmers have developed strategies to maintain, promote and expand their activity throughout the city: grassroots *food justice* movements, active non-profit such as Keep Growing Detroit, perfuse indirectly this activity with philanthropic dollars and advocacy before the municipality.

From our inquiry, we established three findings and one speculation. First of all, we found evidences of exchange systems that are not ruled by market principles: the grant and the barter networks. Secondly, we understood how two visions of urban farming, themselves inferred from perceptions of the city of Detroit, stabilized themselves in the wake of the 2010's. Finally, we constated high inequalities in terms of access to land and market financing among the farmers. We also speculated that albeit huge opposite forces, low-income urban farmers, community gardeners and cooperatives coordinated themselves to propose another way of producing food, itself based on contestations and deformations of market institutions.

These findings lead us to assess the validity of our hypotheses: indeed, we illustrated in various cases how farmers engaged in bartering were more likely to enjoy access to foundation resources. Similarly, we also demonstrated that farmers engaged in urban farming advocacy were also less likely to collect philanthropic grants. Finally, we demonstrated that urban farmers engaged both in the barter-network and urban farming advocacy developed strategies to, at least, survive in a hostile food market: by determining their own prices, by squatting land, by contesting property rights in community gardens, some urban farmers show a surprising reliability, sometimes lasting more than twenty years (Earthwork farm for instance was created in 1998).

We did not contend to narrate a 'David and Goliath' story nor we did not assume that urban farming *should* be a solution for Detroit vacant land. However, following Saussure, we mobilized heterogeneous corpus of scientific literature to explain certain phenomena, from urban regime theory (Stone; 1993, Orr and Stoker; 1994) to political-cultural definitions of markets (Fligstein; 1996, Fligstein; 2011), passing by network analysis (Marwell; 2004) and policy instrumentation (Scott; 2014, Valverde; 2011, Safransky; 2014). We intended to propose an *original* reading of urban farming as a 'total social fact' (Mauss; 1924). Assessing the

coherence of these theories altogether is a task far above our capacities. Nonetheless, they provide interesting reading keys for explaining segments of it.

We titled this master thesis from a quote of one of our interviewees: “we’re the illegitimate child of the city” (Greg; 30th of January). We would like to draw two conclusions from Greg’s observation. First of all, if we think of ‘the city’ as the public power, Greg is doubly right: the Federal government enabled the emergence of urban farming by, at the same time removing taxes for the philanthropic sector, incentivizing wealthy individuals to invest massively in foundations (Salamon; 2014), foundations who nowadays perfuse indirectly urban agriculture economics. Moreover, the local government inaction in front of city decline, and the progressive evaporation of public services in entire neighbourhoods, consequences of urban ‘rightsizing’ strategies (Anderson; 2011), engaged individuals to cooperate for reallocating the remaining resources. In the case of Detroit, access to food has been determined by *food justice* activists as a key issue to address citizens’ needs. In this sense, urban farmers are indeed the illegitimate child of the city.

The other conclusion we would like to draw from Greg’s insight refers to the replicability of our observations in other places. When Greg talks about the city, he primarily refers to the City of Detroit, an administration that has been through 50 years of harsh decline, a mayor sent to jail in 2008 and who has not proved yet its capacity to cope with numerous issues, from land vacancy management to regular sewerage floods. Although urban farming is a global phenomenon (Smit *et al.*; 2001), its actualized forms differ so much from one place to another that comparison tools are sometimes hard to find. A significant part of our work as consisted in elaborating criteria in the light of which we would compare our farmers: the question of barter-network embeddedness, the active participation to urban farming advocacy may provide opportunities to compare forms of urban farms across cities, across countries.

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Annex-Methodology

Table 1: List of categories used to classify the recipient activity (alphabetic order)

Administration	Animal	Arts and culture	Car industry	CDC (community development corporation)
Church	Civic engagement	Club	Community organizing	Consulting for NPOs
ECDC (Early childhood development center)	Economic development	Education	Environment	Farming
Food	Foundation	Health	Heritage	Hospital
Housing	Legal help	Local business	Media	Minority
Museum	Music	National firm	Non-Profit networks	Planning
Real estate company	Drug rehab centre	School	Sciences	Security
Senior	Sport	Theatre	Thinktank	Transportation
University	Unknown (n= 62)	Urban recovery	veterans	Women empowerment
Workforce training	Youth empowerment			

Table 2: List of interviewees

Date	Name	category	Duration (mn)
3rd of October 2018	Anya	architect	65
21st of January 2019	Jeffrey	farmer	40
22nd of January 2019	Mike	farmer	54
23rd of January 2019	Mark	NPO contact/ farmer	50
28th of January 2019	Noah	farmer	50
30th of January 2019	Greg	farmer	67
4th of February 2019	Gregory	City administrator	61
5th of February 2019	Ritchie	University	40
6th of February 2019	Jerry Ann	NPO contact/ farmer	77
18th of February 2019	John	journalist	63
21th of February 2019	Michael	NPO contact/ farmer	69
22th of February 2019	Patrick	NPO contact/ farmer	69
22th of February 2019	Luis	farmer	52
23th of February 2019	Dan	NPO contact	67
27th of February 2019	Mary B. Danielle	Foundation	57
4th of March 2019	Kathryn	City administrator	87
6th of March 2019	Ryan	NPO contact	50
11th of March 2019	David	NPO contact	51
12th of March 2019	Gary	farmer	70
15th of March 2019	Annmarie	NPO contact	49
27th of March 2019	A1*	City administrator	50
3th of April 2019	Britney	farmer	65
4th of April 2019	Christine	foundation	63
4th of April 2019	Malik	NPO contact/ farmer	57
5th of April 2019	Imani	NPO contact	60
11th of April 2019	Ashley*	NPO contact	60

*Interview not recorded

Figure 1: Farmers' Guideline *Source: The author*

Structure:

- Presentation of the theme (UA and legalisation in Detroit) and why he/she/them is important for my research, presentation of the structure:
  - Working in Detroit How, Why?
  - The Farm
  - Issues related to regulation
  - Personal vision of UA in Detroit

Never forget to ask for recording BEFORE starting the ITW

1. **Working in Detroit, Why, How?**

Individual information

- Would you mind presenting you briefly? Age, professions, academic background
- Are you a Detroiter? If yes, why did you choose to stay here? If no, what were the event that led you to settle here?

About the Job

- Is farming your principal activity?
- Have you got a background in farming?

Variables

- How old are you?
- What is your university degree?
- What did your parents do?
- How much do you earn from your activity?
- How many children have you got?

2. **The Farm**

The activity itself

- Would you mind describe the farm for me? Size, for profit or non-profit, crops you have on, is it running all along the year?
- How do you get your seeds?
- Are you the owner of the land? Do you share it with someone else? Is it illegal?
- How did you get the land?
- How many people work here?
- What is the size of the land?

The financing

- Did you finance your activity from your own savings? If no, how did you finance your activity?
- How do you sell you products? With CSA, direct sell, market sell, partnership with public organisations, restaurants?
- Have you received any help in the form of grant, tax cut? From whom? Banks? Foundations?
- How did you apply to that grant?
- (Have you got a specimen of grant application form?)
- What are your future plans for the farm? How do you plan to finance it?

3. **Regulations, issues related to the activity**

Public institutions

- Are you in contact with public institutions (city council, county, state)
  - If yes, what kind of contacts: do they come for check? Do they do administrative control?
  - If no, would you like being in contact with them, better not?

Problem they may face

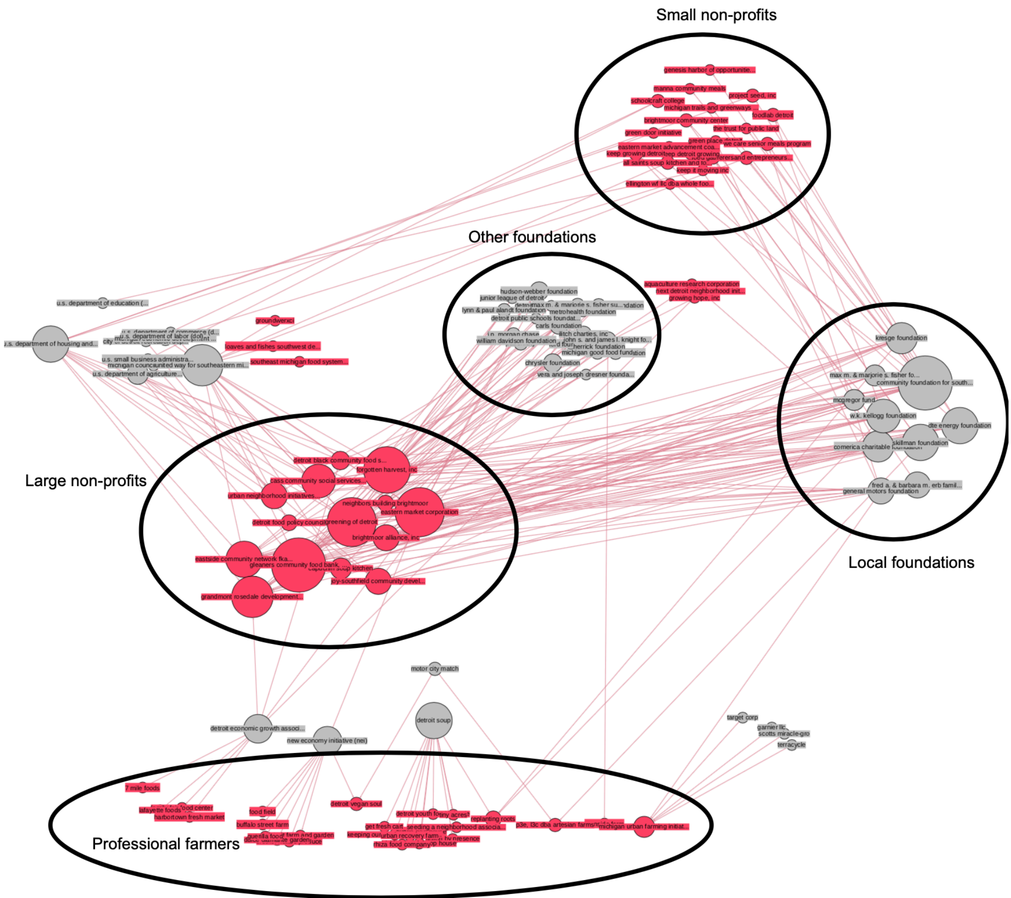
- What is/are your main problems with your activities?
- With whom have you got frictions? State, County, City, neighbours, others?
- How would you characterize these problems?
- What are your relationships with other farmers?
- How are your relationships with non-profit farms?
-

4. **Vision of UA in Detroit**

- What do you think of the expansion of UA in Detroit?
- According to you is the municipal Council going to the right direction or not?
- How do you imagine UA growth in the years to come in Detroit?

Conclusion: do you want to add something? Do you know someone who would be interested in answering my questions?

Figure 2: Grant Network and inferred categories (author's projection) *Source: Detroit Ledger*



Annex 1 (Section 1)

Table 1: Number of granted farming-related activities and their share in the overall allocations
Source: The Detroit Ledger; 2018

Year	2010	2011	2012	2013	2014	2015	Total
Number of grants	73	75	93	183	116	107	644
% of total grants	4.2	3.8	4.5	5.9	5.2	4.9	
Amounts (M$, approximated*) and year variation (%)	7.7	10.1 (+30.6%)	8.3 (-19.3%)	14.5 (+82.2%)	11.3 (-23.4%)	8.5 (-22.9%)	60,6
% of total amounts	2.11	2.04	1.08	1.53	1	1.1	

*amounts have been flatted to hundreds of thousands. Attention has been paid to orders of magnitude

Figure 1: Grants allocated in Detroit between 2010 and 2015 (amounts and number of records)
Source: The Detroit Ledger; 2018

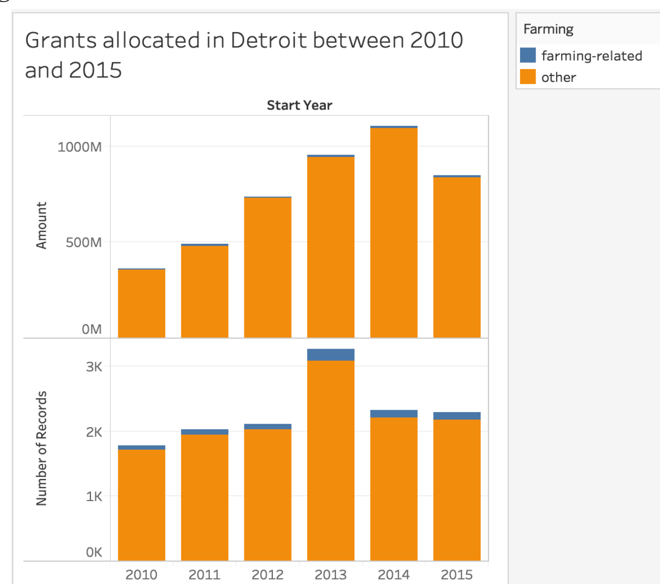


Figure 2: Non-profit organization's share of the overall grant budget
Source: The Detroit Ledger; 2018

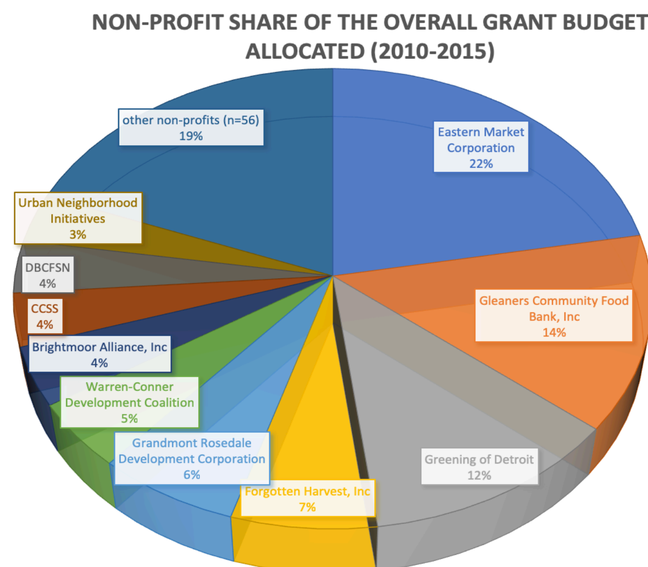
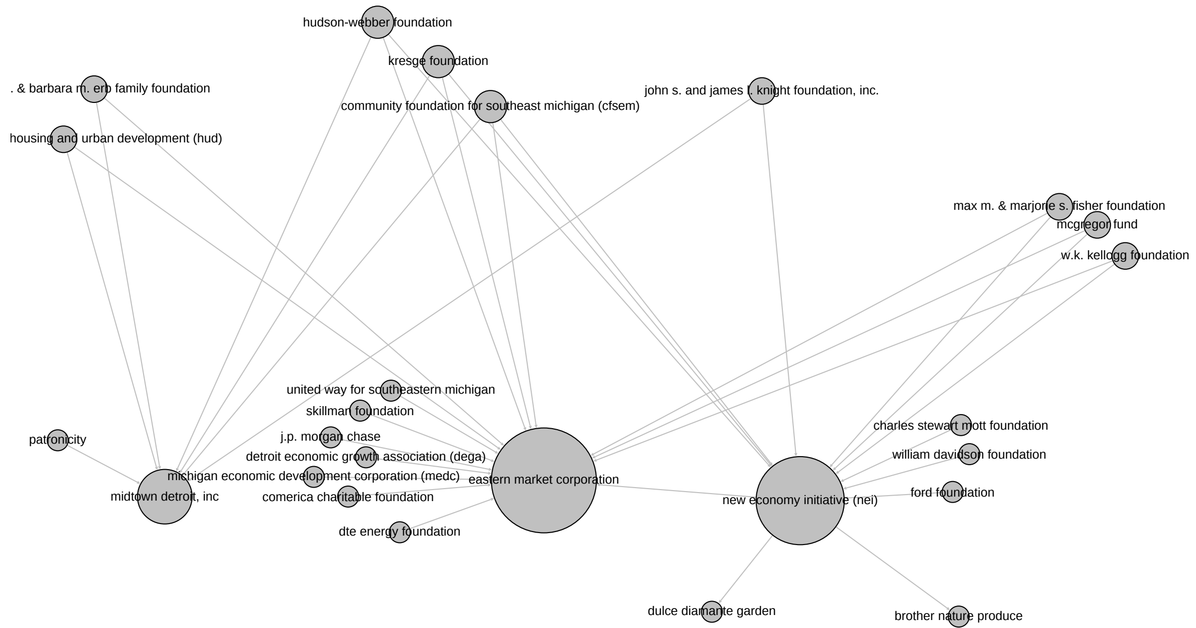


Figure 7: Grant rewarding of four actors

Source: Detroit Ledger, visualisation: the author



Annex 2 (Section 2)

Table 1: City of Detroit revenue between 2008 and 2013 ($ Millions)
Source: Tuberville C., Wallace, 2013 "The Detroit Bankruptcy", Demos: an equal chance for all, p16

	2008	2009	2010	2011	2012	2013
Muni Income Tax	276.5	240.8	216.5	228.3	233.0	238.7
State Revenue Sharing	249.6	266.6	263.6	239.3	173.3	182.8
Wagering Tax	180.4	173.0	183.3	176.9	181.4	173.0
Property Taxes	155.2	163.7	143.0	182.7	147.8	134.9
Sales & Service Charges	191.3	166.7	154.1	155.0	145.4	120.4
Utility Users and other taxes	73.0	71.5	64.8	64.8	57.1	54.8
Other Revenue	156.9	142.7	134.2	152.4	125.5	93.4
General Fund Reimbursement	34.7	55.7	47.6	32.3	47.6	31.2
Transfers	80.1	82.5	83.8	85.1	85.8	92.8
Total	**1,397.7**	**1,363.2**	**1,290.9**	**1,316.8**	**1,196.9**	**1,122.0**

Source: City of Detroit Bankruptcy Filing

Table 2: City of Detroit MVA indicators
Source: Detroit MVA, The Reinvestment Fund, 2011

Market Type (# block goups)	Median Sales Price 2009-10	Sales price coeficient of variance	% Residential properties currently in REO	% Residential proerties with a foreclosure filing in 2009-10	% Owner Occupied Units	Commercial - Residential land use ratio	% Housing units with Section 8	% of all parcels classified as unimproved vacant lots (Detroit Works survey)	% of all housing units classified as vacant, open and dangerous (Detroit Works survey)
A (4)	$124,500	0.80	3.23	1.14	48.12	0.12	0.18	6.50	0.50
B (10)	$68,583	0.55	2.95	3.13	67.23	0.07	0.98	7.50	0.00
C (17)	$31,500	0.76	1.93	1.07	28.92	0.13	1.63	18.00	1.00
D (60)	$21,000	0.74	6.70	4.87	90.09	0.04	2.05	0.00	0.00
E (167)	$11,888	0.90	6.98	4.55	79.33	0.05	3.20	1.00	0.00
F (127)	$10,150	0.87	5.13	3.79	50.52	0.08	2.36	5.00	2.00
G (181)	$6,050	1.17	7.33	4.03	66.37	0.05	3.26	4.00	2.00
H (77)	$5,000	1.13	5.86	2.93	38.60	0.09	2.55	16.00	7.00
I (55)	$4,100	1.16	4.28	2.54	65.71	0.04	1.80	21.00	8.00

Annex 3 (Section 3)

Figure 1: Urban farming standard criteria
Source: QUON, SOONYA, Planning for Urban Agriculture: A review of tools and strategies for urban planners, Cities Feeding People Report, Annex II p60

Location: The definition should specify the location in which UA can occur and provide clear criteria about how to identify the urban or peri-urban area.

Activities: The definition should specify the types of activities included under UA (e.g., food production or non-food production, and more specifically, production of plants vs. animals, and gathering vs. production)

Landownership, Legality: The definition should specify whether it includes legal (vs. illegal) agricultural activities, agriculture on both private and public land, and for private or public use and consumption.

Stage: The definition should specify the stages of production that are included (e.g., growth and harvesting of products, or also processing, marketing and distribution)

Scale: The definition may specify the scale of activities included (e.g., maximum and minimum size of area encompassed by activity)

Table 4: farmers financing model *Source: the author*

Artesian Farms LLC	Equity, impact investors (2 foundations and 10 individuals, 2 grants), product sales
Hantz Farm LLC	Branch of Hantz Group and support from Hantz foundation
Recovery Park Farm	12 foundations, impact investors, product sales
Food Field	Own savings, 1 USDA hoop house grant (more or less $2,000), product sales
Brother Nature Produce	Own savings, NEI grant ($10,000), product sales
Beaverland	Own savings, borrowing from family, 1 USDA hoop house grant (more or less $2,000), product sales
Dulce Diamante Gardens	Own savings, NEI grant ($10,000), product sales
Hamtown Farm	Own savings
Earthworks Farm	Umbrella organization’s budget (donations and grants)
Georgia Street Community Collective	Donations and grants
Oakland Avenue Farm	Donations, grants, product sales
D-Town Farm	Donations, grants, product sales

Table 1: Farmers characteristics

	Artesian Farms LLC	Hantz Farm LLC	Recovery Park Farm	Food Field	Brother Nature Produce	Beaverland Farm	Dulce Diamante Gardens	Hamtown Farm	Georgia Street Community Collective	Earthworks Farm	Oakland Avenue Farm	D-Town Farm
Location (vacancy rate/ neighborhood)	32.8%	36.2%	35.2%	42.5%	16.9%	41.7%	14.3%	9%	31.2%	36.1%	35.2%	39.4%
Type of activities	vegetables (basil)	trees (sugar maple, white oak, black cherry)	vegetables (all kinds)	vegetables (all kinds) livestock (chickens, codfish, emus)	vegetables (salad mix) livestock (chickens)	vegetables (all kind)	vegetables (all kind)	vegetables (all kind)	vegetables (all kinds) livestock (chikens, goats, bees, pigs)	vegetables (all kind)	vegetables (all kinds) livestock (chikens)	vegetables (all kinds)
Activity's status	LLC	LLC	LLC and 501(c)(3)	LLC	LLC	LLC	LLC	501(c)(3)	501(c)(3)	501(c)(3)	501(c)(3)	501(c)(3)
Land tenure	Owner	Owner	Owner	Owner	Owner and squater	Owner and squatter	Owner	Tenant	Onwer	Owner	Owner	Tenant
Stages of production	Growing, harvesting, marketing, distribution	Growing	Growing, harvesting, marketing, distribution	Growing, harvesting, marketing, distribution	Growing, harvesting, marketing, distribution	Growing, harvesting, marketing, distribution	Growing, harvesting, marketing, distribution	Growing, harvesting	Growing, harvesting	Growing, harvesting	Growing, harvesting, marketing, distribution	Growing, harvesting, marketing, distribution
Scale	1 acre	180 acres, 35 actives	40 acres	4 acres	1 acre, half not owned	2 acres	2 acres	1/3 acre	1 acre	2.5 acre	6 acres	7 acres
Purpose	profit from sales	real estate investment	Prisoner reinsertion profit from sales	profit from sales	profit from sales	profit from sales	profit from sales	community organizing	community organizing	Charity	community organizing profit from sales	community organizing profit from sales
Manager/ President's race	White	White	White	White	White and African-American	White	Latino	White	African American	White	African American	African American
Manager/ President's gender	Man	Man	Man	Man	Man and Women	Man and Women	Women	Man	Man and Woman	Man	Woman	Man
Tpes of groups involved (in $/ year)	Agribusiness	Agribusiness	Agribusiness	Low income farmer (irregular)* From 30 to 40 k$/ year	Low income farmer (irregular)* From 30 to 40 k$/ year	Low income farmer (irregular)* From 20 to 45 k$/ year	Low income farmer From 25 to 30 k$/ year	No revenue from the farm Medium-income revenue from other source	Low-income non-profit worker	No revenue from the farm non-profit worker 45 k$/ year	Low-income non-profit worker	Medium-income non-profit worker 45 k$/ year
Category	**Agribusiness**			**Low income farmer**				**Community gardens**			**Farmer cooperatives**	

Median income (2017) $34,750/year
Mean income (2017) $45,140/year

Figure 3: Grown in Detroit Pricing, *Keep Growing Detroit, 2017*

2017 GROWN IN DETROIT FARMERS' MARKET PRICING (see Eitan for wholesale, CSA, & carryover pricing)

Crop	Avg. Size	Avg.Weight	Price
Arugula	Bag	**At least 0.5 lb *dry***	$5/bag
Beans	Quart	**1 lb**	$3/quart
Beets (with greens if fresh)	Bunch, 5 to 7, more if small/1 quart	**1 lb**	$2/quart; $3 w/ greens
Berries	**Pint**	14 oz	$4/pint
Braising Greens	Bunch, 10-14 leaves	**1 lb**	$3/bu
Broccoli	Head or bunch of smaller heads	**1 lb plus = large**	$1/sm $2/lg
Brussels Sprouts	**Stalk**	Not Applicable	$4/stalk
Cabbage	Head	Sm=1 lb Lg=1.5 lb plus	$1/sm $2/lg
Carrots (with greens if fresh)	Bunch with tops, 5 to 7, more if small	**1.5lb w/ tops, 1lb w/o**	$3/bunch
Cucumber	Solo	**0.5 lb lb + = large**	$.50/sm $1/lg
Eggplant	Solo	**0.75 lb + = large**	$1/sm $2/lg
Endive/Escarole/Radicchio	Solo	**.75 lb + = larger**	
Fennel	Solo or bunch if small	**1 lb**	$2/each
Cut Flowers	**Bunch, small/med/large**	Use Flower Gauge	$5/sm $10/m $15/lg
Fruit (apples, peaches, pears, plums)	**Quart – blemish-free**	Not Applicable	$4/quart
Greens: Chard, Collards, Mustard, Asian, Turnip, Beet	Bunch, 14-16 leaves, more if small	**1 lb**	$3/bunch
Garlic	3-5 bulbs bunched with stems	**0.5 lb**	$3/bunch
Garlic Scapes	**Bunch, 10 stems or quarter-sized diameter; length 12"**	Not Applicable	$3/bunch
Herbs: Cilantro, Parsley, Basil, Dill, Rosemary, Sage, Chives, Oregano, Mint, Tarragon, Thyme	**Bunch, quarter-sized diameter**	Avg. 2 oz	$2/bunch
Honey	**Jar**	**12 oz**	$12/jar
Horseradish	**Bunch, 3-4 roots**	Avg. 1 lb	$4/bunch
Kale – separate varieties on each line	Bunch, 10-14 leaves	**1 lb**	$3/bunch
Kohlrabi	Bunch, 3-4	**1 lb**	$2/bunch
Leeks	**Bunch 3-4**	0.5-0.75 lb	$3/bunch
Lettuce Heads	Solo	**0.75 lb + = large**	$1/sm $2/lg
Melon	Solo	Not Applicable	Depends on size
Okra	**Pint**	0.5 lb	$3/pint
Onions (green/scallions)	**Bunch, 5 to 7, more if small**	0.25 lb	$2/bunch
Onions (bulb)	Single or in pint	**1 lb pint**	$2/pt
Pak Choi	Solo or bunch if small	**1 lb.**	$2/each
Peas	**Quart**	0.75 lb	$4/quart
Peppers (Hot) – separate varieties on each line	**Pint**	Not Applicable	$2/pint
Peppers (Bell/Sweet)	**Quart**	1 lb	$2/Green $3/Red
Potatoes	**Quart**	1.5 lb	$2/quart
Radishes	**Bunch: 5-7, more if small**	0.75 lb	$2/bunch
Salad Mix: Cut & Come Again: All Lettuce, Spicy, Fancy	Bag	**At least 0.5 lb *dry***	$5/bag
Spinach	Bag	**At least 0.5 lb *dry***	$5/bag
Squash (Summer)	Solo	**.75lb plus = large**	$.50/sm $1/lg
Squash (Winter)	Solo	**At least 1 lb**	PRICE AT MARKET
Sweet Potatoes	**Quart**	Avg. 1.5 lbs	$3/quart
Tomatoes (Cherry)	**Pint**	14 ounces	$3/pint
Tomatoes (Heirloom)	**Quart**	1.5 lb	$5/quart
Tomatoes (Regular)	**Quart**	1.75 lb	$2/quart
Tomatoes (Green)	**Quart**	1.75 lb	$2/quart
Tomatillos	**Quart**	1.75 lb	$3/quart
Turnips (with greens if fresh)	Bunch, 5 to 7 if small	**1 lb**	$2/bunch
Transplants	**Discuss w/ Market**	Not Applicable	Priced@market

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