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The Creation of a Sustainable Urban Foodscape in San Francisco City and County

**A case study of the CalFresh participants and
their access to healthy food**

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Abstract

Food policies have become increasingly relevant for the federal and municipal planning in the recent decades. Poor quality diets are associated with a number of diseases, such as obesity, heart diseases, diabetes, and some cancers.

I have done a case study of food policy in San Francisco. I focus on the three dimensions of the city food planning, such as access to healthy food, sustainable and local food production, and the importance of nutrition education. For the analysis I chose the population of recipients of one of the federal food assistance programs in the U.S., the Supplemental Nutrition Assistance Program (SNAP), implemented in the state of California under the name of CalFresh.

Implementation of this program under the guidelines of the San Francisco food policy is analyzed in order to demonstrate the importance of food planning in solving the challenges of food access and poor diets, to show how governmental and public engagement in the formation and implementation of such policies and programs on a national and local level can help promote healthy living among the population, and to demonstrate the potential complexities and shortfalls of the implementation process.

I find that despite of the guidelines on Healthy and Sustainable Food introduced in 2009 by the Office of the Mayor of San Francisco City and County that explicitly target food access, regional food production and nutritional education, some of the areas require more attention and facilitation from the Food Policy Council.

Keywords: Sustainable Urban Foodscape, San Francisco, Food Access, Nutrition education, Local Food

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1. Introduction

“The invisible hand of the market” that is doing its job to deliver foods to supermarkets and that allows people in the developed world the possibility of consuming enough calories on a daily basis, is not concerned with balanced diets or environmental pollution – it only cares about maximizing the profits (Ladner, 2011).

Poor quality diets are associated with a number of diseases, such as obesity, cardiovascular diseases and diabetes and some types of cancer. The number of overweight people and obesity rates worldwide are rising due to increased consumption of energy-dense foods. Lack of access to healthy food is one of the obstacles every low-income household may have to overcome in order to follow the healthy diet. In many prosperous cities next to the gentrified residential areas poor neighborhoods exist where fresh fruits, vegetables, and other healthy foods are too expensive or difficult to get. The contemporary challenges of access to affordable and healthy food in the cities on the one part is a matter of governmental attention and policy-making, and on the other part it is a matter of choice of each and every one of us (Hawkes, 2006; Thornton *et al*, 2010).

According to the definition by FAO, “*Food security is a situation that exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life*” (FAO, 2001). In my thesis I would like to explore how challenges of unequal access to food and unhealthy diets of the population are being addressed in one of the biggest and the most expensive cities in the United States - San Francisco City and County, California.

1.1. Objective and research question

The objective of this study, with the help of relevant theories, is to demonstrate the importance of food planning and education, to show how governmental and public engagement in the formation of food assistance policies and programs on a national and local level can help promote healthy living among populations. I will also demonstrate some of the potential complexities and shortfalls of such policies and their implementation . I believe that the analysis of the Supplemental Nutrition Assistance Program (SNAP, formerly the Food Stamp Program) that has been running for over 50 years in a prosperous and developed country such as the United States of America, can be used as a lesson for increasingly relevant food planning agendas both in the developed and the developing world.

Considering the definition of *food security* provided by the FAO, a goal for any food policy should be to improve access to healthy and nutritious food for everyone and to ascertain that people use the improved conditions to change their diets and eat healthier.

The San Francisco Food Policy, namely the Executive Directive on Healthy and Sustainable food introduced by the Government in 2009, is targeting the issues of access to food and healthy nutrition in building a sustainable urban foodscape¹ under the general agenda of the city government. I would like to understand whether the implementation of the SNAP, called CalFresh in the state of California, in collaboration with local food policy is helping its' government and residents to meet these goals.

My *research question* is as follows:

- How does the San Francisco Food Policy addresses challenges of sustainable urban foodscape?

1 The term 'foodscape' in this thesis means relationships with food of a certain population in a certain place.

And my sub-questions are:

- What is the status on food access for the CalFresh benefits recipients in San Francisco?
- What is the status of access to regionally produced and sustainable food in San Francisco?
- What is the status of nutritional education initiatives in San Francisco?

1.2. Theory

As mentioned above, food planning is a complex phenomenon, and it touches upon the most important areas of government activities. Theories I used to introduce the relevance of food planning are mostly articles by scholars from the field of urban and regional planning, such as Kevin Morgan (2009; 2010). These articles discuss challenges of food sustainability, planning, and urban poverty.

There are many perspectives to look at food planning efficiency in order to understand whether it solves the challenge of uneven access to food and healthy diet. In this thesis I chose to focus on those aspects of urban food policy that I believe to be the most important and relevant for contemporary food planning.

These aspects are:

- Access to food for urban poor
- Nutritional education and nutrition-related diseases of the population
- Sustainable food and local production

Undernutrition in low-income urban populations is often associated with their socioeconomic status and challenges of food accessibility. Researchers also confirmed that less educated individuals more seldom consider health impact of food (Gustafson *et al.*, Thornton *et al.*, 2010; Ball *et al.*, 2006). Nutrition influences health of an individual during the childhood and later their labor productivity as adults. Therefore issues of access to healthy and affordable food and awareness of nutrition effects on health are fundamentally important for efficient food planning.

To elaborate on the described perspectives and their importance I will use relevant theories that contextualize the studied phenomena. Then these theories are introduced in each chapter of the thesis in relation to the discussed topic.

There is a number of studies on food access in the U.S. cities and I use them to provide an overview of this challenge, such as articles by Gustafson *et al.*, 2013,

Rose & Richards, n.d. and Short *et al.*, 2007.

Dietary guidelines for fruit and vegetable intake are not followed by the majority of people who have the ability to do so. Challenges related to the politics behind the food market and importance of nutritional education are very-well covered by Marion Nestle (2007), and I use her book *Food politics: How the Food Industry influences Nutrition and Health* to explore this topic. Other academic literature related to the subject of education, healthy diets and nutrition-related diseases such as obesity is used to provide a framework for the research and facilitate further analysis of the local San Francisco (SF) scene.

The sustainable food agenda in San Francisco reflect trends of the global North where local food production movement became increasingly popular and are intensively encouraged by the governments in many cities (Born & Purcell, 2006). The topic of sustainable food is widely covered by the scholars (Katkin, 2012; Ladner, 2011; Schnell, 2011; Morgan, 2010). I will refer and elaborate on a number of publications on food miles and local food production in Chapter 2.

1.3. Method and material

I have done an exploratory single-case study examining “contemporary set of events”, over which I have no control (Yin, 2003, p.9). The exploratory case study investigates distinct phenomenon, in this thesis it is the implementation of the San Francisco Food Policy. Low-income residents that receive CalFresh benefits in San Francisco City and County constitute a specific research context characterizing this phenomenon. The motive behind this thesis is to explore how the specific food policy is being implemented in one of the largest cities of an economically developed democracy. As Flyvbjerg (2006) describes the case story, it is “itself the result”, meaning that the case study research allows to obtain the sensitivity of the issues explored in the case that cannot be accomplished solely by theoretical means. The theories I refer to are used to explore current progress and complexities of the Food Policy and the CalFresh program implementation in San Francisco City and County.

In addition to the SNAP (CalFresh in the state of California), there are other food assistance programs available in the U.S., such as Women, Infants and Children (WIC) (a short-term program providing benefits for women, infants and children for a period from 6 months to one year), School Lunch and Breakfast Programs, Child & Adult Care Food Program (CACFP), and others. I chose to focus on the SNAP, because it is the largest federally funded nutrition program in the U.S., therefore data on participation is more comprehensive and representative.

Case study research is very-well suited to produce context-dependent knowledge that is well-suited to explore social relations rather than to prove general laws, the latter being a difficult task for social sciences (Flyvbjerg, 2006).

San Francisco is a consolidated city-county, a status it has had since 1856, and is the most densely settled large city (population greater than 200,000) in the state of California. I chose San Francisco as a case because it is a diverse city, with more

than 50% of the population of non-white origin and ranks as the 2nd most expensive in the U.S. (SFGate, 2014). The history of food assistance programs in the U.S. is quite long and the programs are under constant improvement, as will be discussed further in the text, therefore, I assume that by now the food policy in San Francisco should be effective in tackling the issues described in the previous section.

The San Francisco Food Policy and the CalFresh program are the embedded units of analysis in the present case study. The SF Food Policy is an illustrative example of an urban food policy that is supposed to address the challenges that I want to explore in the thesis and the CalFresh program reflects the local situation with food provision to low-income populations.

My approach is to chose methods that will help collect information to answer the formulated research questions, rather than choose methodology and then try to alter my research to it. As Flyvbjerg (2006) puts it “Good social science is problem-driven and not methodology-driven”.

Primary difficulty that was identified in an attempt to collect the data on investigated topics is that sometimes the connections between various local organizations contracted by the USDA an involved in the CalFresh implementation and support are unclear and complex. Some of the cooperations that are linked to this program may not be active or represented in San Francisco. For example, nutrition education is supposed to be provided by the UC CalFresh, but in fact there are no representatives registered on the terrotiry of San Francisco City & County. The total number of organizations that are connected with the CalFresh program and the Food Policy of the city is difficult to identify, therefore I used the material provided by the official contractors of the USDA and the San Francisco Government, and countrywide statistics.

Available statistics on participation in the CalFresh program provided by the San Francisco Government cover the period from January 2007 to September 2013. In

order to assess the status of food access, I chose to analyze the distribution of the venues in the selected neighborhoods. The highest number of the CalFresh benefits recipients was the selection criteria of these specific neighborhoods.

The United States Census Bureau provides comprehensive data on all the parameters that were relevant to the research on the urban poverty level, such as data on unemployment and population figures. Reports and other official data provided by local organizations that are directly involved in the implementation of the Food Policy and the CalFresh program within the San Francisco Bay Area were used to explore the tools that are applied by the government to tackle all the arising challenges in the past few years and in at the present time.

Perspective on the nutritional education in San Francisco City and in the U.S. in general was explored through academic literature on that topic and official sources such as the San Francisco government website and reports published by the organizations such the SF-Marin Food Bank, the organization contracted by the SF government to facilitate the implementation of the Food Policy. Through review of various studies on this subject, I tried to understand the population's knowledge about nutritional standards and reasons for making dietary choices. Furthermore, I looked into the CalFresh restrictions on food items that can be purchased using the Electronic Benefit Transfer (EBT) card.

The sources of evidence I used include documentation, such as administrative documents and newspaper articles, and archival records that include GIS maps, charts and survey data.

Since the purpose of this thesis is to explore how the specific food policy is addressing challenges of sustainable urban foodscape in San Francisco, I will try to identify potential complications and shortfalls of the currently established policies and procedures using the findings of the conducted case study research.

I do not expect that the findings of the present research can produce formal

generalizations, rather I expect them to create an example that can be learned from. As Flyvbjerg (2006) emphasized in his paper *Five Misunderstandings About Case-Study Research*, “formal generalization is overvalued as a source of scientific development, whereas ‘the force of example’ is underestimated”.

1.4. Disposition

In Chapter 2 of this thesis I introduce the importance of food planning, elaborate on the complexity of the phenomenon in an urban context and mention relevant examples in other countries with a brief description of food policy in the Brazilian city Belo Horizonte. Theories on food access, regional food production and distribution, and nutrition education and politics are employed in sections 2.2.-2.4.

In Chapter 2 I also speak about the history of the Food Stamp program in detail. It is given in order to explain the historical context of this program and give an overview of its progress in the U.S. Hereafter I discuss the transparency of the Food Stamp Program execution and how certain contractors can benefit from participating in the country's welfare policy, in other words how they can make money from poverty.

Chapter 3 begins with an overview of the San Francisco Food Policy and its' objectives. The data on the CalFresh implementation in San Francisco is summarized and elaborated on.

Topics of analysis in Chapters 4 cover urban poverty, food access, regional food production and distribution (farmer's markets) in San Francisco. These challenges are looked at from a local perspective and in relation to the Executive Directive guidelines.

In chapter 5 I focus on nutrition education in San Francisco. I present local and data on obesity and explore the current nutritional education initiatives that are carried out in the county.

2. Theory. Challenges of food planning.

Questions of food security, ecology, access and distribution are becoming highly relevant in the contemporary world. Reasons for this have already been well-described by the scholars and they are: price surges that lead to food insecurity and subsequent food riots, climate change effects related to water stress and damaged ecosystems, land grabbing², limited access to food retailers ('food deserts'³) for urban-dwellers, and health problems entailed by malnutrition and rapid urbanization (Burn & Purcell, 2006; Morgan, 2009; Morgan & Canino, 2010).

Food security is directly linked to economic output as proper nutrition influences health and labor productivity in an urban context. Policy-making related to the foodscape matters interferes with main government units such as agriculture, education and public health. The quality of diets and access to proper nutrition differs among income, age, gender and ethnicity groups. To address the needs of everyone it is necessary for policy-makers to have a comprehensive understanding of the environments that they are working with, whether the policy is being formed on a neighborhood, city, regional or countrywide scale (Skolnik, 2008).

2 Land grabbing is the contentious issue of large-scale land acquisitions: the buying or leasing of large pieces of land in developing countries, by domestic and transnational companies, governments, and individuals. While used broadly throughout history, land grabbing as used today primarily refers to large-scale land acquisitions following the 2007-2008 world food price crisis.

3 A 'food desert' is a geographic area where affordable and healthy food is difficult to obtain, particularly for those without access to a car. Food deserts exist in rural areas and low-income communities.

2.1. Food Policies

The image of the city as a non-agricultural community that obtains food from the trade relationship with its rural producers is changing. Planners in many cities worldwide (e.g. Toronto, Rotterdam and New York) are including a food policy dimension into existing and developing urban plans. Municipal agendas often include targets to reduce greenhouse gas emissions by encouraging urban agriculture and distribution of locally produced food through the organization of farmer's markets. The recent popularity of these projects can also be explained by an attempt by local governments to create a sustainable, and therefore competitive city image. Various types of grants are offered to city-dwellers and businesses to support expansion of green roof projects and build urban farms and gardens (Gorgolewski *et al.*, 2011; Morgan, 2009).

Policy-makers and urban planners have the ability to take part in the creation of more sustainable urban environments and take part in prevention of nutrition-related deceases such as obesity and undernourishment by effectively addressing the food security issue. One of the pioneers in the food policy implementation is, for example, Belo Horizonte, a city in Brazil with a population of 2,5 million people, and 5 million in its metropolitan area. Being a pioneer in integration of food security initiatives into the urban development policy, they have already been implementing urban food policies for about a decade when the similar London Food Strategy program that launched in 2006. It has been titled as a “city that ended hunger” and received numerous international and Brazilian prizes for its' initiatives in fighting hunger, reducing malnutrition and making healthy food accessible to everyone (Rocha & Lessa, 2009).

One of the main reasons why food security initiatives in the mentioned case of Belo Horizonte were so successful is that, unlike in many of the North American and European cities where food movements have entrepreneur-based or social character (Community Supported Agriculture, organic farming, etc.), food policy implementation in Belo Horizonte was supported by the government by means of

establishment of the Secretariat of Food Policy and Supply (SMAAB⁴).

Upon the policies of the new left leaning government (1993) in Brazil, the city of Belo Horizonte developed special programs to promote healthy eating and to address malnutrition mainly among poor families, children, youth, and elderly. They also created partnerships with private food vendors in order to reduce areas that were not supplied by commercial outlets, i.e. food deserts. Price regulation policy was also introduced and financial and technical initiatives were offered to small producers. Those programs have been altered with time and the main lines of the existing ones are “1) Subsidized Food Sales; 2) Food and Nutrition Assistance; 3) Supply and Regulation of Food Markets; 4) Support to Urban Agriculture; 5) Education for Food Consumption; and 6) Job and Income Generation (including Professional Qualification)”. Results of the implementation of these programs made Belo Horizonte the only major city in Brazil where most of the food is supplied by alternative commercial providers to supermarket chains (Rocha & Lessa, 2009).

Most of the programs implemented by SMAAB are partnerships with the Secretariat of Education, Social Assistance and Health policies. As food policies are rarely on the same level of importance as education and health systems, an uncertainty about whether the same support from the government will be received in the future in case of political changes, is one of the challenges that SMAAB might face (Rocha & Lessa, 2009).

Some of the difficulties with urban food planning strategies lay on the political side. Some argue that the reason for ignoring the political relationship between urban elites and their food producers have been due to the split between urban and rural sociology and geography. A better analysis of urban-rural relationships is required to open up and foster the political processes. Belo Horizonte is an illustrating example that proves that above other things politics really matter (DuPuis & Goodman, 2005; Morgan, 2010; Rocha & Lessa, 2009).

4 Secretaria Municipal Adjunta de Abastecimento.

2.2. Poverty and the urban foodscape. Food access.

Along with the economically, socially and environmentally sustainable images that cities in the global North are trying to create, poor neighborhoods exist where people live in a daily struggle to make ends meet. Healthy food, being the most important component that is necessary to live an active life, can be expensive or difficult to get. Often existing food assistance programs are insufficient to solve food access and affordability issues. Displacement of affordable diners, corner shops and cafes as an outcome of urban gentrification, makes food consumption a cultural marker of class distinction, benefiting the modern restaurant and food retail industry oriented at the higher classes of urban dwellers. Rapidly expanding high-end developments create areas of exclusion which low-income population cannot afford to visit or feel uncomfortable entering, which is referred as 'foodie gentrification' by Miewald & McCann (2014). At the same time, overall socioeconomic status of a neighborhood where low-income populations reside may predispose specific type of food stores to open there, and as a result contribute to the food choices people make (Short *et al*, 2007; Miewald & McCann, 2014; Gustafson *et al*, 2013).

Food system research became familiar with the food desert phenomena in the developed countries, when in the USA post-World War II improvements in transportation set favorable conditions for middle-class families to move into the suburbs. Possibility to use large pieces of available land allowed retailers to use operational capacity and economies of scale to lower costs and increase margins. Food deserts are commonly found in low-income neighborhoods where national retail chains and independent supermarkets are not present due to the lower aggregate buying power and low-volume purchasing of the local population, people are forced to pay higher prices for a smaller variety of food of lower quality. Those who do not own a private vehicle have to struggle with their grocery shopping and rely mostly on corner and liquor shops if they live in the food desert areas (Short *et al.*, 2007).

Small retail food stores might be seen as a part of the solution. One issue associated with them is uneven distribution in low-income communities; they are usually located in areas with high number of immigrants and target specific ethnic groups. In San Francisco Bay Area, where Latino presence is quite strong, many of the small stores of such kind offer a wide variety of Latino foods and usually have Spanish-speaking personnel (Short *et al.*, 2007).

Another issue is that supermarkets and small stores which are located in the urban areas often charge more for the same products in comparison with the suburban areas. It is conditioned mainly by higher operational costs that owners are bound to bear. In an attempt to keep the costs down, owners create low-paid jobs for the store personnel and by this create a function of insufficient income. This reverse effect attracts more residents of lower socioeconomic status to these neighborhoods. (Rose & Richards, n.d.; Short *et al.*, 2007).

Approaches discussed by the scholars who want to address the challenge of food access include transportation solutions that involves creation of shuttle service from low-income urban neighborhoods to suburban grocery stores and development of alternative systems of fresh and nutritious food provision, such as local and community supported agriculture⁵, farmers markets and urban gardening (Short *et al.*, 2007).

Availability of stores that sell healthy foods is associated with better nutrition among the area's residents. Although, a study conducted by Boone-Heinonen *et al.* (2011) in urban settings found relationships between the food stores availability and quality of diets mixed, no clear causality was discovered. It is hard to escape a conclusion that increasing distribution of food stores and supermarkets in urban settings cannot be the only strategy for dietary change, and should be accompanied by nutritional education (Ball *et al.*, 2006; Boone-

⁵ Community-supported agriculture is an alternative, locally-based economic model of agriculture and food distribution; association of individuals who have pledged to support one or more local farms, with growers and consumers sharing the risks and benefits of food production. CSA members or subscribers pay at the onset of the growing season for a share of the anticipated harvest; once harvesting begins, they receive weekly shares of vegetables, fruits etc.

Heinonen *et al.*, 2011).

2.3. Local food production and sustainability.

When it comes to the matter of sustainability, food supply is a vital challenge in securing the urban food systems. In line with the development of international food trade, transportation of food products and related carbon emissions have increased significantly, and the discourse about 'food miles'⁶ became widely recognized. Contamination of food as a result of accidents has also raised consumer concerns about safety standards of global food system in the recent years (Caputo et al., 2013).

The main claim against capitalist food system concerns environmental sustainability. Dependence of global food production, marketing and distribution on fuel, chemicals and greenfield land, is used in food activism discourses to draw connections between the localization of food systems and sustainable social and environmental development (DuPuis & Goodman, 2005). In addition to that, local food production is often associated with organic production, which, firstly, may not necessarily be true, and secondly, economic and social dimension of sustainability of organic farming in the circumstances of increasing urban population that spreads out to the lands that were primarily used for agriculture might be widely argued, mainly because of its' lower yields.

Consumers started showing their interest in ethical issues around the food that they purchase, mainly about where it comes from, the way of production, and what are the environmental costs associated with it. Local food movements base their campaigns on claiming that eating locally helps achieving number of goals, namely freshness of food, better taste, avoiding GMOs, saving family farms, preserving open space, and, most notably, reduce carbon emissions associated with food transportation (Born & Purcell, 2006).

6 'Food miles' is a term introduced in 1994 by the Sustainable Agriculture Food and Environment (SAFE) Alliance to address the distance the food travels from producer to a consumer.

Estimated distance for average meal in the United States is 1500 miles, and the prevailing argument in the promotion locally produced food consumption lies on the assumption that it reduces food miles and the accompanying fossil fuel transportation costs and carbon emissions (Katkin, 2012).

Environmental and economic cost of globalized food transportation is claimed to be inadequate, opening space for the discourses on impacts of food production and distribution. Some argue that claiming food miles as a main reason to build case for local food is not a strong argument even though distances that what we eat travels before getting into our plate are unarguably outrageously long (Caputo *et al.*, McWilliams, 2009; Ladner, 2011). Although the number of food miles the average meal travels is widely argued mainly because of unclear definition of what average meal stands for, local food movements using this argument for their promotion became popular in the recent decade and are widely supported by different organizations in Europe, the U.S. and Canada (Schnell, 2013).

Food activists and researches lately have been arguing that local food production is preferable to global or national scale production, that it would be more socially just, provide better nutrition, security and quality. Although the right way to analyze whether locally produced food is the most ecologically sustainable is to apply the product life cycle analysis which allows to measure carbon footprint of the product. That is in a case if carbon and 'food miles' is the metric of sustainability, not taking into account social and economic angles. Morgan (2010) argues that for the matter of deliquescence local food movements could “degenerate into a parochial form of green localism”. Absence of generally accepted indexes of food sustainability create space for confusion about local food system sustainability targets and whether they are met in reality.

Findings of the research conducted by Weber and Matthews (2008) show

that despite of the public concern and rising public awareness of food-miles, most of the carbon emissions are associated with the production cycle, than with the product transportation (only 11% of GHG emissions of the product life-cycle in the US case). They suggest that dietary shift will contribute more to decreasing an average household food-related climate footprint than consumption of locally produced food. For example, if a household chooses to substitute red meat and dairy products could with chicken, fish or vegetable meal, it would be a more substantial contribution than the shift to local products, as on average red meat is 150 % more GHG-intensive than chicken or fish (Weber & Matthews, 2008).

Ladner (2011) gives another example of questionable environmentally friendly character of local food consumption: he explains that apples imported to UK from New Zealand will represent less carbon emissions than those produced locally, mainly because two thirds of the energy in New Zealand come from renewable sources, therefore an apple can be produce for half of the fossil fuel amount required to produce the same apple in Norther Europe farm. Low energy costs of shipping by the sea also make local production and consumption of apples in UK in winter three times more intensive when it comes to GHG emissions.

Whether it is efficient to use land for producing food locally is another issue. If we compare global food systems that are organized in a way that vegetables and fruits are grown in the places they have a better environment for it, local farmers lack this flexibility and require more land and energy to produce the same amount of food. Production of sugar is an example: yields from sugar cane in the tropics produce twice as much sugar per acre than growing sugar beets in cooler climate such as the Northern Midwest (Avery & Avery, 2008). Such inefficiency influences the final price of the local product and consumers might expect to pay about 10% more for local produce (Ladner, 2011).

Therefore buying locally can produce social losses as well, as inequalities within the community can allocate economic gains produced by local consumption in a way that escalates social injustice. In case of the wealthy community, such consequences can be spread out to a larger scale. Local focus for food planners might also be confusing and dangerous in a way. Scale of food production cannot be a goal, but a part of a strategy to meet certain goals. Thus 'local' does not automatically mean sustainable, and outcomes of each certain strategy that involves promotion of local production and consumption depend on the agenda of those who promote them (Born & Purcell, 2006).

Some counterexamples described above illustrate that linkage between local food and ecological and economic sustainability is weak. There is a thin line that is easy to cross where 'buy-local' movements become utopian, therefore planners need to apply a critical approach when it comes to adaptation of tactics and strategies favoring local production and consumption movements, otherwise they risk to end up in what Born & Parcell (2006) call the *local trap*.

By no way does this mean that supporting the local production is always a local trap, as food systems of some of the cities mentioned in this paper proved otherwise. Growing multi-cultural cities in their attempt to implement the sustainable food strategies are ought to find a balance between localization of food chains and globalization that promotes fair trade with developing countries (Morgan & Sonnino, 2010). It is certain that in case when food security initiatives are supported and encouraged by the government, as demonstrated in the case of Belo Horizonte, that balance is easier to achieve.

As for the public awareness on the matter, research by Caputo et al. (2013) suggests that CO₂ indication on food labels is slightly more important for the consumers than indication of food miles traveled by certain product.

Choice of consumers to buy local food is usually justified not only by an attempt to lower the ecological footprint, but to support local farmers and get more fresh products than those that are offered by the retailers.

2.4. Nutrition and politics

During the last two decades there have been two events on the international arena aimed at solving global food security issues: World Food Summit (WFS) in 1996 and Millennium Declaration (MD) in 2000. WFS' goal was 'eradicating hunger in all countries, with an immediate view to reducing the number of undernourished people to half their present level no later than 2015", and MD's goal was to 'halve, between 1990 and 2015, the proportion of people who suffer from hunger'.

According to the *The State of Food Insecurity in the World 2013* report, the total number of undernourished people has fallen by 17 percent since 1990-92. Despite of the significant progress in meeting the target in some regions, about 842 million people in the world are still undernourished, mostly in the developing countries (FAO, 2013). According to FAO report *The State of Food and Agriculture 2013*, there is about 26 percent of stunted children in the world, as well as 2 billion people suffering from micro-nutrient deficiencies, and 1,4 billion overweight people.

At the same time, obesity is also a worldwide problem nowadays, it is a growing epidemic that is often happening side by side with underweight. This issue is shared between high-income and low to middle-income countries. Children have unhealthy eating habits since early age, especially in low-income families. Low-quality foods are accessible in corner shops and often purchased by children on their way to school. American statistics show that adult obesity increased from 12% to 18% just between 1991 and 1998 and the number of overweight children (6-11 years old) doubled from the late 1970s to the early 1990s (Nestle, 2007, p.8; Cannuscio *et al*, 2010).

Nutrition is fundamental to human health, it influences children physical and mental development, and it affects their health and labor productivity as adults. Most of people are confused about what a healthy diet is. Nutrition habits depend on many factors, mainly on geographical, cultural and economic ones. Several researches on nutrition demonstrate that diets rich in fruit and vegetable, limited

fats of animal origin and balanced in calories are beneficial for human health (Nestle, 2007, pp.7-10).

The costs of education and measures that can be taken to deal with micronutrient deficiencies, such as iodine deficiency that is widespread in the developing world, is not high. Per capita expense for adding a small portion of a iodized salt to food is about two pennies a week. Even though in high-income countries a iodized salt has been facilitated for more than 50 years, in many countries of the world uniodized salt is still being sold. Educational activities, such as promotion of breastfeeding and healthy diet can help enable improvements in nutrition worldwide (Skolnik, 2008).

Generally, the public lacks basic understanding of nutritional science to navigate in the vast food market, to access and use information and services related to the healthy choice of foods. Even though the Dietary Guidelines for Americans have existed in the USA since 1980, the average number of citizens who meet the fruit and vegetable intake recommendation is 28% and 49% respectively. For low income population these numbers are 23% and 42%. General knowledge of the amount of calories being consumed on a daily basis is also lacking, for example, only 9 percent of the interviewed, as per the results of the conducted survey, were able to assess it (Liu, 2012; Rose & Richards, n.d.).

As it was mentioned earlier in the text, diets nowadays largely depend on income and social status. Wealthier people tend to eat healthier and usually are more physically active. Food and beverage corporations influence the gaps in diet by seeking for new marketing opportunities in low-income neighborhoods and among minorities when their profits from sales of certain products drop. Income of each household plays the most important role in the adequacy of their diet. Those whose earnings cannot cover cost of the products that would supply the minimum of nutritional needs almost entirely feed on starchy, carbohydrate-rich, and unhealthy fast foods, often consume contaminated food and water. Those who live in more affluent settings and possess higher incomes and have easier access to

variety of foods tend to add a wide range of vegetables and fruits, livestock products and grain-based meals to the diets (Southgate *et al.*, 2007).

Modern urban life, as well as societal changes such as an increased proportion of women in the labor force, gives the populations opportunities to spend more time on education, cultural activities and leisure, replacing home food preparation with frozen pre-cooked meals and dining.

There is a number of factors that influences people's nutrition, that might be genetic (e.g. allergies), economic (e.g. poverty), poor preparation of food due to limited access to clean water and others. Challenges of food security vary not only between continents or countries, but, as described previously in this section, also between neighborhoods within just one city. All this make the challenge of nutritional education complicated and multidirectional. What food people consume is very often determined by their knowledge and behavior, therefore education in the area of nutrition plays one of the most important roles in the formation of a healthy diet.

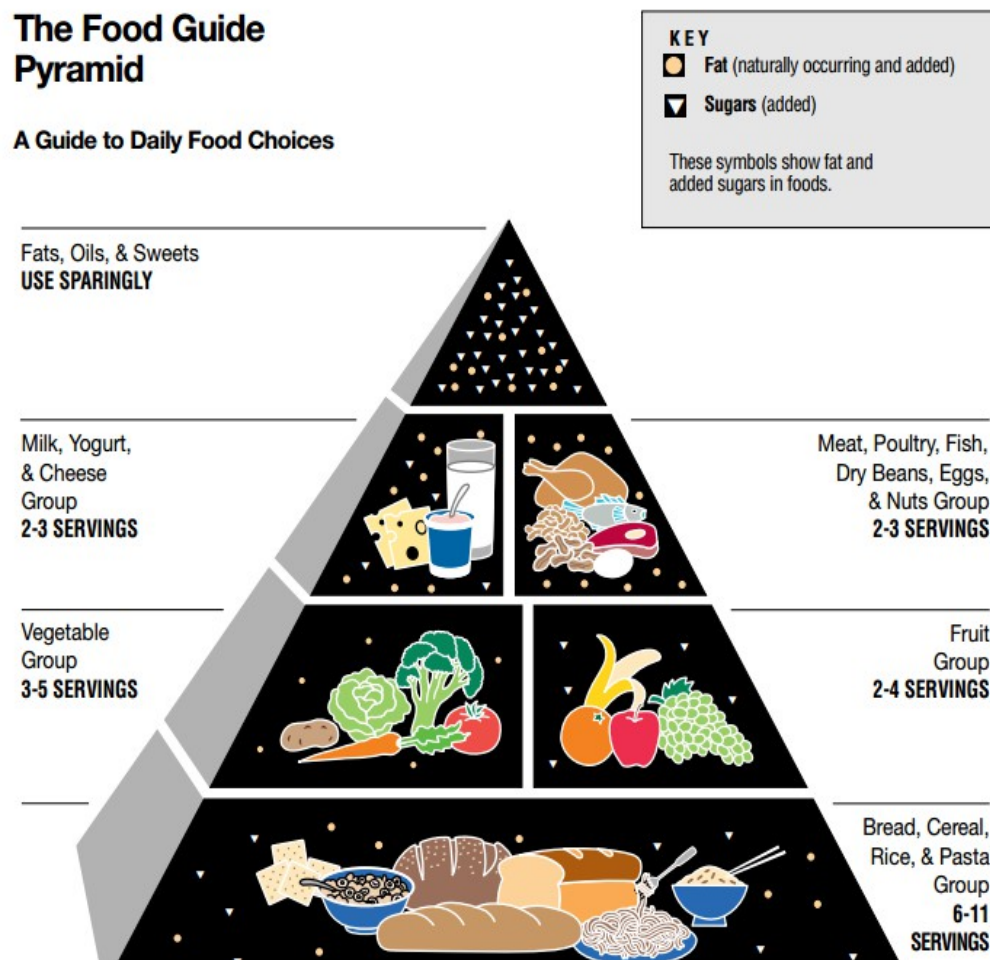
Contemporary public knowledge about nutrition and health is mostly based on the scientific research which is published on the internet and other media. It is important to understand that most of the research focus on a single nutrient, mainly because it is much easier to get funding for such type of research. Thus the complexity of every product in our diet, which is multi-nutrient, are being left out. These studies are used by the food companies in their marketing materials, e.g. place the information about 'healthiness' of their product on the labels.

What makes nutritional education political is that for any government promotion of healthy eating is a constant struggle between public interests and the influence of food corporations. Very often the agenda of the corporations overlooks what science tells about nutrition and its' effect on health. Advertising of foods is much more aggressive than information about healthy diets and foods. Amounts of money spent to advertise new food items by corporations in the USA are many times higher than the costs of promotion of the USDA Food Guide Pyramid

(Picture 1). The government simply cannot have more funds in their disposal to assign them to nutritional education needs than corporations spend for the marketing of their products (Nestle, 2007, pp.93-136).

Other difficulties of healthy eating commitment promotion based on research data lie in people's perception of scientific data as a part of the many belief systems like religion or concern about animal rights. Therefore nutritional science is a subject of interpretation and largely depends on the point of view.

Figure 1. The USDA Food Guide Pyramid.



Source: www.cnpp.usda.gov.

Dietary guidelines in the U.S. (Figure 1) received a lot of criticism from various

perspectives, such as critiques on the limits of serving recommendations and absence of vegetarian diet option, or critique on the lack of information on required daily intake of essential fatty acids and overall complexity of nutritional and health data, critiques on objectivity of division of foods into 'good' and 'bad' ones, and gastronomical advices to separate certain foods into different categories (beans and meat, for example).

In addition to the described critiques, any kind of nutritional advice from the government should reflect on potential diversity of food preferences within the multicultural population. For example, some ethnicities cannot digest the lactose in milk after a certain age therefore some might require to represent dairy products as optional rather than the superior source of calcium (Nestle, 2007; Skolnik, 2008).

The agricultural and food industry is seldom behind dietary advice issued by the companies specialized in nutrition consultancy. The phenomenon that strongly influences food politics in the USA is lobbying. Various corporations and organizations hire lobbyists to represent their private interests in the governmental organizations and influence the government decisions. Activities of such representatives are hidden from the public eye most of the time.

There is a number of methods used by the lobbyists to affect the decisions. They submit various propositions for legislation and regulation changes based on comprehensive research, make campaign contributions, organize public demonstrations and events, use personal contacts to achieve their goals, etc...

Lobbyist from agricultural and food industries contribute significant amounts of money through the campaigns (in 1998 the Center of Responsive Politics estimated the figure was \$ 52 million of the officially reported money). In addition to the official numbers, sums that are being contributed through various kinds of social transactions, such as dinners and gifts, are difficult to estimate (Nestle, 2007, pp. 95-110).

Nutritional specialists and those involved in the food research should be aware of the ways and possibilities of how laws are being influenced at the expense of public health.

Another field of influence on nutritional and dietary advice lies in the professional field of nutritional research. Nutrition specialists are connected to food companies in the same ways as food lobbyists to government officials. Nutritionists are influenced in the number of ways, and the most commonly used is sponsorship of education and research. This is a serious threat to the integrity and honesty of nutritional education as it undermines the specialists independence of opinions on diet and health. In the US, various nutritional journals and journal supplements are being sponsored by the food and drug companies such as Coca-Cola, Procter & Gamble, Nestle and others (Nestle, 2007, pp.111-136). Other ways to control the nutritional education are sponsorship of conferences, research studies and even funding of academic departments by the food companies (for example, the case of partnership between Novartis and UC Berkeley University). The latter arrangement compromises the academic freedom of a publicly funded university as research agendas might be imposed by the funding corporations.

According to the issues discussed above, nutrition education is an essential dimension of any food policy that needs to be addressed with the same level of attention as the issues of food access and sustainability. Further in the text I will analyze whether the nutrition education initiatives have been successfully implemented in San Francisco.

2.5. The Food Stamp Program history

Nowadays the main goal of the biggest welfare program in the United States, the Supplement Nutrition Assistance Program (SNAP), is to address issues of hunger and malnutrition in the low-income populations. In order to better understand the political and social dynamics of the biggest food assistance program in the U.S., its historical background is provided in this section.

Initially the idea of the first Food Stamp Program (FSP), which lasted from 1939 to 1943, was to support farmers by permitting people who received aid from the government to buy stamps for normal and surplus food purchases. During 4 years of the program being operational approximately 20 million people participated in it. The reason for ending the program was the absence of conditions of “unmarketable food and widespread unemployment” that initiated it no longer existed.

18 years thereafter President Kennedy began a food stamp pilot program in 1961 fulfilling his campaign promise to make farms prosperous and create surplus food distribution system that was supported by urban and rural organizations.

Participants of this pilot program were entitled to purchase stamps that were of greater value than the money paid for them and then use these stamps at participating stores. Although, the concept of special stamps for surplus food was eliminated and replaced by the emphasis on perishables.

In 1964 the Food Stamp Act was signed into law, which left the eligibility criteria to be defined by each state and limited number of establishments where stamps could be used to government-approved ones.

By the end of 1974, 15 million people participated in the program, which exceeded the government predictions. Rapid increases were explained by the geographical expansion. Changes and innovations to the program in the 1970s were a response to increased public concern over hunger in “the land of plenty”.

Among others, changes that came with The Food Stamp Act in 1977 included the expansion of eligibility criteria and removal of the requirement to pay for stamps with cash. Food stamp recipients then were provided with a portion of stamps instead of purchasing them with cash. The Act also included integrity provisions such as fraud disqualifications and enhanced funding to States for anti-fraud activities.

In the 1980s Food Stamp was linked to the Aid for Families with Dependent Children (AFDC) program. Later on Food Stamp eligibility rules were expanded to include households qualifying either for AFDC or Social Security Insurance.

Hunger problem in the USA in the latter half of the 1980s led to another change in the program, they included elimination of sales tax on food stamp purchases and increased the limit for most households, added homeless to the eligible population and expanded nutritional education initiatives.

Since 1993 development of EBT systems was widely discussed and in 1996 the mandate was issued that all States should implement EBT systems before October 1, 2002 (USDA, n.d.).

Eligibility rules for participation in the Food Stamp Program were expanded again in 2002. Any person participating in a welfare program funded through TANF⁷ or another state-level welfare program and persons living under 200 percent of the Federal Poverty Line⁸ could apply for the FSP.

By 2004 23.8 million Americans were participants of the FSP. In 2008 it was officially renamed to the Supplemental Nutrition Assistance Program (SNAP). The name change did not influence the program's structure and was intended to

7 Temporary Assistance for Needy Families. TANF was structured as a block grant to be administered by the states.

8 The set minimum amount of gross income that a family needs for food, clothing, transportation, shelter and other necessities. In the United States, this level is determined by the Department of Health and Human Services. FPL varies according to family size. The number is adjusted for inflation and reported annually in the form of poverty guidelines. Public assistance programs, such as Medicaid in the U.S., define eligibility income limits as some percentage of FPL.

make it feel more comfortable for people to participate by removing associations with initial paper food stamps.

2.6. EBT cards market or the other side of the welfare

In 2002 the mandate to introduce electronic cards to replace the paper stamps opened a door for cronyism. In order to keep the costs down, the majority of states hired private companies to manage the benefits distribution.

There are two types of fraud that can be found in the SNAP (or CalFresh) program. These are the falsification of eligibility documents by a person that applies for the benefits and trafficking of EBT cards. It is a complicated procedure to prove that a person falsified documentation and absence of data may often result in a failed prosecution.

Trafficking of EBT cards created a black-market on the web (Craigslist, Facebook, etc...) where people posted advertisements to sell their cards for cash in smaller amounts than the available benefits.

In the beginning of 2014 two men were accused of running the scheme for more than 2 years in Dallas. One of the accused men managed the store that offered food and beverages. They bought food stamp benefits from actual recipients in exchange for cash at a 50% exchange rate, that means that they paid 1\$ for every 2\$ of benefits. The amount of the redeemed benefits were then transferred in small deposits, to avoid being reported, to one of the partners' bank accounts. This case is being investigated by USDA officials. These schemes might become less likely to happen if there is a sufficient number of investigators policing the retailers that accept EBT cards (The United States Attorney's office, 2014).

One interesting incident that is worth mentioning happened in October 2013. There was a computer system shut-down and EBT cards did not show the limits for a few hours. One of the leaders of food retail, Walmart, announced that people could still use their cards to purchase food, expecting that people could not use these technical problems to their advantage. This resulted in endless queues in their stores that ended the same moment as the cards were back to operational. It was reported that one person was convicted for an attempt to get food for 700\$

while her card showed a balance of only 49 cents.

The SNAP program is managed by the Department of Agriculture even though it is designed as a welfare program. This is because originally this program was designed to maintain high agricultural commodity prices. The Department of Agriculture oversees implementation of all of the existing food assistance and distribution programs, while the House Committee on Agriculture and the Senate Committee on Agriculture Nutrition & Forestry have jurisdiction over them (House Committee on Agriculture, n.d.; Senate Committee on Agriculture Nutrition & Forestry, n.d.).

The Government Accountability Institute's findings show that contributions from JP Morgan, the main EBT services provider, to both the House and the Senate have grown significantly since they were contracted by the government (EBT provider in 23 States⁹).

JP Morgan contribution per election cycle accounted for an average of \$82, 897 between 1998 and 2002. After they entered the EBT market, their average donation per election cycle has grown to the average of \$215,120 (The Government Accountability Institute, 2010).

After the presidential election in 2008, when Barack Obama won, the American Recovery and Reinvestment Act made changes to the SNAP policy that favored the EBT providers. In 2009 the maximum SNAP benefit was increased by 13,6% which encouraged more individuals to sign up for food stamps (The Government Accountability Institute, 2010). A second change was related to adaptation of broader rules in order to increase SNAP caseloads, making jobless adults without children eligible for the program. The connection between SNAP enrollment and profits of EBT service providers is clear – the more people sign up for the benefits, the more EBT cards are issued, the more income is coming into the accounts of the EBT companies.

⁹ <http://www.fns.usda.gov/sites/default/files/state-lines.pdf>, retrieved on April 17, 2014.

Report published by the USDA in April 2011 claims that food expenditures by low-income households increased by 5.4 percent and food insecurity declined by 2.2 percent since the introduction of the American Recovery and Reinvestment Act of 2009 (USDA, 2011).

One can assume that by enhancing the SNAP expansion the president's administration increased its' electorate. It is possible that those who receive more benefits from the government's welfare system will more likely vote for the same political party during the next election.

3. San Francisco Food Policy

3.1. Structure and Objectives of the San Francisco Food Policy

The first steps towards a comprehensive Food Policy being implemented by the city of San Francisco were taken shortly after passing the Sustainability Plan Resolution (1997) by the San Francisco Board of Supervisors¹⁰, when they acknowledged the achievement of a sustainable society as an essential goal of the city development. Various resolutions on the nutritional standards related to genetically engineered foods, fair trade certified goods, children nutrition and organic foods have preceded the Executive Directory (ED) on Healthy and Sustainable Food, that declares the city's commitment to increase the amount of healthy and sustainable food published in 2009 by the office of the mayor of San Francisco (San Francisco Government, 2009).

List of challenges to be met by the local government included all of the challenges of urban foodscape described above. The San Francisco Food Policy Council is responsible for ensuring that the principles of the ED are legally embedded into the initiatives in the six major areas such as:

- nutritional standards,
- urban agriculture,
- food business,
- fisheries,
- regional food, and
- hunger and food security.

San Francisco promotes nutritional standards among community based organizations and food programs that were not required to meet federal or state nutritional guidelines or not funded by the city already (food pantries, shelter

¹⁰ The Board of Supervisors is the legislative branch of the City and County of San Francisco. The Board consists of 11 members. Each member is elected on a non-partisan basis from a district where he or she lives. Their mission is “to respond to the needs of the people of the City and County of San Francisco, establish city policies, and adopt ordinances and resolutions” (www.sfbos.org).

meals, etc...). These guidelines require that “*trans fats or any fat, oil, shortening or margarine containing artificial trans fat, may not be used in the preparation of any food within a food facility*”. Potential contractors of the city should serve nutrient-dense healthy foods and beverages which should be fat free or contain only 1% of fat, 100% fruit or vegetable juices, fresh water and no soft drinks.

Hence it's required to limit number of foods high in fat, saturated fat and trans fat, added sugars and salt. Other requirements concern balanced meal provision according to the age group, such as preferences for whole grain products and the desirable way of food preparation that favors boiled, steamed, baked, grilled and stir-fried meals instead of a deep fried option, protein foods, desserts and food with added preservatives. No alcohol or sodas can be purchased with city funds or served in city funded programs.

To support local production and promote vegetable and fruit intake, one of the guidelines requires potential contractors to “*serve at least two servings of fruit and/or vegetables with each meal; use a wide variety of seasonal and locally grown produce whenever possible*” (San Francisco Government, 2009).

3.1.1. SF-Marine Food Bank

SF-Marine Food Bank, an organization that employs volunteers and exists thanks to the sponsorship and donations from companies and individuals, and with the help of the cooperation between various retailers, restaurants and websites through special campaigns and offers, works on the territory of San Francisco and the Marin area.

They work closely with the SF Government on promotion of CalFresh by organizing a “*Food Stamp (CalFresh) Outreach*” program. According to the 2011-2012 report by the SF Marine Food Bank, only half of the people that are eligible for the CalFresh program were enrolled in it at the time of the report. The main reason is assumed to be the paperwork burden that each person should submit in order to access the program's benefits. To solve this issue, the Food Bank arranged a partnership with the Human Services Agency of San Francisco. Each month they organize one meeting where during one day all the documentation can be submitted and verified, so that participants can use their EBT cards to purchase foods under this program already on the next day. According to the information published on SF-Marine Food Bank, they plan to help more than 2500 people to enroll to the CalFresh in 2014.

On average about 30,000 households are being served by the pantry network organized by the SF Marine Food Bank. To provide an easy access for participants, pantries are located in low-income housing developments, places of worship, community centers, seniors centers and at the formerly supportive housing for the homeless. Weekly markets are also organized to provide participants a selection of fresh fruits, vegetables and staple foods that might be unaffordable otherwise.

Other initiatives of Sf-Marine Food Bank include programs aimed at improving food access for children and families (Healthy Children Pantries, Morning and Summer Snack Programs), for seniors (Home-Delivered Groceries, Brown Bag Pantries, and the USDA Supplemental Food Program). The Commodity

Supplemental Food Program (CSFP) that is being operated by the Food Bank serves about 11,000 low-income seniors and also pregnant women, women up to one year postpartum and children under the age of six.

Most of the programs are run by volunteers and participants of the actual programs, and often those who receive food through these programs also sign up for volunteering. The Food Bank claims that 96 percent of all the donations go directly to the programs. Sponsors of the organization include some big names like JP Morgan Chase, Bank of America, Walmart, Genetech (member of the Roche group), and Kraft.

3.2. Progress of the CalFresh in San Francisco

Statistics on the participation in CalFresh program (**Table 1**) are being published on San Francisco Government website. For comparison I chose January 2007 (the earliest available data) and September 2013 (the most recent data). Number of cases has increased by 118 %, from 15658 cases in January 2007 to 31938 (50781 individuals) in September 2013. From the overall increase of enrollment, number of children receiving Calfresh benefits increased dramatically by more than 4 times since 2007. These changes are most likely related to the broadened eligibility requirements and better promotion of the participation in the program by the local government and the SF-Marin Food Bank.

According to the eligibility requirements, benefits are available to non-citizens as well, namely to “most legal immigrants who have lived in the country for 5 years”, to those who “are receiving disability-related assistance or benefits, regardless of entry date”, and to “children under 18 years of age regardless of entry date”. In addition to that, in cases where some of the household members does not hold legal immigration status, others who do hold such status in the same household are still are eligible for CalFresh.

There is also a restriction for all able-bodied persons without dependents who are not involved in an “approved work activity or workfare” for at least 20 hours per week. Those can receive only 3 months of CalFresh benefits in a 3-year period. Statistics on the short-term recipients are not provided separately by the San Francisco Department of Public Health.

Another eligibility restriction touches upon those who receive benefits under The Supplemental Security Income program. This program pays benefits to disabled adults and children with limited income and resources, and they cannot receive CalFresh benefits in California. According to the data provided by the CDSS, total number of cases in September 2013 was 6229 (CDSS, 2014).

At the start of the investigated period, more men than women were enrolled in a

program. By 2013 gender differentiation of participants evened out. During approximately 6 years number of participants of Latino origin increased by 3 times, Chinese – by almost 2 times, and African American and White origin participants number has grown by almost two times.

Table 1. CalFresh progress in San Francisco County/City.

CalFresh participants	January 2007	September 2013	Change, %
Cases	14658	31938	118%
Individuals	18695	50781	172%
Gender (Individual)*			
<i>Female</i>	7851	25413	224%
<i>Male</i>	10842	25366	134%
Top 4 ethnicities			
<i>Chinese</i>	3574	9708	172%
<i>African American</i>	5490	11840	116%
<i>Latino</i>	2928	11774	302%
<i>White</i>	3850	7620	98%
Children (<18 y.o.)	3764	19370	415%
Elderly (65+)	1105	2697	144%
Top 3 areas (by ZIP code)	94102	94124	-
	94124	94112	-
	94103	94134	-

Data Source: San Francisco Department of Public Health, www.sfdph.org.

In 2012, according to the data from feedingamerica.org, the number of food insecure people in San Francisco was 16,6% (133,420). That means, according to the definition by the USDA, that 16,6% of the population had "limited or uncertain availability of nutritionally adequate foods or uncertain ability to acquire these foods in socially acceptable ways" (San Francisco Health Improvement Partnership, retrieved on May 5, 2014). If we make an assumption that all of these food insecure citizens are eligible for CalFresh, it is only less than 50% of them currently enrolled in the program according to the above provided data.

Eligible households and individuals that do not sign up for CalFresh do it for different reasons, which include some false beliefs such as:

- Homeless people are not eligible for CalFresh because one must have housing and mailing address;
- CalFresh is like welfare and a person is considered a public charge when he/she receives CalFresh benefits;
- Children will have to repay CalFresh when they turn 18;
- Undocumented individuals applying for the CalFresh on behalf of their family will be turned in to immigration authorities by the workers;
- Signing up for CalFresh will affect the immigration status, or be used against the individual when they try to get Legal Permanent Residency or Citizenship status; and others.

Disproving these myths is a matter of proper program outreach to potential eligible population, and some of the organizations such as SF-Marin Food Bank organize it in cooperation with SF government.

4. Food access in San Francisco

4.1. Urban poverty

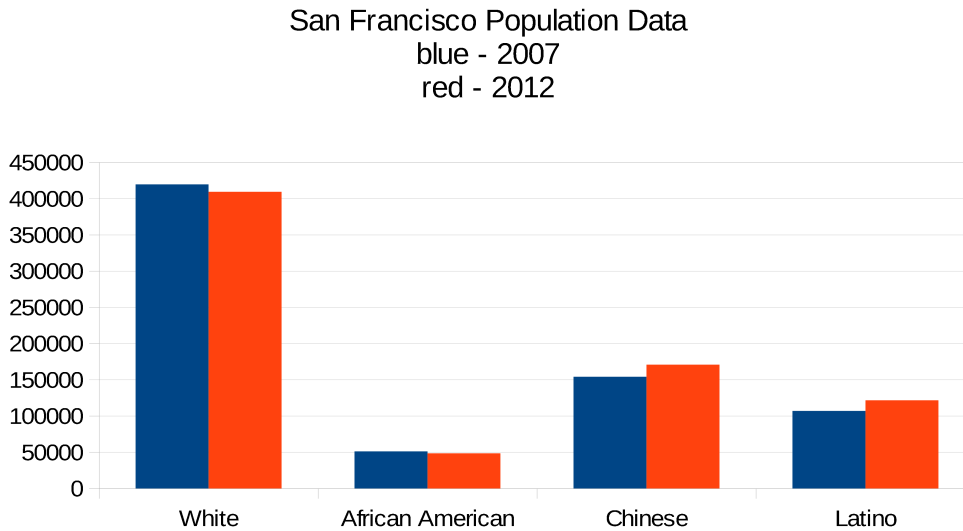
Federal Poverty Guidelines measures levels that make certain households or individuals eligible for federal assistance programs. It can be argued that the same levels can be applied to all the States due to regional economic differences. According to the CalFresh eligibility requirements, “the maximum gross allowed is 130% of the Federal Poverty level (FPL) or 165% of the FPL if the household has an elderly or disabled person who qualifies to be a separate household” (USDA, n.d.). 133% of the FPL for a household of three is \$26,321 annually. The Self-Sufficiency index for a family of three (one adult and two children) for the California counties is \$73000. Current minimum wage for San Francisco is \$10.55 per hour, and to be able to earn enough income, it is necessary for an adult to have three minimum wage jobs. The consequence of this is that this family does not have resources to purchase healthy and nutritious food and at the same time they may not be proved eligible for the existing food assistance programs.

The City and County of San Francisco Health Improvement Partnership provides the map of the city which shows the proportion of the population living below federal poverty level by neighborhood (San Francisco Health Improvement Partnership, 2014). Some of the neighborhoods have more than 19,8% of the population living below the federal poverty level (Bayview-Hunters Point, Lake Merced, Merced Manor, Lake Shore, Tenderloin, Chinatown, South of Market).

The population of San Francisco in 2012 has changed by 5,6% in comparison with 2007 (Diagram 1). Total unemployment has risen by 3,2% and the most considerable change of unemployment is concerning the African American population of the city – it has risen by 5,5% (Diagram 2). Unfortunately, data on Chinese/ Asian labor force was not available. Hence the population size has not changed significantly, these findings open up ways for the research on the reasons of substantial increase in unemployment among the citizens of the African American origin. Unemployment level in Bayview Heights (Zipcode 94124) is one of the highest among the San Francisco neighborhoods, and is 14,5%. There

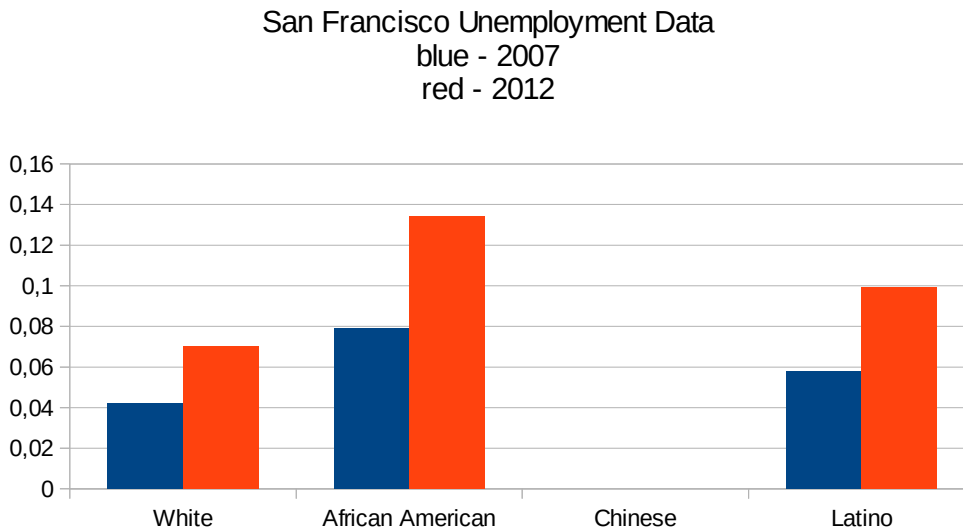
is a connection that can be noticed between this neighborhood leadership in the CalFresh participation number both in 2007 and 2013 and its' unemployment index.

Diagram 1. San Francisco Population Data.



Source: United States Census Bureau. Ethnicity types are chosen based on the CalFresh participation numbers provided in the Table 1.

Diagram 2. San Francisco Unemployment Data.



Source: United States Department of Labor, Bureau of Labor Statistics. Data on Chinese population is not available.

4.1.1. Poverty and dietary outcomes

No matter how counter-intuitive it may sound, expansion of food assistance programs in the US was accompanied by rise in obesity rates. Studies on food deserts in low-income and minority neighborhoods build a base for research on connection between socioeconomic status (SES), availability of healthy food retailers and dietary outcomes of the populations (Gustafson *et al*, 2013). Although, the connection between availability of stores and dietary outcome is still quite arguable. For example, a study in Australia showed that poorer diets among women in disadvantaged neighborhoods in Melbourne were not referable to the limited availability of healthy foods (Thornton *et al*, 2010). If these findings reflect the reality, then dietary outcomes depend more on other factors.

Despite of the efforts to inform populations about the necessity of healthy eating habits that include daily intake of fruits and vegetables, these dietary guidelines are rarely followed by the majority of people in the developed world. Health-protective effects of nutrition are either not recognized or ignored by the public. Food choice is influenced by many factors of individual and environmental character, such as education, SES of an individual, food pricing, marketing of foods. Food prices are more important for those who have lower socioeconomic status.

SES of individuals is often linked to their dietary behavior, with a less healthy diet among those whose SES is lower. Impact of lower SES lies in the fact that households or individuals consume fewer fruits and vegetables, and choose to purchase foods that are lower in fiber and other important nutrients and higher in fat (Thornton *et al.*, 2010; Ball *et al.*, 2006). Certain factors such as nutrition knowledge of individuals and considerations of food's impact on health affect their diets. A European study among middle-class mothers confirmed that the consumption of snacks and food that contain dietary fat is lower than among lower-class mothers. In addition to that, middle-class mothers considered costs of food less often and were more restrictive on food intake in general due to health

considerations. Another study showed that older women, women with higher levels of education, those who scored better in the nutrition knowledge variable and those who had support for healthy eating from family and friends, had higher fruit and vegetable intake.

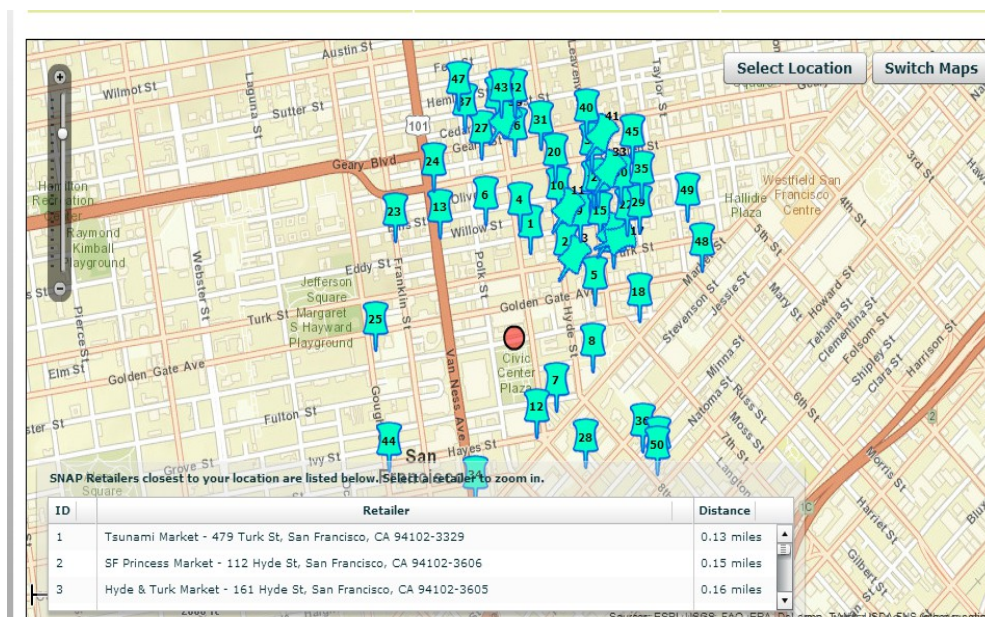
Dietary choices are also influenced by social interaction of an individual. When a healthy diet is supported in the environment such individuals live in, for example by the family members, it impacts their choice greatly. It is suggested that such support is weaker in the families with lower SES (Ball *et al.*, 2006; Hupkens *et al.*, 2000).

4.2. Food access in the selected neighborhoods

As of 2013, there are 84 supermarkets and 126 grocery stores in San Francisco. 85% of all the supermarkets accept EBT cards, and 59% of grocery stores (San Francisco Department of Public Health, 2013).

The USDA website provides a map of SNAP retailer locations. After entering Zip code you can choose to see nearest 10, 25 and 50 locations. By selecting the nearest 50 locations in 94124 Zipcode neighborhood (Bayview Heights), the neighborhood that has one of the highest numbers of CalFresh participants both in 2007 and 2013 (see Table 1), the distance to the nearest stores and farmers markets from the red dot that is used as a central point vary from 0,7 to 1,6 miles (Picture 1).

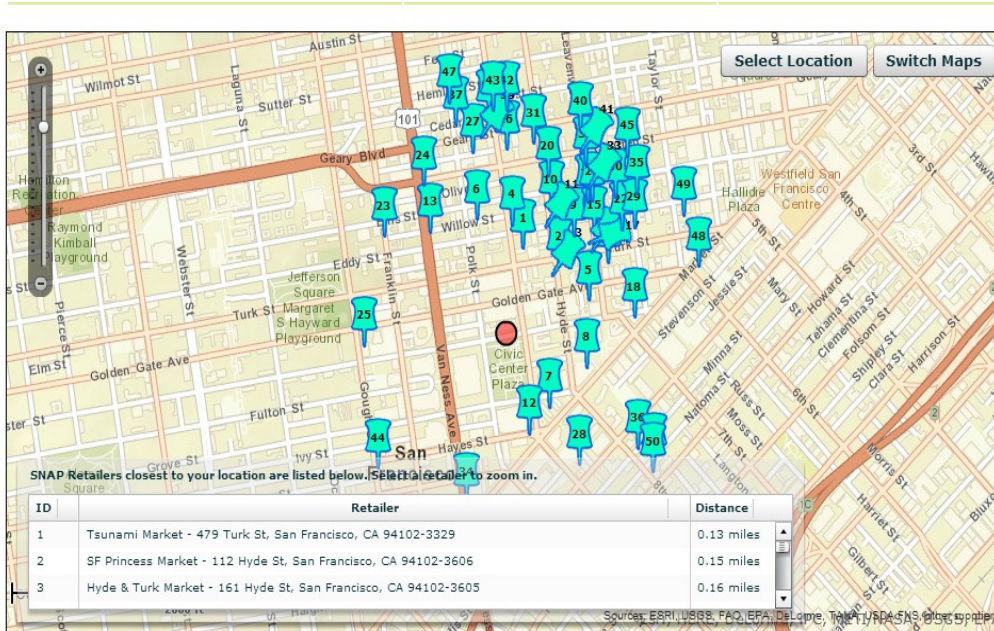
Picture 1. SNAP store locations, Bayview Heights.



Source: <http://www.fns.usda.gov/snap/retailerlocator>.

Same test for the Tenderloin (94102) neighborhood shows a better result when it comes to distance, it varies from 0,13 to 0,44 miles from the central point. However, stores and markets in Tenderloin are not evenly distributed (Picture 2).

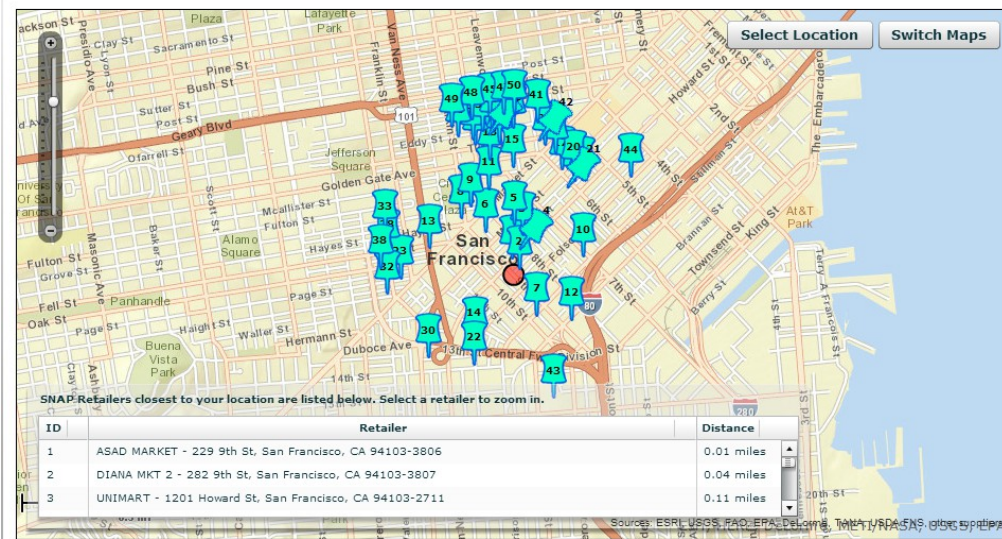
Picture 2. SNAP store locations, Tenderloin, Hayes Valley, North of Market.



Source: <http://www.fns.usda.gov/snap/retailerlocator>.

South of Market (94103) neighborhood shows a good result, the distance varies from 0,01 to 0,65 miles. Markets and stores are distributed quite evenly, with some quiet zones in the north-west of the neighborhood (Picture 3).

Picture 3. SNAP store locations, South of Market.

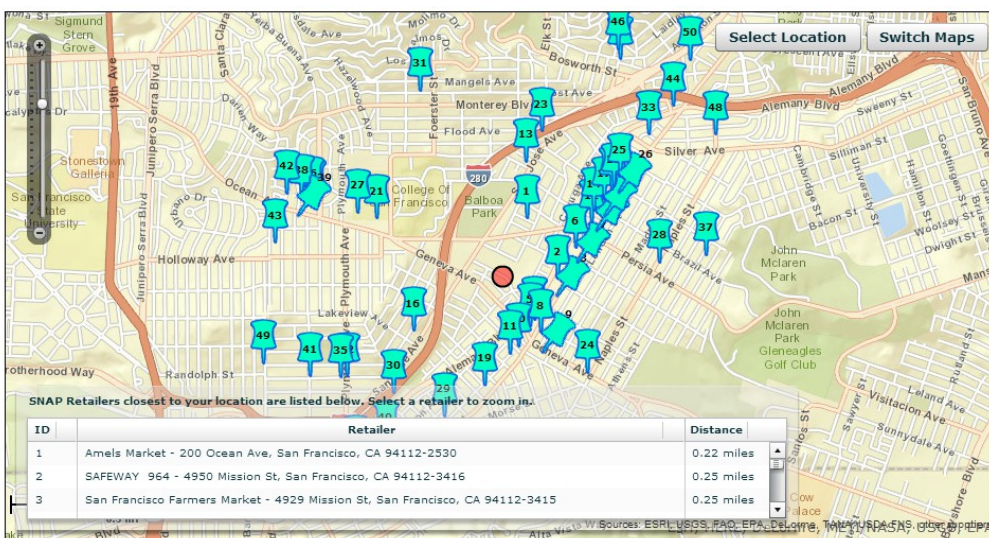


Source: <http://www.fns.usda.gov/snap/retailerlocator>.

Ingelside – Excelsior (94112) neighborhood shows an average result, and the distance to stores and markets varies from 0,22 to 1,21 miles from the central point. Markets and stores are distributed quite evenly, with some quiet zones in the north-west of the neighborhood (Picture4).

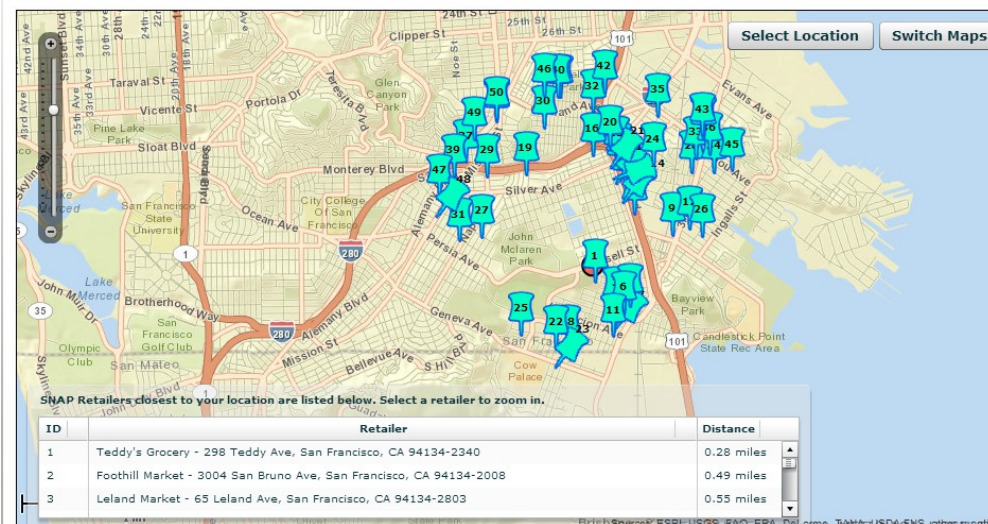
Visitacion Valley (94134) shows the similar situation with dispersion of food venues, but with a higher gap between the closest location (0,28 miles) and the farthest location (1,43 miles), which is 1,15 miles (Picture 5).

Picture 4. SNAP store locations, Ingelside – Excelsior.



Source: <http://www.fns.usda.gov/snap/retailerlocator>.

Picture 5. SNAP store locations, Visitacion Valley.



Source: <http://www.fns.usda.gov/snap/retailerlocator>.

Most of the stores that locator finds are small stores, liquor stores and small full-service markets. It is arguable whether the maximum distance from the central point that was shown by the maps of the five chosen neighborhoods, that is 1,6 miles, is acceptable for grocery shopping or too long. It is acceptable as a walking distance in the circumstances when the person is not old and in good shape. It is known that more than half of the CalFresh participants are children (younger than 18 y.o.) (see Table 1), convenience of the stores disposition in some of the neighborhoods is left under question. Therefore, organization of additional stores and markets that accept EBT cards would improve the situation with food access in Bayview Hights, Ingelside-Excelsior and Visitacion Valley neighborhoods.

Overall, there is a high number of food venues in every one of the investigated neighbourhoods where EBT cards are being accepted. As findings of the research on selected low-income communities in San Francisco Bay Area (Short *et al.*, 2007) show, small markets can provide a variety of foods at affordable prices and can answer the needs of culturally diverse population of the area.

Whether these stores and markets sell food that is affordable to all low-income residents is another question. Income inequality and poverty still persist in these neighborhoods, and it is possible that existing food assistance benefits are not

sufficient to ensure food security for the residents.

In addition to the above mentioned issue, implications of low wages in the small stores and associated labor issues that was discussed previously should be considered by the planners and food security advocates. Some support for the development of small business that does not undermine overall economic development of the city should be considered. Also, small stores in low-income neighborhoods may keep prices down to keep up with the competition and any policy-makers that are engaged in the support of small businesses should be aware of this (Short *et al.*, 2007).

4.3. Farmer's markets in San Francisco

Control over global food supply is in the hands of few, and even if it doesn't seem for the eye of an outsider that issue of food security is not as relevant in the developed economy like the USA, its' citizens are dependent on the efficiency of modern distribution systems and are not capable of feeding themselves in case of supply breakdowns. Carolyn Steel, in her book "Hungry city; How food shapes our lives" (2009) compares our dependence on food conglomerates with that of ancient city-dwellers on their kings or emperors. In these circumstances local production of food can be viewed as a way to avoid risks associated with potential supply breakdowns.

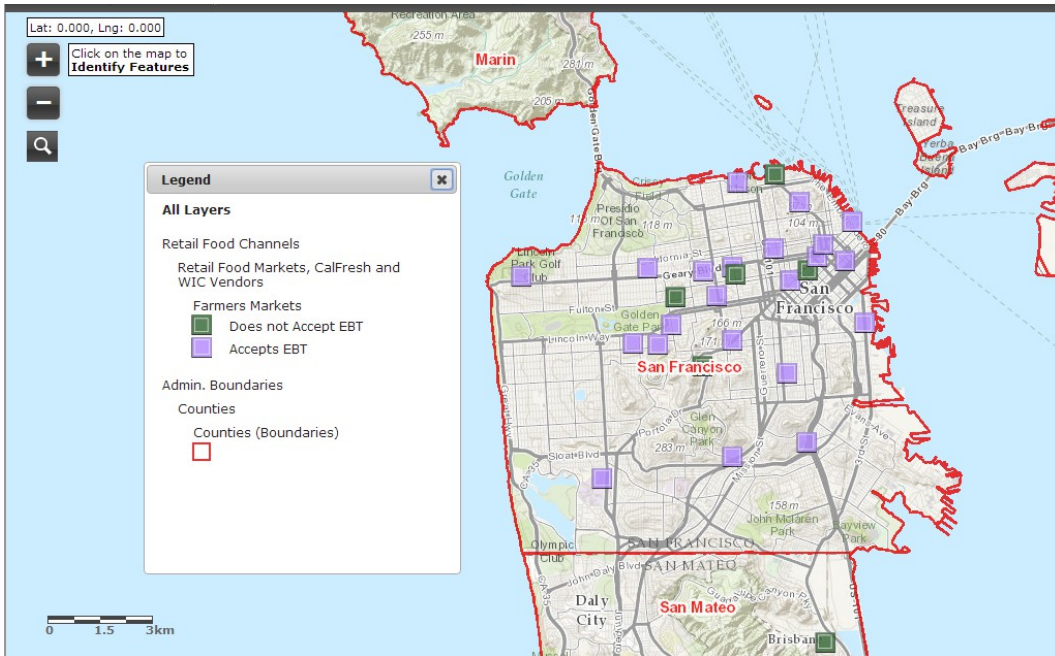
Rapid changes within the agricultural food systems across the world, especially in the developing countries, have increased food industry consolidation. Large scale food manufacturing and the diffusion of retailer/supermarket chains in the developing world is spreading intensively following the same pattern observed previously in the global North. Supermarket share in the total of foods being purchased in supermarkets circa 2005 in the United States was 80%, in China – 15%, and 5% in Nigeria. Growth of food retailing in China was quite intensive, in comparison with 1993 when the share of supermarket sales in urban food retailing was nearly non-existent, in 2003 this share accounted for 30%. Multinational food retailers started entering the developing countries in search for expansion. In 2003, Mexican consumers spent almost 20% of their food budget in Wal-Mart stores. In Great Britain more than 2000 of independent food shops are being closed each year because they cannot compete with supermarket chains (Haggblade *et al*, 2007; Steel, 2009).

In the growing urban areas where purchasing power and the cost of time is rising among the non-poor, and land consumer imports are being liberalized, ownership of automobiles and refrigerators makes food purchasing in the emerging supermarket chains more popular not only among the middle class customers, but also the working poor (Haggblade *et al*, 2007).

One of the principles that the Executive Directive on the Healthy and Sustainable Food for San Francisco states to be guided is “to reduce the environmental impacts associated with food production, distribution, consumption, and disposal, whenever possible, city resources will be used to purchase and promote regionally produced and sustainably certified food”. All city departments and agencies are entitled to purchase “healthy, locally produced and/or sustainably certified foods to the maximum extent possible” for events or meetings using city funds upon the signing of the Executive Directive.

California Department of public health (CDPH) provides a possibility to create GIS maps with indicators that are of interest to the visitor. I created a map with farmer's markets that currently operate in San Francisco and accept or do not accept EBT cards (Picture 6). CDPH defines a “certified farmer's market” as “a location approved by the county agricultural commissioner where certified farmers offer for sale only those agricultural products they grow themselves”.

Picture 6. Farmer's markets in San Francisco.



Source: <http://gis.cdph.ca.gov/cnn2.0/>.

Tenderloin, Hayes Valley, North of Market (Zipcode 94102) neighborhoods which

is known as one of the most densely populated and less safe neighborhoods in San Francisco and also one of the leaders among the neighborhoods in the CalFresh participation in 2007, is a host to the Heart of the city Farmers Market. Highest number of homeless and marginally housed individuals reside in this neighborhood and the unemployment rate is more than 10%. According to the report published by The Tenderloin Hunger Task Force¹¹ (THTF) in 2013, “Tenderloin residents suffer from detrimental health conditions that are often associated with food insecurity and poor nutrition including obesity, diabetes, hypertension, heart disease and cancer. Over one-third of residents in the neighborhood live with disabilities, and this number is expected to grow given the aging population in San Francisco”.

The Heart of the City farmer's market happens every Friday and Sunday and it brings local-grown food from the areas within the 200 miles distance from the market. It takes part in the CalFresh program and accepts EBT cards for food purchases. In addition to that, it participates in the community nutritional education by organizing workshops and information booths for children (San Francisco State University, 2012). It is interesting that the majority of farmers that participate in this project are Asian or Hispanic origin. Potential reasons for this are the ethnic diversity of Tenderloin and the market's proximity to Chinatown neighborhood, which is also known as one of the areas with the highest levels of poverty in the San Francisco County area.

Ruelas *et al.* (2012) surveyed customers of farmers' markets in low income urban communities in East and South Los Angeles anonymously during the period 1 April 2007 - 3 June 2009. Majority of the surveyed consumers were low-income “Latina women with less than 12 years of education who reported some level of food insecurity”. Most of them lived within 4 miles distance from farmer's markets and visited the venues twice a month or more often. Results of the conducted survey showed that customers were satisfied with the markets both in

¹¹ The Tenderloin Hunger Task Force is a coalition of agencies working together to maximize food security in the Tenderloin and nearby disadvantaged neighborhoods in San Francisco. Member agencies include a number of non-profit organizations.

the communities of East and South Los Angeles and positive dietary changes and increased physical activity were reported by the majority of respondents since they started purchasing food items in the farmers' markets (Ruelas *et al.*, 2012).

Benefits from farmer's markets for the economy and community are widely discussed with the emergence of the phenomenon. They play an important role in rebuilding local food systems. Customers have a chance to learn about seasonality of local foods, a knowledge that was lost in the 'supermarket era'. Governmental subsidies and support and consequent increase in the number of customers encourage farmers to diversify the foods that are being sold, and that is contributing to the development of the more localized food system (Brown & Miller, 2008).

There are multiple benefits provided for small farmers, consumers and communities by the Certified Farmers Markets. CDPH defines them on their website: “for farmers, the certified farmers markets provide an outlet especially suited to moving smaller volumes of produce, thus creating a marketing channel outside of the traditional large volume distribution systems. CFMs also allow farmers to sell field run produce not restricted to pack and grade standards. This enables the farmer to sell tree ripened fruit which is too delicate for the packing and shipping process. It also increases profits for the farmers because of the cost savings”. The main benefit for those who are interested about their food is that they have an opportunity to meet the farmer and learn about the production of food.

According to the map (Picture 6), from the selected 5 areas where the majority of the CalFresh participants reside (Table 1), farmer's markets operate only in South of Market (94103) and in Tenderloin (94102). It is also clear from the picture that not all of the farmer's markets accept EBT cards. There are 4 markets out of the total 22 who did not sign up to become CalFresh provider.

These findings bring us to the conclusion that there is a limited access to locally

produced food for all of the residents of the city, including the CalFresh benefits recipients.

Farmer's markets could also contribute to the improvements in diets of low-income residents, as findings of the research conducted in Los Angeles show (Ruelas *et al.*, 2012). Given that most of these venues accept EBT cards, they could make a good alternative to small corner shops where many residents are entitled to make their grocery shopping in case their number is increased and dispersed to more neighborhoods in San Francisco.

5. Nutrition, Education and Health in San Francisco

5.1. Obesity

Obesity and other nutrition-related diseases is a topic of a continuous debates among policy makers and researches. In the United States obesity has been associated with all-cause mortality. Recent review of about one hundred scientific articles suggests that Body Mass Index higher or equal to 30.0 is associated with higher risk of all-cause mortality. Urban populations are at higher risk of over-nutrition due to their reliance on wages/salaries and a commercial food supply. (Borrell & Samuel, 2014; Dixon *et al.*, 2007).

Solutions to this issue usually focus on nutritional education, psychological factors and change of the food environment to prevent the diseases. Among other factors that affect obesity, such as genetics, physical activity and time spent in front of the television screens, socioeconomic status, environment (in terms of easy access to healthy food and to infrastructure where people can get regular physical activity), and, most importantly, eating habits can help reduce the risk for obesity.

Recent findings from the 5-year research by the University of California show that 37% of Mexican-origin farm-worker families in California are food insecure and about 49% of children in the age group from 3 to 7 years old are overweight or obese. This research was funded by the USDA Nutritional Institute of Food and Agriculture, and the grant amount was 4,8\$ million (White, 2013).

Tables provided below represent obesity and overweight figures among male and female respondents in San Francisco in 2007 and 2011-2012. This data was collected by the UCLA Center for Health Policy research. Age groups included are teens and adults. For adults "Overweight or obese" include the respondents who have a Body Mass Index¹² (BMI) of 25 or greater. And for adolescents, "Overweight or obese" includes the respondents who have a BMI in the highest 95

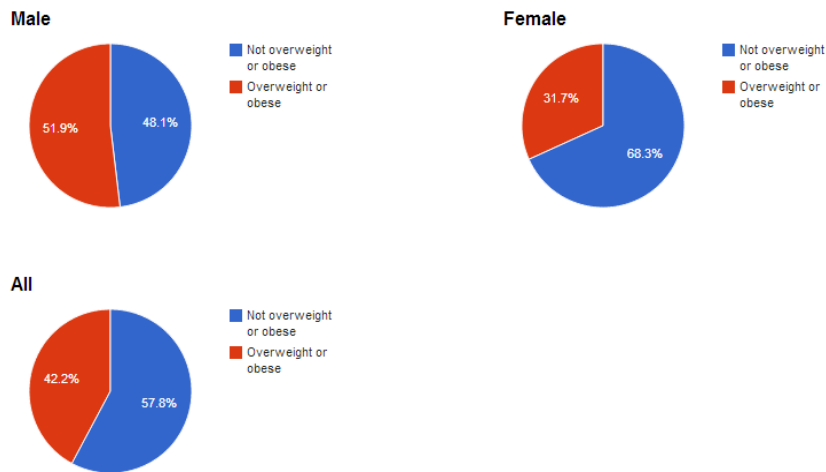
¹² BMI is calculated by dividing weight (in kilograms) by height squared (in meters).

percentile with respect to their age and gender.

As it can be understood from the data provided in the Diagrams 3 and 4 below, overall obesity rate in San Francisco has dropped by 1,7%. However, this change is caused by the decreased obesity and overweight rate among male respondents (by 4,9%), while this rate has grown among female respondents by 1,5% since 2007. This allows to identify females as a target group for nutritional education programs in San Francisco.

Diagram 3. San Francisco obesity rates, 2007.

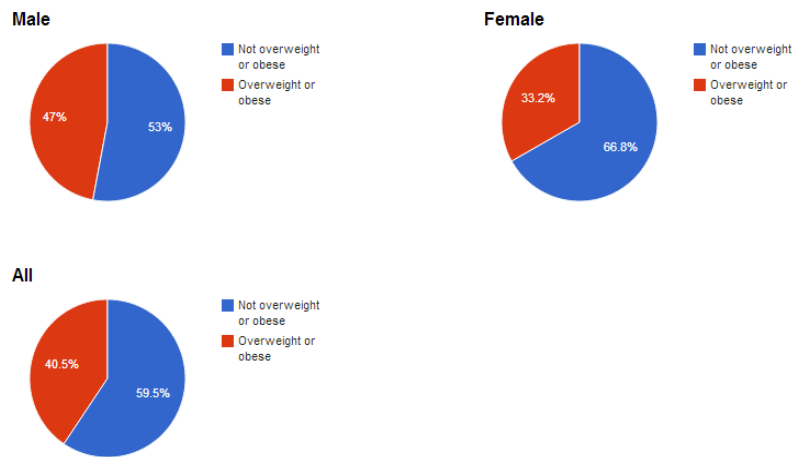
Results include 2007 data



Source: <http://ask.chis.ucla.edu/>.

Diagram 4. San Francisco obesity rates, 2011-2012.

Results include 2011 - 2012 data



Source: <http://ask.chis.ucla.edu/>.

5.2. Nutritional education initiatives in San Francisco

CalFresh limits the the scope of food items available for purchase to 'foods for human consumption' and "seeds and plants to grow food for household use", "you cannot buy pet food, vitamins, medicines, alcohol, tobacco, paper products, fast food or food that will be eaten in the store".

The City and County of San Francisco Executive Directive states that "San Francisco's neighborhood food environments must allow residents the opportunity to make healthy food choices and reduce environmental causes of diet related illnesses". Matter of the opportunity to access food in San Francisco and overview of the theories on this topic were discussed in Chapter 2 of the thesis, in this Chapter I would like to examine whether nutritional education initiatives that are being introduced in San Francisco provide the necessary support to population in making healthy food choices.

Various organizations like nutritional education Project (<http://www.healthiersf.org>), the County Nutrition Action Plan (CNAP) and the San Francisco Unified School District (SFUSD) have education initiatives targeted at specific groups like children, women or elderly. Those initiatives can include brochures with information on different food assistance programs, unified messages sent out to the subscribers and members of the programs, lessons and workshops.

Supplemental Nutrition Assistance Program Education (SNAP-Ed) was organized by the USDA to promote healthy eating habits in accordance with the current Dietary Guidelines and active lifestyle among the SNAP eligible audience, and to help prevent chronic diseases such as obesity.

The Nutritional education and Obesity Prevention Program (NEOP) is funded with USDA SNAP nutritional education Funding. It has three offices in San Francisco (see Picture 7). In the 2011 report that was published for the The Public Health Institute and the California Department of Public Health stated that the

program has three priorities, and they are: “decrease sugary beverage consumption and increase healthy beverage consumption, especially water, increase physical activity and increase consumption of healthier foods”. As it can be seen at the map (Picture 7) NEOP offices are located in three neighborhoods, those are 94114 (Castro, Noe Valley), 94102 (Tenderloin, Hayes Valley, North of Market), 94111 (Embarcadero, Barbary Coast).

The Local Food and nutritional education (LFNE) Channel is a part of the NEOP program and consists of community-based projects, a majority of those are operated by non-profits. These projects function at a local level and “provide nutritional education to low-income Californians and to a lesser degree, promote physical activity and participation in the CalFresh Program”. SNAP-Ed provides funding for the LFNE for up to 4 years.

Picture 7. Locations of NEOP Local Food and nutritional education Projects.



Source: <http://gis.cdph.ca.gov/cnn2.0/>.

The University of California organized a CalFresh nutritional education Program (UC CalFresh) which is funded through the agreement between the University of California Cooperative Extension, the U.S. Department of Agriculture/ Food and Nutrition Service (USDA/FNS), the California Department of Social Services. The program consists of three branches focusing on adults, families and youth and

operates in California.

The general goal of the UC CalFresh “is to improve the diet and nutrition-related skills of the CalFresh recipients and their families” by enrolling the CalFresh recipients on a voluntary basis and give them lessons on food preparation, food safety and sanitation, budgeting, feeding children and infants, and physical activities. Initiative on youth nutrition targets schools and community programs with large number of children from CalFresh households and lessons are focused on the topics of healthy lifestyle, fruit and vegetable consumption, food safety and physical activity.

When choosing the layer called “UC Cooperative Extension sites” in the GIS map provided by the California Department of Public Health, the map does not identify any location within the San Francisco City and County (<http://gis.cdph.ca.gov>). These sites, according to the layer description, “are 'extenders' from universities and use all available resources to deliver innovative, creative and inclusive research-based nutrition programs that respond to current and anticipated community needs. As UC Agriculture and Natural Resources' outreach arm, UCCE has farm, 4-H, and nutrition, family and consumer sciences advisors based in more than 50 county offices”. The nearest site to San Francisco is located in Oakland.

As the UC CalFresh Annual Report for 2013 shows, “the Santa Clara/San Mateo/San Francisco (SC/SM/SF) program provided services to over 25,000 individuals and 800 teachers in FY 13, an increase of over 50 % from the previous year”. In San Mateo and San Francisco US CalFresh initiatives are being coordinated with the county health departments, however, as the map shows, agency site has not been finalized in San Francisco. “In SF, we had successful ongoing adult programming in Chinatown and newly developed adult programming focused in SF’s Mission District with many adult classes being held for parents in Mission Neighborhood Centers Head Start locations” (University of California CalFresh Nutrition Education, 2014).

SF-Marin Food Bank also organizes nutritional education programs along with other initiatives aimed at improving food access for children and families . For example, their Nutrition Team provides recipes that are easy to use at home and cooking demonstrations at the pantries using seasonal produce and other foods. They also provide regular trainings for pantry coordinators and meal providers on food safety, focusing on safe storage and distribution.

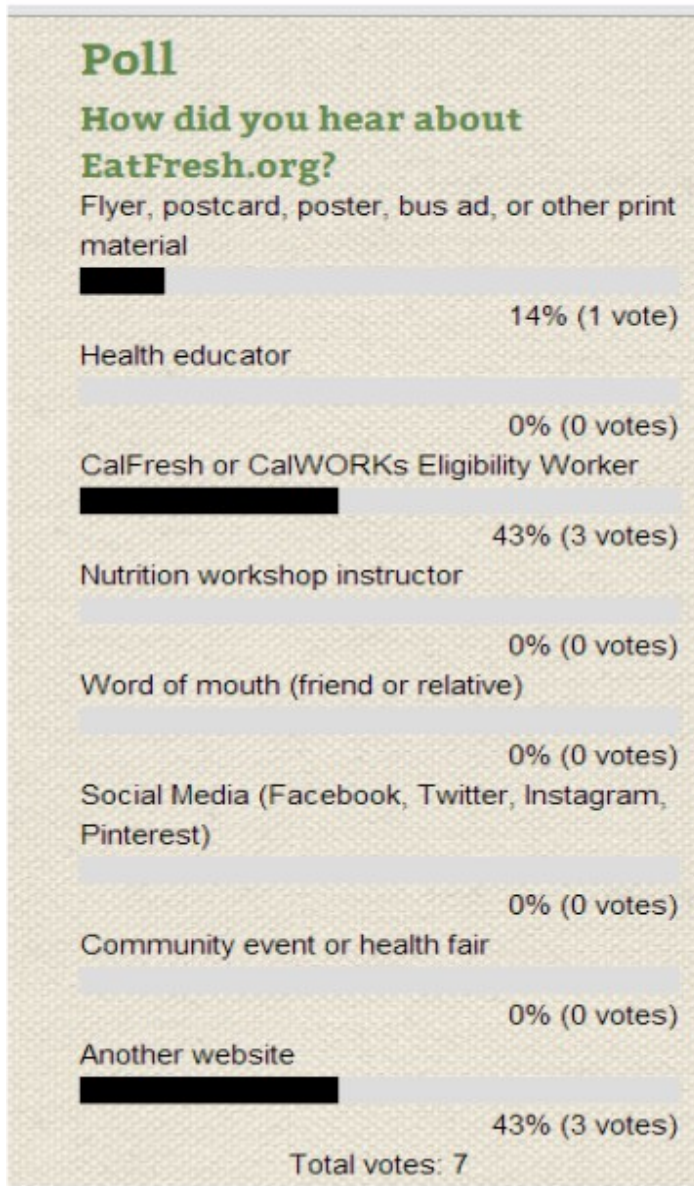
Nutritional education classes for pantry participants and agencies are being held in cooperation with a local non-profit nutrition-focused organization. These classes last from 1,5 to 3 hours includes information on nutrition basics, instruction on how to understand food labels and healthy food recipes and preparation tips. A six-week workshop that consists of interactive demonstrations and discussion is organized to inform participants on simple changes to the diets they can make to eat healthier.

The website with various recipes, health and nutrition advices (www.eatfresh.org), funded by the USDA, is suggested to CalFresh participants by the MyBenefits CalWIN information platform (a platform that was created for California residents to make it easier to apply for medical, food, and cash assistance programs). It's goal is to provide the food assistance recipients with recipes for their budget, give tips on healthy nutrition and promote active lifestyle. It is available in English, Spanish and Chinese targeting the diverse population of CalFresh participants.

To understand how popular it is a response to the poll that was published on the website (Picture 8) was submitted by me. It is safe to assume that very few people use the website since the total number of respondents on 7 May 2014 was only 7, and this number includes my vote. CalFresh or CalWorks Eligibility workers (3 votes including mine) and other websites are the primary sources of information about this website, that contains a lot of useful information for those who are interested in the healthy diet. Considering the total number of CalFresh participants in San Francisco in September 2013 was 50781 (see Table 1.), the effectiveness of www.eatfresh.org promotion among the food assistance recipients

is almost absent.

Picture 8. Poll, www.eatfresh.org.



Source: www.eatfresh.org

6. Conclusion

Nowadays feeding the city is not only a matter of food market development, but a complex task that requires involvement of various actors, such as public, businesses, urban planners, agriculture, health and educational sectors. Intersectoral approach to food policies might be effective in eliminating issues of food access, consumer ignorance, and diet-related diseases (Dixon et al., 2007). Food policy, whether it is implemented country-wide or being introduced as an experiment in any city, cannot be successful if it is not supported by the public as well as the government. Focus on the foodscape of San Francisco highlights not simply food security status, but existing social and political relationships and identifies potentialities for future change.

The Executive Directive on Healthy and Sustainable Food for San Francisco explicitly targets some of the most important challenges of the sustainable urban foodscape, such as access to healthy food, local food production and distribution, public awareness of nutrition and its effect on human health. As the Executive Directive on Healthy and Sustainable Food of San Francisco City & County (2009) describes the policy, it “approaches the food system holistically; from food production and distribution of consumption and recycling with the acknowledgment that a thriving local food system has far reaching benefits for the health, environment and economy of San Francisco and its residents”.

Without access to healthy food choices, individuals cannot make positive changes to their dietary behaviors. In San Francisco, the amount of providers that accept EBT cards is rather impressive. The SNAP locator identified 50 locations in each neighborhood that was looked at for the purpose of this thesis. The threshold was limited by the program to a maximum of 50, therefore the total quantity of the venues can theoretically be higher.

A study on food deserts in selected neighborhoods in the San Francisco Bay area by Short *et al.* (2007), that was previously referred to, identified that small stores

are capable of providing culturally acceptable and affordable healthy food, but the number of investigated locations was very limited to make generalizations. Therefore, further analysis of the variety of foods offered by venues that accept EBT cards is necessary in order to assess their contribution to the healthy foodscape of San Francisco.

In the postindustrial countries, the contemporary urban food sector creates zones that provide foods that answer to demand of certain types of populations, “the wealthy consume diverse diets of unprocessed and local foods sourced from specialist providers, city farmers markets, and wholefood cafes and restaurants, whereas the majority rely on industrial and processed foods of varying nutritional quality sourced from supermarkets, fast food chains, and cafes that use short-order cooks to heat and serve mass-produced food” (Dixon *et al.*, 2007).

User comments about the prices of foods in the farmer's markets of SF that was found on various websites was mostly positive. Investigation of a variety of offered foods and price comparisons can be made in order to have a better picture of affordability to CalFresh participants and other low-income households that are not eligible for food assistance programs.

Farmers' markets are the source of local and fresh produce for city dwellers, and even though the Executive Directive of the City & County of San Francisco has stated that “promotion of regionally produced and sustainably certified food” was one of the guiding principles in 2009, findings presented in this thesis show that markets are not present in all the neighborhoods of the city. Access to them might be difficult for those who do not own a personal vehicle and do not reside in these neighborhoods. Better distribution of farmer's markets in San Francisco is going to be beneficial for those who experience difficulties with transportation. As for the CalFresh benefit recipients, most of the farmer's markets in San Francisco accept the EBT cards as it was shown by the map in the Chapter 4.

Within the context of a free market economy it is more complicated for

governments to force producers to stop selling certain types of foods and start selling others. State organizations in the U.S. have to be very careful and circumspect when issuing any kind of dietary advice to the public under the federal guidelines, due to the risk of being widely criticized and opposed by the food companies, as it was described in Chapter 2 of this thesis.

The medical costs for six diet-related health conditions (coronary heart disease, cancer, stroke, diabetes, hypertension, and obesity) in the U.S. exceeded \$70 billion in 1995. Estimates by the authorities say that 1% reduction in intake of saturated fat across the population would prevent more than 30% of coronary heart disease cases and save more than a billion dollar in healthcare costs (Nestle, 2007, p. 7).

Efforts of nutritionists that are trying to educate the public about nutritional value of certain foods and their effect on health are often perceived as a threat by the food industry. As a result food corporations use different means of influence in order to overshadow the educational message of nutrition professionals with a message that follows their sales agenda and ignores public interest. Those who have a lower social-economic status should be specifically targeted by nutrition promotion initiatives, as it was confirmed by a number of research that they consider food impact on health less frequently than those of higher SES and follow the guidelines on fruit and vegetable intake less strictly (Thornton *et al.*, 2010; Ball *et al.*, 2006; Hupkens *et al.*, 2000). Drivers of food consumption inequalities should be investigated more closely in order to identify ways to eliminate or lessen them and achieve good nutrition for everyone.

In San Francisco, education initiatives are not aggressive enough. The very useful website described in the chapter 5, with recipes for any member of a household, advices for healthy and active lifestyle, and other nutrition information, is not noticed by most of the people who can use this data for their advantage. The nutritional knowledge, when it is shared among all the household members will be much more influential.

For example, the creation of the platform targeted at CalFresh recipients described in Chapter 5 is also funded by the USDA, but marketing and promotion channels are not used well enough to promote this useful tool. Cooperation with various organizations such as SF-Marin Food Bank and local offices of the CalFresh can be used for the information distribution.

We live in an era when what we eat is our free choice. However, if we make informed choices is a big question. Food marketing strategies influence our choices every day. We may think that this or next the purchase is based solely on our own opinion but in reality the choice might be driven by various factors such as advertising and information acquired by reading research sponsored by the food corporations.

A shift to restriction of food advertising to marketing of a healthy diet can have an effect on consumers and encourage changes in the food production. Implementation of this initiative would create a supportive environment for promotion of healthy lifestyles (Hawkes, 2006). Such change can happen only with accompanying support of the federal governments and then municipal government. Given the lobbying phenomenon and other influences that politicians are being exposed to in the U.S. makes this task quiet complex in any city, including the one that was chosen for the present case study, San Francisco.

Anti-tobacco and anti-alcohol campaigns that succeeded in getting warning labels and advertising restrictions have been around for decades now, and almost everyone is aware of the their effects on human health. Is it not a good time to educate the public about food in the same manner? Messages about food items are unarguably more complex, and the difficulty of advocating the healthiness of certain product or its' negative effect on health lies within this complex set of issues.

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