

JAPANESE FOOD DESERT ISSUES AND SUPPLY CHAIN

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ABSTRACT

Purpose: The purpose of this paper is to clarify the relation between factors generating Food Deserts, and these issues; the retail industry's shift in strategy and consumption and supply chain factors.

Design/methodology/approach: This research focuses on the point of "collapse of the supply chain of food" in Japan.

Findings: The following conclusions have been obtained through this research;

1. A new market is created by the retail industry's measures for Food Desert issues.
2. Measures for Food Desert issues contribute to a performance improvement in the retail industry.
3. The struggle against Food Desert issues means shifting the strategy of retail industry. Therefore, a new strategy is needed simultaneously with a reconstructed supply chain.

Research Impact: The result from this research, which not only can be contributed to the dissolution of future Food Desert issues but also to offer the strategy shift to the retail industry.

Originality/Value: The composition of Food Desert issues in Japan differs greatly from Britain, which is where these problems originated. Here, taking Food Desert in Japan as Shopping Refugee and connect it to the strategy shift of retail industry which straggle in the changing society with Low birthrate and longevity. That is, this study is regarded as research not of a social problem, but an economic problem, or a problem of corporate management.

Keywords: Food Desert, Shopping Refugee (Senior residents in shopping deserts), Low birthrate and longevity, Retail Industry, door-to-door food delivery service, shuttered shopping street, Supply Chain

Paper Type: Research paper

Definition and History of Food Deserts

Origin of Food Desert Issues

The British Government named the phenomena "Food Deserts". Food Desert issues are a social problem generated by two combined elements; a "collapse in the food supply chain", and a "community of socially vulnerable groups" which arise in a rapid change of the socio-economic environment.

Research into Food Desert issues, has been advanced from various angles, such as geographic, sociological, nutritional, and medical viewpoint, and Europe has played a leading role in this advance since the 1990s. The emergence and growth of large stores (large-scale department stores) in Britain's suburban areas was realized by the advance and growth of suburban living and motorization alongside the successive discontinuance of business among small grocers in the city from the 1970s to the 1990s. As a result, the poor who cannot move from the city, have no choice but to buy at the remaining grocery stores, where the offered perishable food products are in bad condition. Thus, the case in Britain, sees low income groups- such as the poor, people with limited mobility, elderly people, physically handicapped persons, and foreign worker,- comprise the socially vulnerable groups that are the victims of Food Deserts.

This suburbanization of a commercial function has been remarkable in the USA as well, where Food Deserts are a serious issue for the poor, especially in African American communities. Thus, Japanese Food Deserts are different from those in Western countries including Britain, and USA, where the problem exist for low income groups, such as foreign workers.

Food Deserts Issues in Japan

It was around 2000 that Food Desert issues actualized in Japan with the so-called "Shopping Refugees (senior residents of shopping deserts)". The Ministry of Economy, Trade, and Industry defines the shopping refugee as "an elderly person, aged 60 and over, who feels inconvenienced by shopping." The population of such refugees is about 6 million (as of May, 2010). Shopping Refugees are the elderly people who are forced to travel long-distances due to the suburban advance of large stores.

Considering the "collapse of the food supply chain" as the generating factor of Food Desert issues in Europe, we see that "the suburbanization of a large store" and the resulting health impairment, as is common among the "Shopping Refugees" of Japan, delineate a food supply chain collapse, and therefore, the "Shopping Refugees" problem in Japan is a Food Deserts issue by definition. However, the backgrounds generating the deserts differ. The quickly-progressing low birthrate and elderly longevity serve as a backdrop to the "Shopping Refugees" in Japan. The victims of European and USA Food Deserts include foreign workers, single mothers, along with elderly people. However, the type of victims in Japanese Shopping Refugee issues is limited to the elderly people with limited means of transportation. This is the point of difference between Japan and Europe's Food Desert Issues.

The mechanism Food Deserts Issues of generating in Japan

The regulation and deregulation for large scale store

The generating factors of the Shopping Refugees (=Food Deserts) problem in Japan are- the collapsing of perishable-foods supply chains, and the increase in the elderly population (low birthrate and longevity). Since small shopping streets were lost in connection with the suburbanization of large stores, the collapse of the perishable-foods supply chain is the phenomenon brought about by being unable to do shopping nearby and instead being forced to travel long-distance to do shopping.

Regulation and the relief thereof, heavily influence the suburbanization of large shopping stores. Although opening a large store saw stiff restrictions with a law enacted in 1974, the regulations gradually eased from around 1990, and were abolished altogether in 2000. Since suburban regulation was so loose, the suburbanization of large stores began from the 1990s and accelerated with the easing of restrictions.

It cannot be over-emphasized that motorization was pivotal in making this suburban expansion possible. In addition, service industries, retail chain, and transportation companies declined and withdrew in depopulated districts and provincial towns, where profitability is low. This, withdraw results in dead zones for food, transit, and the like. Therefore, in depopulated districts or provincial towns, elderly people with no means of transportation will encounter difficulty in acquiring food

In summary, Japan's Food Desert issues are a problem of Shopping Refugees, and it can be said that they are brought about by changes in social structure resulting from quickly advancing low birthrate and elderly longevity and from changes to the food delivery system.

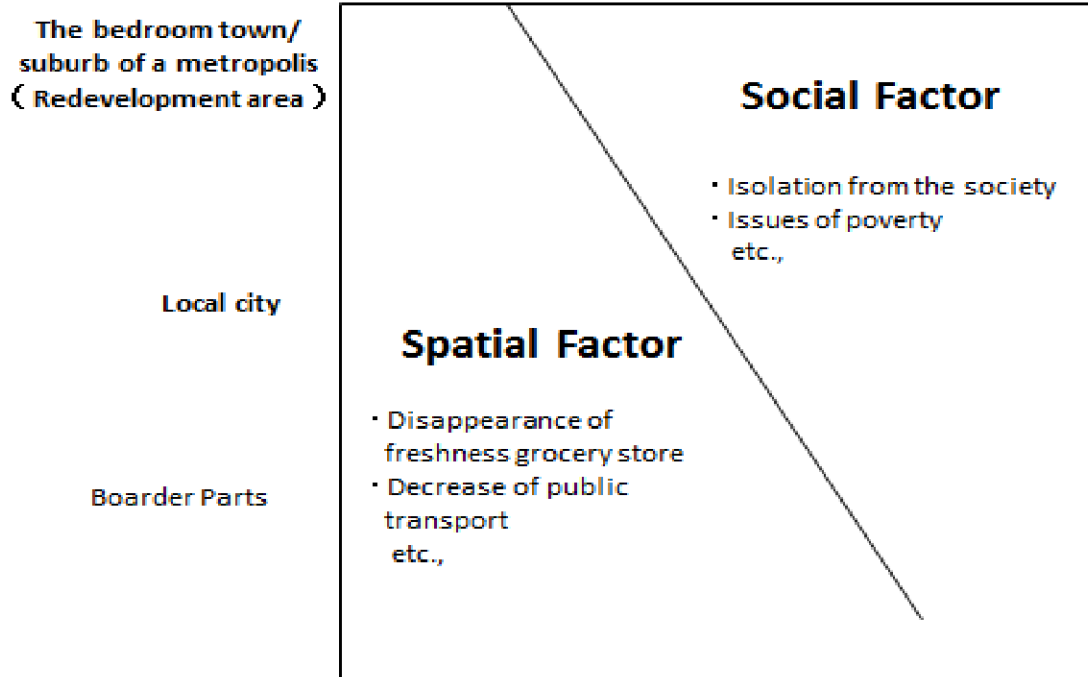


Figure1. Outbreak factor of the Food Desert by area

Source: Nobuyuki Iwata (2011), "Food Desert Issues" Agriculture-and-forestry statistics publication

Low birthrate and longevity

The population of Japan is ageing quickly. The population aged 60 and over is projected to be 44,850,000 in 2020. This is about 40% of the Japan's population.

Shopping Refugees are mostly elderly people. The following reasons are cited.

1. The abolition of public transportation facilities, such as public buses, in provincial towns, depopulated districts, etc.
2. So-called "Shuttered-shopping-streets" appeared when small grocery stores closed one after another due to the suburbanization of large stores, and also with withdrawal of large stores from residential sections of the suburbs with decreased populations
3. Elderly people have trouble going out (they cannot drive cars, public transportation facilities have been abolished, etc.).

The measures against Food Desert issues by companies, local governments, and NPOs

The solution to the source of Food Desert issues

The shopping Refugees problems is a matter of elderly people who have limited access to transportation, the blockage of the distribution system, in the suburbanization of large stores necessitating long-distance travel to shop, and the appearance of "shuttered shopping streets"

Such shopping impaired people are a phenomenon seen not only in depopulated districts but also in city centers where the solitude of elderly people is increasing, due to the trend toward the nuclear family. Central and local government, NPOs, companies, and all citizens need to be united, and tackle the Shopping Refugees problem. The government has to implement measures to tackle the low birthrate and longevity situation. Local governments need to organize to support the measures of companies. Companies must change management strategies and adopt measures to aid the Shopping Refugees. Citizens needs to improve the state of their communities and regain the spirit of mutual help. As a possible solution, two points are mentioned,; the Guarantee of transportation devices " and "activation food delivery system and redesign of food supply chain".

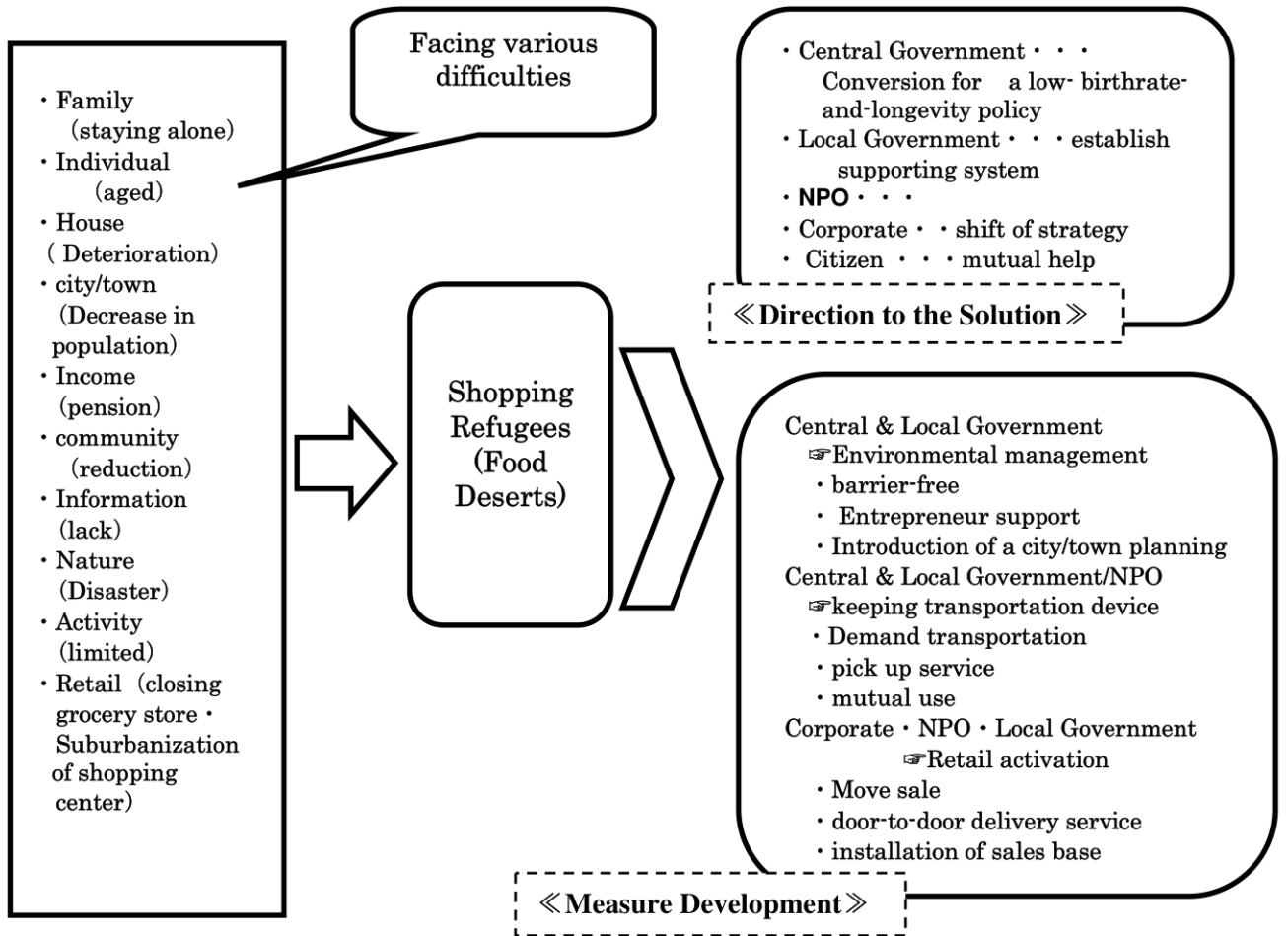


Figure2. Mechanism of the shopping Refugees outbreak and action for solution

The measure by companies, local governments and NPO

There are three types of measures against the Shopping Refugee problems; “meal offer”, “delivery”, and “improvement of access/transportation”. Meal offer are luncheons several times per month. Delivery is a door-to-door delivery service, especially for lunch and supper. Recently, supermarkets have started this service with any kind of daily goods as well as meals. Delivery can then be broken into three categories; “meal delivery service”, “Shopping Representation”, and “Door-to-door delivery service”. “Improvement of access” consists of three categories as well, “establishing shopping place”, “move sales”, and “Shopping bus”. Moreover, another type of access improvement is seen in new public traffic services which offer door-to-door transportation, called “demand traffic”, with low-price options, like public buses, and convenience options, like taxis.

The parties pushing measures to aid Shopping Refugees are Individual persons, local government, NPOs, supermarkets, and CVS, who usually manage by themselves, but sometimes, there are cases where two or more players cooperate and tackle the issue, in which case it is because of profit difficulties.

Type	measure	subjects
meal offer	Luncheons	NPOs, JA*, Local government
delivery	Meal delivery service	Local government, NPOs, co-op, Private Company
	Shopping representation	NPOs, Local government
	Door-to-door delivery service	Logistics Company, CVS*, Supermarket, Local government
improvement of access	Establishing shopping place	Citizen, local Association of store, JA, Local government, Local Supermarket
	Move sales	Supermarket, Local government, Local store, move sales
	Shopping busses	NPOs, Local government

Table1. Three types of the measure for Shopping Refugees

Source: Nobuyuki Iwata (2011), "Food Desert Issues" Agriculture-and-forestry statistics publication pp117-122 etc. *JA; Agricultural cooperative association, *CVS; Convenience store

The measure against Food Deserts, and corporate strategy

Market of door-to-door food delivery service

The size of the door-to-door food delivery market was 1,584 billion yen (US\$20 billion) in 2008. This was a 4% expansion from the previous year. It is expected to grow to 1,792 billion yen (US\$22.5 billion) in 2013. Within the door-to-door food delivery market, 970 billion yen (US\$12) comes from co-ops. 46.8 billion yen (US\$0.6 billion) comes from CVS and net supermarket. While the consumption market declines, the door-to-door delivery market is expanded.

Yamaguchi Co-op began door-to-door food delivery first in 2007. It expanded to 33 co-ops in March, 2011. Today, there is a demand of 40,000 deliveries per day. In Japan, 27 million partners have joined 138 co-ops throughout the whole country, and industry is worth 2,684 billion yen (an increase of 1.5% compared with last year). While the store business had a 1.8% decrease in income, the door-to-door food delivery service was in the black with a 3.2% increase of income for the whole co-op business in Japan.

Strategy of the Retail Industry

Each retail industry, like super market chain stores and CVS, has also set forth strategies which target Shopping Refugees. AEON will aim to establish a door-to-door delivery service network throughout Japan by 2014. Through this service, orders are received on the internet and the goods are delivered. Delivery depends on existing Yamato and Japan Post networks.

Seven-Eleven leads the convenience store industry, with "Seven Meal", the company's specialized delivery of lunch and other prepared meals with free delivery for order of 500 yen or more (with a 120 yen charge for orders of less than 500 yen). The staffs at 10,000 shops are responsible for delivery. Lawson and Family Mart are also following Seven-Eleven's lead.

The shift in strategy of retail industry, and reconstruction of a Supply Chain

So-called "net supermarkets" are more important than internet business in the "door-to-door" service. Regarding this business, reconstruction of the supply chain is an important matter. In other words, it appears the Shopping Refugees, or elderly people, are a new sales target. Until now, the main customers were the younger generations, and these were the main targets of CVS. That is, CVS has been located in a convenient place near stations, is 100-square-meters in scale, and has developed a strategy which made the younger generation the main customer. Making Shopping Refugees the main customers means changing the management strategy of CVS. To solve the issue, stores will need to operate in depopulated districts, develop elderly-oriented product subdivide goods, open smaller shop (50-square meter scale), and so on. To support shop operation under this new strategy, it is essential to reconstruct supply chain.

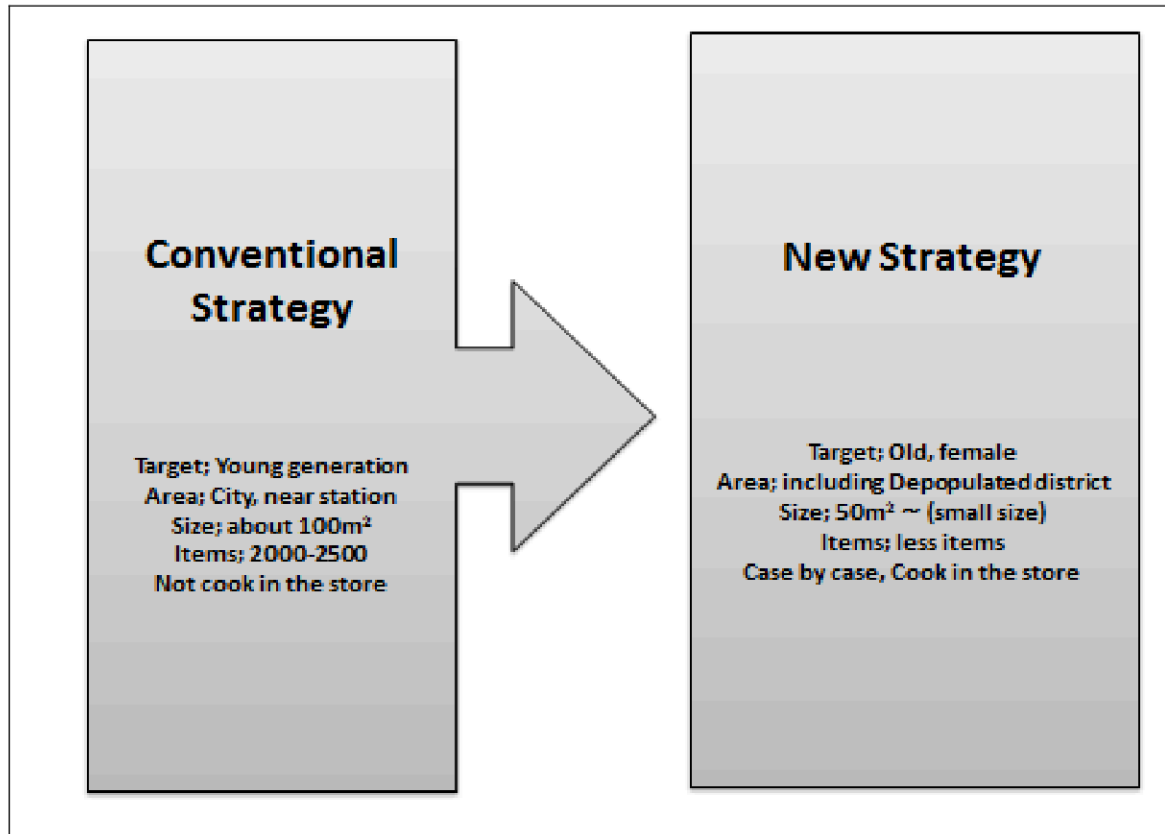


Figure3 Strategy Shift of CVS

Type of service	Player	Service
Door to door delivery service	Izumiya Supermarket	Meal delivery (supper)
	Coop Sapporo	Meal delivery(supper) to old
	Coop Kobe	Meal delivery (supper)
	Nisshin Iryoshokuhin	Meal delivery(lunch) to old
	Osaka Pal Coop	Meal delivery (supper)
	Max Value Nishi Nihon	Meal delivery by order
	AEON	Delivery service by net 28 provinces, by 2014 all provinces
Move sales	Moss Burger	Delivery (target; old) 260 stores
	Osaka Izumi Coop	Using Modified truck
	Coop Kobe	Using Modified truck
	Coop Sapporo	Specialized trucks, 100 unit
	Mikawayaya	Move sale of the clothing for old
Shopping representation	Seven Eleven Japan	Using Modified truck
	Heiwado	Shopping representation service at Shiga Province
Shopping Bus	Matsugen Supermarket	Operation of free round buses for shopping

Table2. The examples of shopping Refugees support services
Source: Nihon Keizashinbun 2012.9.11, Nikkei MJ 2012.8.13 etc.

AEON has used existing networks, such as Yamato Transport and Japan Post, while Seven- Eleven established its own networks, and Lawson and Family Mart are establishing networks with the M&A door-to-door food delivery company. Although the method, vary, each company has worked to reconstruct their supply chain. That is, a keyword here is “supply chain”. For the net supermarket, the method of delivery is important.

In that sense, the net supermarket can be placed at same rank of Yahoo, Askul, Amazon, and Rakuten. The movement of such companies toward strengthening distribution functions and services is remarkable.

Conclusion

The clothing/apparel and fast foods businesses, such as McDonald's and MOSS Burger, have expanded to include Shopping Refugees as targets. Amidst the elderly longevity and low birthrate, Shopping Refugees focused business is an effective management strategy for survival and continued growth. Survival will be difficult, if the conventional strategy is not shifted to target senior citizens.

According to the age-based statistics of visitors to Seven-Eleven per day per shop, the percentage of visitors 50-and –over, which was 9% in 1989, has increased to 28%. On the other hand, the percentage of visitors 20-and -under decreased greatly, from 28% to 10%. The middle-aged and the elderly (40-and –over) composed 40% of the customers in 2009, making them the new main customer segments for convenience stores, and signalling that a shift in strategy is necessary.

As the consumption market of Japan reduced as a whole, the door-to-door food delivery service market expanded. Although there has been a lot of new entry in the door-to-door delivery market, it is not easy to gain profits, except in some urban areas where there is great demand. There are also cased in depopulated districts where companies are forced to withdraw.

While deflation continues in Japan, it is difficult for enterprises to continue, if they do not successfully save costs while providing low-cost products. In this situation, a proper supply chain is necessary in new business models to ensure profit while prices are not expected to increase.

The measure for Shopping Refugees business, in other words, the new business model which focuses on elderly people, connect improvements in corporate earnings simultaneously with improvements in elderly people's life. That is to say, the interests of the elderly consumers and retail enterprises are well aligned.

For the retail industry, it is key to supply goods oriented toward the elder while maintaining low development cost, and, for that purpose, the reconstruction of Supply Chain is indispensable.

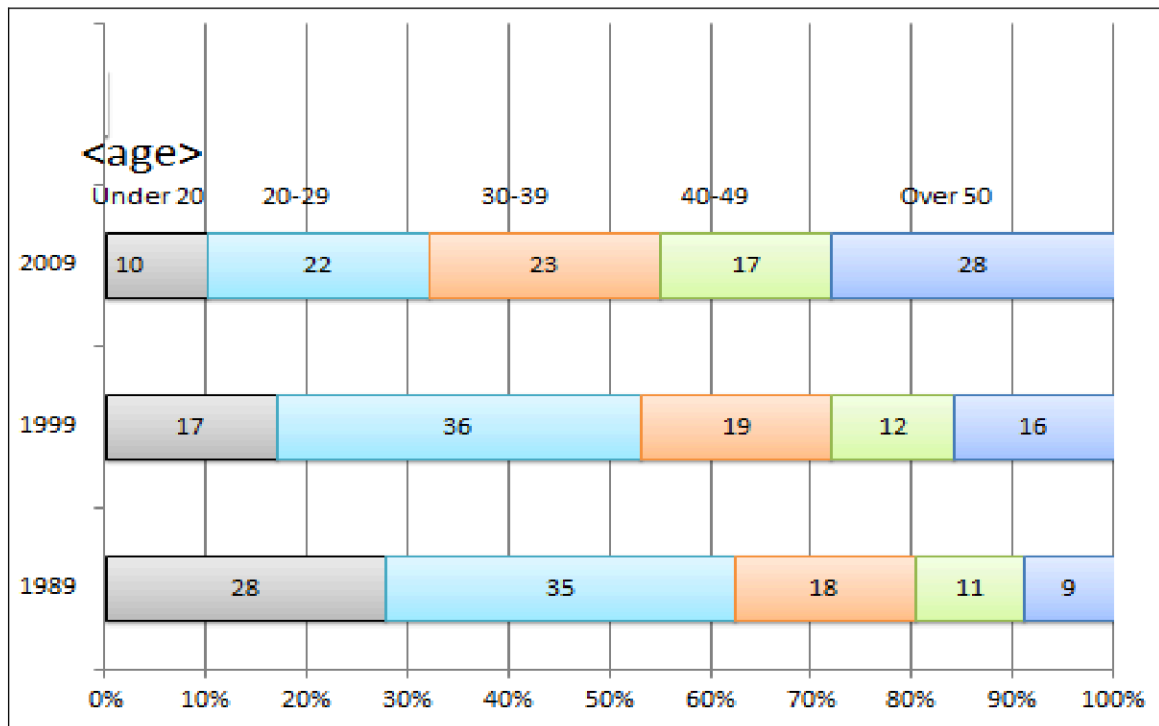


Figure4. The number of average visitors classified by age of Seven-Eleven Japan per day per store
Source: Investigation by Seven Eleven Japan

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