

# Care for Home-bound Older Adults and Revitalization of Local Shopping Arcade

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**Abstract-** The Japanese Ministry of Internal Affairs and Communications announced, on Respect-for-the Aged Day in September, 2005, that the population over 65 is over 20 % of the nation's total population. The Ministry also announced on June 1, 2006, that the special total birth rate in Japan recorded the lowest value of 1.25. If the birth rate continues to decrease faster than estimated, the ratio of older adults to the nation's total population will increase faster than expected. As new housing and large-scaled supermarkets are planned and constructed in the suburbs, older adults, the poor and the disabled people who cannot afford to drive for utilizing suburb supermarkets are forced into old inactive residential area and shopping arcade. Older adults hope to communicate with others, which can be facilitated by advanced technology. The case studies in this study show that older adults can satisfy such needs by communicating with shop owners in local shopping arcade. The secret for the revitalization of local shopping arcade lies in the care for home-bound older adults. We recommend a concept of cozy compact city where home-bound older adults can actively enjoy their lives in and out of their home and the local shopping arcade can be revitalized.  
**Key words:** care for home-bound older adults, shopping arcade, revitalization

## 1. Introduction

On Respect-for-the Aged Day in September, 2005, the Japanese Ministry of Internal Affairs and Communications announced that the population over 65 was over 20 % of the nation's total population. This shows that Japan is further on the way to aging society. The Ministry also announced on June 1, 2006, that the special total birth rate in Japan recorded the lowest value of 1.25. If the birth rate continues to decrease faster than estimated, the ratio of older adults to the nation's total population will increase faster than expected. In European countries, the ratios of older adults to nation's population for many are more than 14%, and these include Sweden, Italy, United Kingdom, and Germany. Figure 1 shows how Japanese aging society is developing.

Figure 1 shows how the aging society is developed in Japan based on the survey by Ministry of Internal Affairs and Communications. The ratio of older adults to the nation's total population statistics in Figure 1 shows that this value was over 15% in 2004, and it is predicted that this ratio reaches 35% in 2050. Compared with other countries, the development rate of aging society in Japan is by far faster. According to the survey of AD branch of Yomiuri newspaper, the tendency of return of older adults to downtown is summarized in Figure 2.

The percentage of "dare want to live downtown" and "want to live downtown" is nearly equal to 29.6%. The percentage of "eager

to live in suburb" and "want to live in suburb" was 28.9%. A total of 41.3% was categorized into other groups. It is possible that such ratios change depending on the housing or living situations in the near future.

The main reasons why older adults prefer to living downtown were: convenience of shopping and the accessibility to medical care center or hospital. Older adults may pay importance on the convenience of living downtown, because the social infrastructure is more fulfilled in downtown than in suburb.

From now on, it is predicted that more and more older adults, tend to return to downtown due to the convenience of living, because almost all of them cannot drive themselves to go to hospital or suburb shopping arcade. Therefore, the demand or need to local shopping arcade is expected to increase. The manager of local arcade must take such a tendency into account, and establish sales strategy to revitalize their local shopping arcade. In other words, they must manage their own shop so that their sales strategy covers the need of older adults who hope to live in downtown in search for the convenience of living. Although there are many studies that investigated the perceptual, cognitive, and motor functions of older adults and made use of the results to the design of computer interfaces or product designs, there seem to be few studies that made an attempt to relate revitalization of local shopping arcade to care for home-bound older adults [1]- [5].

In this study, it has been investigate how such revitalization strategy should be realized to enhance the quality of life (QOL) of older adults who tend to live in downtown. A concept of cozy compact city has been proposed so that home-bound older adults can actively enjoy their lives in and out of their home and the local shopping arcade can be revitalized.

## 2. States of local shopping arcade and image of local citizens towards shopping arcade

Results of survey on the vigor of local area by cabinet office, Government Japan are summarized in Figure 3. Three thousands persons more than twenty years old was surveyed based on an interview. About 70.3% cooperated the interview- based survey. The answers to the question "Do you think that your local community is vigorous?" were as follows: (A) "Not vigorous at all" plus "not vigorous" (43.7%), (B)"Vigorous" plus "a little bit vigorous" (37.5%). Many people seem to judge that their local community is not vigorous. The reason why the judge their local community to be not vigorous included: "The number of children or young people living in the local community is decreasing", "Local shopping arcade in downtown of community is deserted", "The basic industry supporting the local community is declining", and "the population is decreasing." Especially, more than 70%

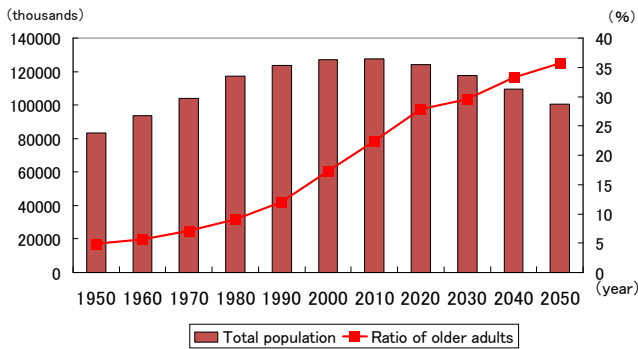


Figure1. Developmental situation of Japanese aging society (Reference:White Paper on the National Lifestyle, 2004)

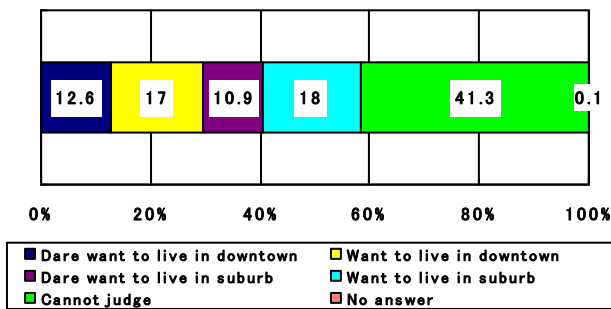


Figure 2. Tendency of return of older adults to downtown (Reference : the survey of AD branch of Yomiuri newspaper, 2003)

persons in Tyugoku and Sikoku area, Hokuriku area, and Tohoku area feels that number of children or young people living in the local community is decreasing. Another question such as “What kind of policy do you think is necessary to revitalize your local community?” was also answered by the participants. The answers included: “Effective measures for crime prevention and disaster prevention” (48.4%), “medical care and welfare should be substantial fulfilled so that every generation can live safely and comfortably.” (40.8%), “revitalization of local shopping arcade or improvement of living environment in downtown”(31.3%), and “construction and maintenance of living environment such as roads or parks and basic industry promotion”(28.9%). Basically, the type of shopping arcade is either surrounding, wide-area or local type.

The surrounding type corresponds to a shopping arcade where housewives visit by walk or by bicycle and buy daily necessities. The local type corresponds to a shopping arcade such as a clothing supermarket or small-scale department stores where people visit by bus or by train and buy both daily necessities and durable goods. In the wide-area type shopping arcade is located at downtown, and people both from local and distant areas visit by train or by subway to buy mainly durable goods. According to the survey by Kyushu branch, the distribution of location of local shopping arcade in Kyushu area are classified as shown in Figure 4. About 40% and 15% were located at downtown and in front of a station, respectively, which means that larger percentage of shopping arcades is at the center of local community. As shown in Figure 5, about 85% of shop owners states that the number of shoppers decreased as compared with that three years ago. The causes of decreased shoppers were “construction of large-scale

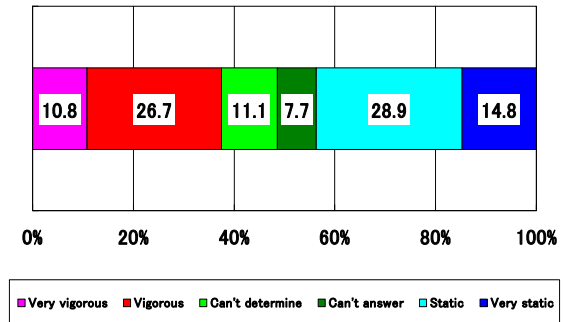


Figure3. Results of survey on the vigor of local area (Reference: Results of survey on the vigor of local area by cabinet office, Government Japan are summarized, 2005)

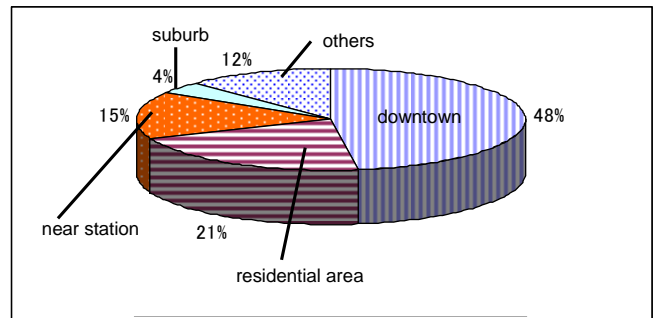


Figure4. Distribution of location of local shopping arcade in Kyushu area (Reference: Ministry of Economy, Trade and Industry in Kyushu, 2004)

shopping arcade in suburb or in neighborhood (64.3%)”, “sluggish of business”, and “cannot cope with the diversity of consumers’ need (24.0%)”, “decrease of neighboring population (16.2%)” (see Figure 6). To make matters worse, due to no correspondence to the diversity of consumers’ needs, the shoppers seems to be taken by a large-scale shopping arcade in suburb. Although some measures, which include the event or exhibition by making use of a vacant shop space, the support of monthly rent by autonomy, and the utilization of vacant shop space as a place for relaxation, seem to be taken to overcome the hollow state of local shopping arcade, these do not function effectively.

### 3. Case study: revitalization provision of local shopping arcade in Kyushu area

The success in the revitalization in Kokai shopping arcade in Kumamoto city was surveyed. To compare this with the failure of revitalization of shopping arcade, the case of Tobata shopping arcade in Kitakyushu city was also surveyed. On the basis of the comparison between two cases, the key to the success of revitalization of shopping arcade was considered.

#### 3.1. Case study: Kokai Shopping arcade in Kumamoto City

The map around Kokai shopping arcade in Kumamoto city is shown in Figure 7. This shopping arcade is located at 2km northeast from the center of Kumamoto city, and about 100 shops along a 400 m road with width of 5m. This shopping arcade mainly deals with perishable foods, and has an atmosphere of market.

According to the survey by Kumamoto city, as shown in Figure 8, the number of shopping arcade and its sales in Sekidai

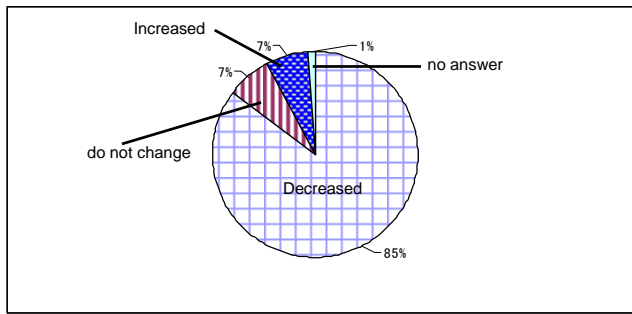


Figure 5. Change of guests to local shopping arcade compared with three years ago (Reference: Ministry of Economy, Trade and Industry in Kyushu, 2004)

area in Kumamoto city are decreasing year after year. In Figure 9, passengers in Kokai shopping arcade over past ten years. Solid and dotted lines represent weekday and holiday, respectively. Due to effective measures for the revitalization, the number of shoppers who visit here and purchase daily necessities and so on tends to recover.

Kokai shopping arcade has taken the following measures, and succeeded in stopping the decrease of shoppers.

- (1) Reformation of attitude towards shop management of shop owners
- (2) Creation of old-fashioned atmosphere
- (3) Exchange between university students and older adults, based on which a variety of events to revitalize the shopping arcade is held.
- (4) United efforts of the concerned people added fun or pleasure to the shopping arcade, and consequently recovered the liveliness as before.
- (5) Making use of the newspaper and the local TV station to call for the advertisement of shop owner.

The rent of the newly advertised shop owner was discounted by 30%, and adults were also opened. As a result, environment where other benefit was provided. As a result, three shops were newly opened. Moreover, a few outdoor shops by older even older adults can comfortably and safely purchase goods. The success of Kokai shopping arcade has been paid attention to by concerned people inside and outside of Kumamoto prefecture.

### 3.2. Case study: Tobata Shopping arcade in Kitakyushu City

Map around Tobata shopping arcade in Kitakyushu city is shown in Figure 10. Kitakyushu is the birthplace of Japanese steel manufacturing. As a competitor of Tobata shopping arcade, "Tobata Saty" opened, the sales is decreasing and become more and more deserted. To overcome and cope with such a severe situation, the following measures are taken.

- (a) Clarify the concept which the shopping arcade should aim at.
- (b) Discuss the revitalization measure together with customers.
- (c) Regard the newly opened welfare facility "Well Tobata" as a good chance to revitalize own shopping arcade, and carry out some measures with the local community.

Population and number of household in Tobata ward, Kitakyushu city is shown in Figure 11. While the population of Tobata ward is decreasing year after year, the number of household is increasing. The ratio of generation in Tobata ward is as follows: 0-14 years old (4.3%), 15-64 years old (71.6%), and

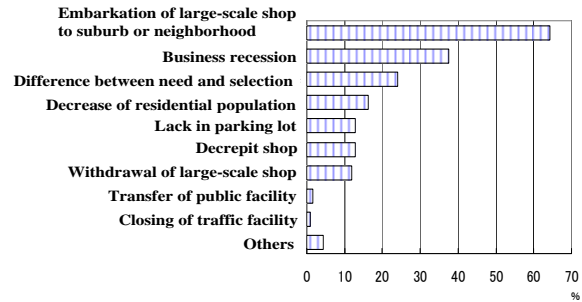


Figure 6. Factors affecting the decrease of guests to local shopping arcade (Reference: Ministry of Economy, Trade and Industry in Kyushu, 2004)

more than 64 years (24.0%). The ratio of 15-64 years old is decreasing every year, and the ratio of older adults is increasing. The ratio of older adults to the ward's total population is nearly equal to 25%. Results of survey (by Kitakyushu city) on change of passengers in Tobata shopping arcade is summarized in Figure 12. On weekday, the number of passengers decreased by 1,163 persons over three years. On holiday, the passengers decreased by 1,684 persons over three years. The number of passengers per day decreased, on average, 355.8. The number of shops in Tobata shopping arcade and Kitakyushu city over past eight years from 1994 to 2002 is summarized in Figure 13 (survey by Kitakyushu city). The shop sales in Tobata shopping arcade and Kitakyushu city over past eight years is shown in Figure 14 (survey by Kitakyushu city). In Tobata shopping arcade, the number of shops decreased by 72 over the eight years (9 shops per year). In Tobata shopping arcade, the shop sales decreased by 5100 million yen over the eight years (about 600 million yen per year). These data suggest that Tobata shopping arcade is getting more and more deserted, and the measures (a)-(c) do not successfully function. According to the questionnaire by customers, the deterioration of service quality, fewer variations of goods, and fewer number of shops were pointed out as substantial problems. The following new opinions were suggested:

- (A) Goods should be delivered.
- (B) Free market, parking lot, rest station, and toilet should be necessary.
- (C) Vacant shops should be made effective use of.
- (D) Create a comfortable atmosphere by spreading music when shopping at arcade.
- (E) Make effective use of the shopping arcade as a place for carrying out community activity.

Tobata shopping arcade is not so successful as Kokai shopping arcade mentioned in 3.1. Comparing these survey results, how the local shopping arcade should be managed will be discussed in Section 5 (Revitalization provision of local shopping arcade which incorporates home-bound older adults)

## 4. Survey on older adults' participation to local society

Survey on attitude towards community activity is carried out every five years. The results in 1988, 1993, 1998, and 2008 are shown in Figure 15. Four thousand Persons more than sixty years old was surveyed. Twenty eight hundred and sixty persons



Figure 7. Map around Kokai shopping arcade in Kumamoto city (Reference: <http://map.yahoo.co.jp/pl?lat=32%2F48%2F32.783&lon=130%2F42%2F55.241&layer=0&sc=3&mode=map&size=s&pointer=on&p=&CE.x=335&CE.y=267>)

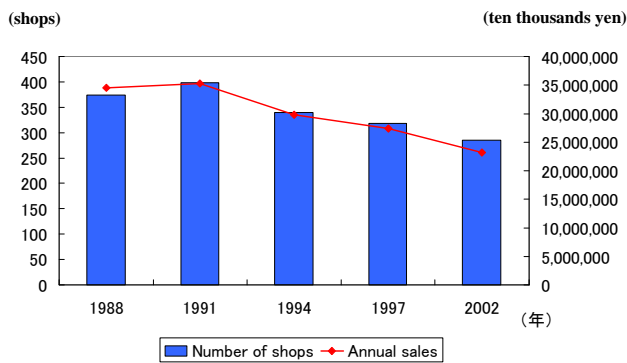


Figure 8. Change of number of shopping arcade and its sales in Sekidai area in Kumamoto city over past ten years (Reference: <http://www.city.kumamoto.kumamoto.jp/aramashi/toukei/14syougyou/toukeihyo/toukeihyo14-6.xls>)

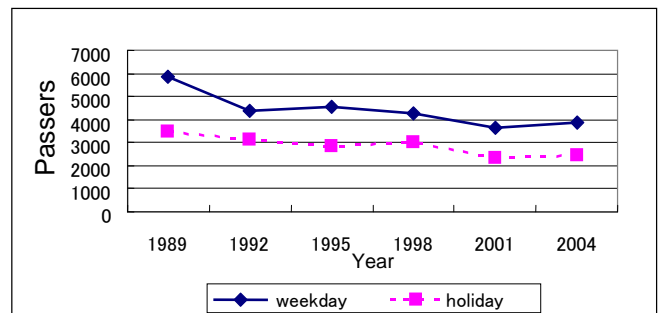


Figure 9. Change of passengers in Kokai shopping arcade over past ten years (solid line: weekday, dotted line: holiday) (Reference: Kumamoto chamber of commerce)

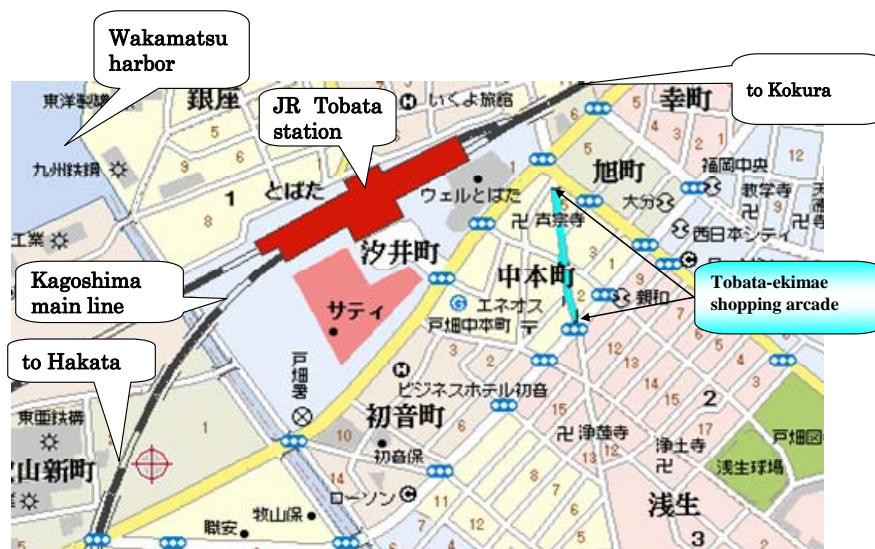


Figure 10. Map around Tobata shopping arcade in Kitakyushu city (Reference: <http://map.yahoo.co.jp/pl?lat=33%2F53%2F31.529&lon=130%2F50%2F0.419&layer=0&sc=3&mode=map&size=s&pointer=on&p=&CE.x=8&CE.y=319>)

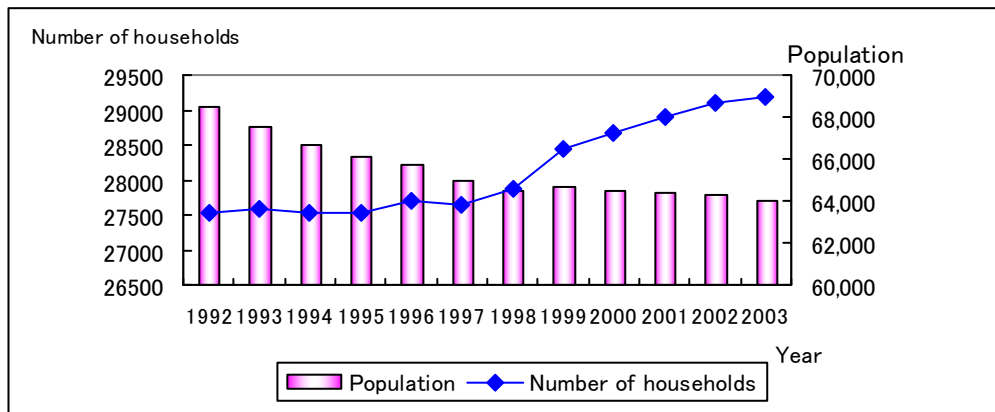


Figure 11. Population and number of household in Tobata ward, Kitakyushu city  
(Reference:<http://www.city.kitakyushu.jp/file/14070100/toukei/sougou/tyouki/02/02006.xls>)

answered the question. More than 50% thinks that they should actively participate in activities in local society. As Japanese society has already been categorized as aged society, it is important to construct a society where older adults can spend the rest of their lives safely and fully by participating in social activities. Older adults have plenty of experience and high abilities cultivated until now.

Based on such a survey, it can be predicted that attitude towards community activity by older adults is positive and become conscious year by year. We insist that such an attitude of older adults towards community activity should be entered into the revitalization of local shopping arcade, which leads to the concept of compact city mentioned in 5.Revitalization provision of local shopping arcade which incorporates home-bound older adults.

### 5. Revitalization provision of local shopping arcade which incorporates home-bound older adults

With the spread of automobiles, commercial facilities, especially large-scaled ones tend to move towards suburbs. As a result, local shopping arcades become more and more deserted. Government or autonomy is trying to take some measures to put a brake on such a tendency. Such a measure is not acceptable at all, because only commercial facilities, the area of which is more than ten thousand square meter, are forbidden to make a business. Therefore, in spite of such efforts by government or autonomy, it is possible that commercial facilities tend to move towards suburbs. Although local shopping arcade become deserted, the rental cost of vacant shops is not reduced in price. Although the taxations for commercial building estate less than 400 square meter is reduced by 20% according to the policy of Japanese government, the owners do not try to sell their estate or reduce the rental price. Consequently, the number of open shops decreases, and the local shopping arcade tended to be deserted. In Berkley, the United State, when the shop is closed, it is obligatory for the owner to search for a new tenant. If the shop is not consecutively rented by someone, a penalty of about four thousand dollars is imposed on the shop owner. Without such a policy, local shopping arcade becomes more and more deserted.

The development of aging society and the declining birth rate further make local shopping arcade falter. To cope with such situations, the following approach would be necessary. The

compact city where shops, public facilities, hospitals, and so on are equipped and purchase daily necessities, and finish their business by walk or by bicycle, should be designed and constructed around local shopping arcade in downtown. This concept is summarized in Figure 16. In the proposed concept, vigorous home-bound older adults and local shop owners cooperate to help sick home-bound older adults (go to hospital to take medicine instead of them, confirm whether they live without troubles, carry necessities to their home) and contribute to the revitalization of local shopping arcade. The revitalization of local shopping area that realizes such activities and help sick home-bound older adults must be attained through the cooperation of concerned people such as shop owners or vigorous home-bound older adults. The problems that must be addressed to realize the compact city and revitalize local shopping arcade are pointed out as follows:

- (1) Promote sales appeal actively  
Original goods that cannot be purchased anywhere must be prepared and offered to older adults.
- (2) Remodeling to barrier-free shop  
Shop owners must devise so that there exist no barrier in their shop.
- (3) Water cooler, bench, and parking space of electronic wheel chair or electronic bicycle should be equipped with local shopping arcade.
- (4) Make effective use of vacant and non-used shop. The information on vacant shops is widely open to public so that citizens can adaptively make use of this space.
- (5) Communication with older adults (customers)  
For shop owners, it is important to be relied upon by older adults. Not only reliability but also security or relief and familiarity are necessary to communicate with older adults. Good human relation between shop owner and older adults is also an important factor to promote the proposed concept of compact city. For example, the feeling of older adults that they can manage their live if they visit or call local shopping arcade.

The Tobata shopping arcade in this study makes many attempts to gather shoppers, it has not attained a remarkable effect. The proposed concept might help to make shopper return to the local shopping arcade and revitalize it.



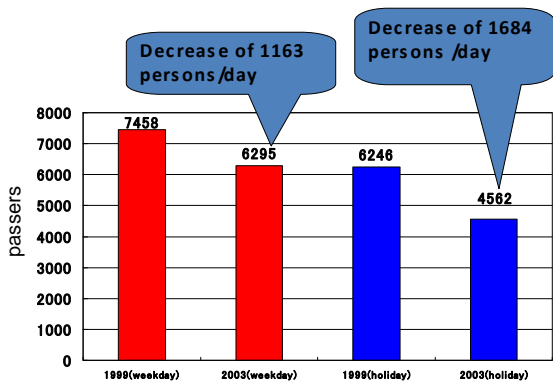


Figure12. Change of passengers in Tobata shopping arcade (Reference: Traffic Survey by Tobata Award)

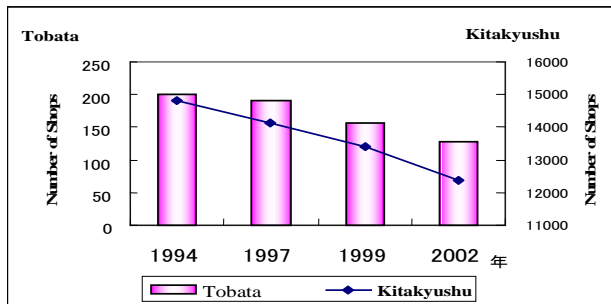


Figure 13. Number of shops in Tobata shopping arcade and Kitakyushu city over past ten years (Reference: Kitakyushu market area measurement)

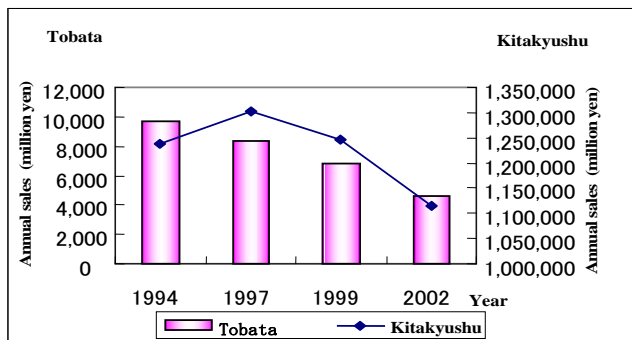


Figure 14. Shop sales in Tobata shopping arcade and Kitakyushu city over past ten years (Reference: Kitakyushu market area measurement)

## 6. Conclusions

The local shopping arcade must take some effective measures to recover the number of shoppers. Their attitude toward the recovery of local shopping arcade must be altered. One solution to this might be the re-birth and development of local shopping arcade as a part of social welfare. The revitalization of local shopping arcade based on the proposed of compact city where people can manage their lives not by car but by walk must lead to the base of safer and comfortable residence especially for older adults. Such a residence would be safe and comfortable even for general residence other than older adults from the viewpoint of universal design.

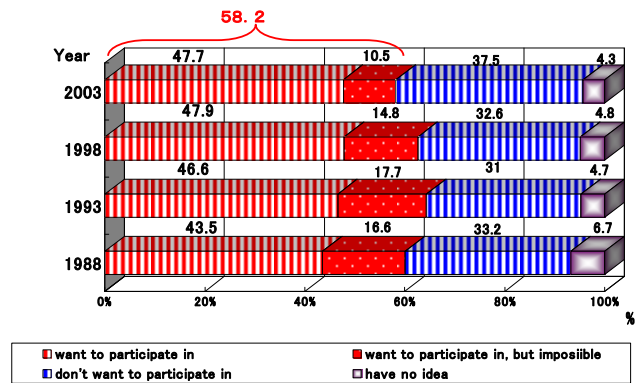


Figure15. Results of survey on attitude towards community activity (Reference: Cabinet Office, Government of Japan, Sep, 2004)

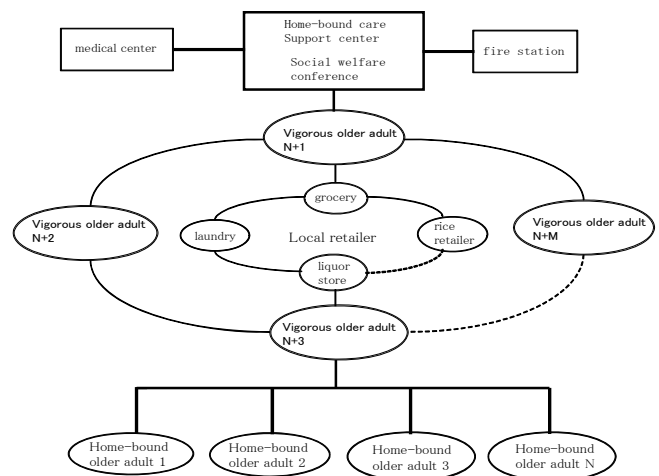


Figure16. Concept of revitalization network of local shopping arcade which is organized with vigorous home- bound older adults.

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