

A RESEARCH ON ECONOMIC AWARENESS AND REQUIREMENT OF DWELLERS TOWARD REMODELING OF APARTMENTS

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Abstract

This paper introduces the result of performing research analysis on awareness and demand on economic aspect of dwellers toward remodeling by aiming at the fact that there are existing dwellers which is the biggest feature of remodeling. Providing services that are suitable for economic conditions and demands of owners or dwellers of Apartment House could be seen as something that must be considered first above all things in remodeling in which consumers have to pay for expenses are specified.

Keywords: Apartment Remodeling, The Requirements and Intention of dwellers, Economical Condition, Aged Apartment

1. Introduction

Generally, the supply of apartments has a tendency to be concentrated after the end of war or during the growth period of population and city. In Korea on the other hand, although there was almost no supply of apartment right after World War II or Korean War, the apartment complexes with few precedence in the past were supplied in massive quantities especially after 1970's as a method to cope with housing demand followed by rapid progression of urbanization after 1960's. The apartments supplied in Korea during this period contain following problems seen from the modern standpoint.

First, the units and utility rooms are small because the minimum standard for people to live has been applied. Second, the supply of unit to settle numeric insufficiency of housing has been prioritized so that public space at the indoor and outdoor of apartment is poor. Third, because it was a common practice to apply uniform floor plan and external design, the consideration in response to demands of dwellers and identity of region are absent. Fourth,

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lifelines such as cooling and heating, water supply and drainage, electricity, gas, communication and EL, etc are poor or old. Fifth, there's lack of parking spaces followed by extended supply of automobiles. Sixth, it is inappropriate for earthquake resisting standard applied as of 1988's are the basic weak points contained in it.

In addition, the physical aging due to natural weathering, artificial friction shock from passing of year had progressed considerably and obsolescence of not being able to cope with modern needs by dwellers and district has also been raised as the problem to be solved.

For methods to solve these problems, the complete scrap & build, remodeling which continuously uses existing structure and the compromise of these to plans, etc can be introduced.

Compared to reconstruction, remodeling can save resources using the ability of existing structure, could be called economical and eco-friendly in that it can reduce the amount of dismantled material waste and maintain sustainability of community so that it could be logically be thought of as a plan to ensure social stability. But when we examine the remodeling projects performed in Korea so far, the examination and reconsideration on whether the settlement of weak points mentioned above and logical advantages have been implemented seem necessary.

Especially, providing services that are suitable for economic conditions and demands of owners or dwellers of Apartment House could be seen as something that must be considered first above all things in remodeling in which consumers have to pay for expenses are specified. Accordingly, this paper introduces the result of performing research analysis on awareness and demand on economic aspect of dwellers toward remodeling by aiming at the fact that [there are existing dwellers] which is the biggest feature of remodeling. This would become the first step toward ensuring customer satisfaction on remodeling services.

2. The Development and Result of Survey

2.1 The Development of Survey

- Research Agency: Center for Aged-Housing Remodeling Technology
- Research Period: May 10, 2006-May 16, 2006

- Subjects: Residents of apartments in Seoul and Gyeonggido
- Total number of distributions:
 - Random distribution toward unspecified people through the internet
- Total number of questions: 46 questions
- Effective respondents: 210 people

2.2 Cross Check Results of Respondent Profile

The total number of effective respondents is 210. By gender, there are 136 males and 74 females. By age group, there are 111 people in their thirties, 62 people in their forties, 31 people in their fifties and 6 people in their sixties. Among them, there are 179 apartment owners and 31 residents of the lease on deposit basis. By occupation, there are 75 office workers, 37 housewives, 30 professionals, 30 self-employed, 17 technicians, 11 others and 10 service workers. By area, there are 124 people in Seoul area and 86 in Gyeonggido area.

Table1 Size of Apartments by Elapse of Year (1Py=3.3m², unit=people)

Years(By Types)	Under 20 Py	20~30 Py	30~40 Py	40~50 Py	50 Py or Greater	Total
0-4 Years	3	19	14	1	2	39
5-9 Years	1	21	13	4	2	41
10-19 Years	11	31	31	13	3	89
20 Years or More	9	13	17	2	0	41
Total	24	84	75	20	7	210

By elapse of years, there are 39 people of 0-4 years, 41 people of 5-9 years, 89 people of 10-19 years and 41 people of 20 years or more. In other words, the ratio of people living in apartment with elapse of 20 years or more which can legally become subjects for remodeling is 19.34% of total, 10-19 years is the highest with 42%, 5-9 years is 19.34% and 0-4 years is 18.87%. If we simply average with just the respondents, about 4.2% among total number of apartments become candidate for remodeling each year for next ten years and could be seen as about 4% becoming subjects for remodeling each year even afterwards. Therefore, if we consider the number of apartments with 20 or more elapse years which the remodeling is currently possible, the period of ten years from this point is tremendously important for remodeling or reconstruction.

Table 2 Age Group of Residents by Apartment's Elapse of Years (unit=people)

Years (By Age Group)	30's	40's	50's	60's	Total
0-4 Years	25	5	7	2	39
5-9 Years	22	14	5	0	41
10-19 Years	48	27	13	1	89
20 Years or More	18	11	11	1	41
Total	113	57	36	4	210

If we look at elapse of years compared to age group of residents, 35.48% of people in their fifties live in apartments of 20 years or more which become subjects for remodeling at this time to be highly concentrated. People in sixties rather have high concentration in new

apartments of 0-4 years. Accordingly, it seems that considerations of families in which someone in fifties is the head of household must be discreet when we think about remodeling at this time.

The ratio of apartments that are more than twenty years old at this time is relatively high in Seoul, gradually getting higher in Gyeonggido to have more in Gyeonggido between 5-9 years. In 0-4 years there are more of them in Seoul once again. Although this value might not be precise, remodeling market will circulate as Seoul- Seoul/Gyeonggido-Gyeonggido-Seoul in a long run.

36% of apartments under 20 Py have elapsed more than 20 years and 44% has elapsed 10-19 years, 80% of apartments under 20 Py become main subject of remodeling at this time and for next ten years. After that, there aren't many small types going into remodeling. Because the demand for floor expansion of such small types is considered to become higher, the next ten years could be seen as the period of greatest demand for floor expansion.

Table.3 The No. of dependents by the elapse of years (unit= people)

Years (By No. of Dependents)	None	1	2	3	4	5 or More	Total
0-4Years	1	2	14	19	3	0	39
5-9 Years	1	6	7	23	1	3	41
10-19 Years	2	13	18	37	15	4	89
20 Years or More	1	7	9	23	1	0	41
Total	5	28	48	102	20	7	210

The households with 3 dependents have the greatest number of apartments with elapse of 20 years or more which currently become subjects for remodeling and residents of apartments that are 10-19 years old are distributed diversely centered on families with 3 dependents. In other words, it is necessary to especially consider the life and migration centered on families with 3 dependents while thinking about remodeling.

For the number of dependents by age groups, there's nobody in sixties with 4 or more dependents, fifties and forties are in the order of 3-2-4 dependents and thirties is in the order of 3-2-1 dependents. When we consider people in thirties with already a few number of dependents and people in forties and fifties whose number of dependents is gradually decreasing, the number of dependents are generally in a decreasing trend seen from the long-term aspect. While there are demands, etc on improvement of dwelling grades, the demand for apartments of sizes in which there are 2 dependents may increase in middle and long term if considered simply by number of families. Accordingly, the expansion of private area cannot be seen as general demand of middle and long term.

2.3 The Perception toward Remodeling and Requirement Analysis

2.3.1 Intentions of Remodeling

The remodeling intention is predominant about 60:40. But while the intention is strong in Seoul with about 70:30, the remodeling intention is weak in Gyeonggido with 45:55. By

age groups, although having remodeling intention is predominant in all age groups with 60:40, the ratio gets considerably lower as the age group gets higher.

Although the tendency is same also by gender, males have stronger remodeling intention than females with about 64:36. Although the trend is similar by floor spaces of apartment, the remodeling intention decreases as the size gets bigger when considered by area in twenties and the remodeling intention gets decreased considerably also for under 20 Py although this is approximately similar.

In relation to ownership, while 61.11% of owners have intention for remodeling, 51.52% of the people with lease on a deposit basis have intention of remodeling so that remodeling intention of home owners is higher.

2.3.2 Factors Making People Hesitant About Remodeling

For the factor which makes people hesitant about remodeling, the fact is that [raising the cost to be appropriated] becomes hindering factor above all things while the sense of burden toward cost and economic aspects such as [burden of costs necessary for migration during construction period] and [suspicion toward real estate price increase more than invested amount], etc as well as the suspicion toward investment value are becoming other greatest hindrances. The trend followed by age group, size, area, gender and form of ownership is almost identical to above.

Table.4 Factors Making People Hesitant about Remodeling (Unit=people)

Factors Making People Hesitant About Remodeling (By Number of Dependents)	0	1	2	3	4	5 or More	Total	Rank
1. No inconvenience in current line of flow and size of space	2	4	3	18	4	2	33	11
2. No inconvenience in current partitions or furniture	1	2	2	13	3	2	23	13
3. No necessity for remodeling in current structure aspect	3	3	5	20	3	3	37	10
4. No necessity for remodeling in current equipment aspect	1	1	3	11	4	3	23	13
5. Burden toward raising funds	2	20	30	59	14	5	130	1
6. Have suspicion on cost increase toward invested amount	3	19	29	37	9	1	98	3
7. Lack of assurance toward safety, endurance or improvement of living conditions	1	2	8	9	2	0	22	14
8. Cost burden necessary for migration is great	2	17	17	56	9	3	104	2
9. Inconvenience of commuting to school or work during Migration period	2	3	11	31	6	1	54	7
10 Safety in storage of household goods during migration Period and living inconveniences	2	10	9	39	8	2	70	5
11. Complications such as participation of conferences by Administration or residents	1	3	2	11	2	1	20	15
12. Suspicion on reliability of progressing business by association	2	10	9	22	4	2	49	8
13. Conflict in understanding between residents from Differences in benefits and burdens	2	11	13	33	3	3	65	6
14. Complaints from neighbors out of noise and dust during construction	1	3	3	15	2	1	25	12
15. Distrust toward service qualities such as sincere Diagnosis, designing and construction	3	9	22	30	5	2	71	4
16. Other	0	1	9	8	4	0	22	14

2.3.3 Standing point for Remodeling

For the position on remodeling as a whole, the ratio of responding as [interested because there would be property value of more than input cost] was highest and [interested because there would be as much value as input cost at least] was next highest. In other words, the ratio of placing optimistic hope without sense of anxiety toward investment value is high. On the other hand, there is also 13.68% [I have almost no intention of investing because the increase of property value as much as input cost is unclear] with anxiety toward investment value. On the other hand, the ratio of avoiding remodeling because one doesn't have spare money or because of trouble was low. In conclusion, we can say the position of wanting to remodel only if real estate investment value is reliable even if it might be troublesome was the strongest. But because such consideration of remodeling as investment concept loses motive for remodeling if the real estate market becomes stable in the future, there is a worrisome aspect in awareness toward remodeling.

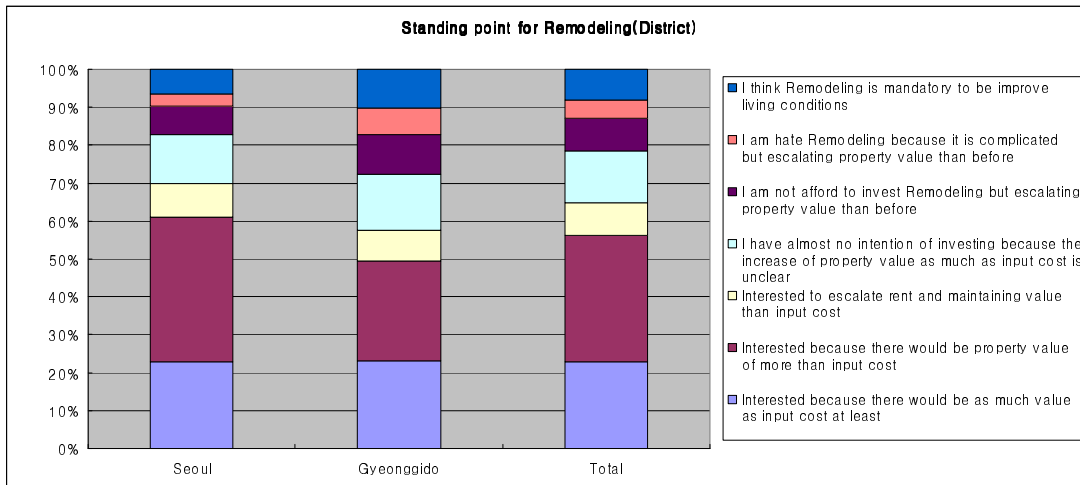


Fig. 1 Standing point for Remodeling (District)

2.3.4 Related to Migration during Remodeling Construction Period

For migration the house during remodeling period, ratio is high in the order of [migration is better]-[not migration is better]-[depends on the situation]. Migration is preferred in Seoul than Gyeonggido, by males than females and by home owners than lease on a deposit bases.

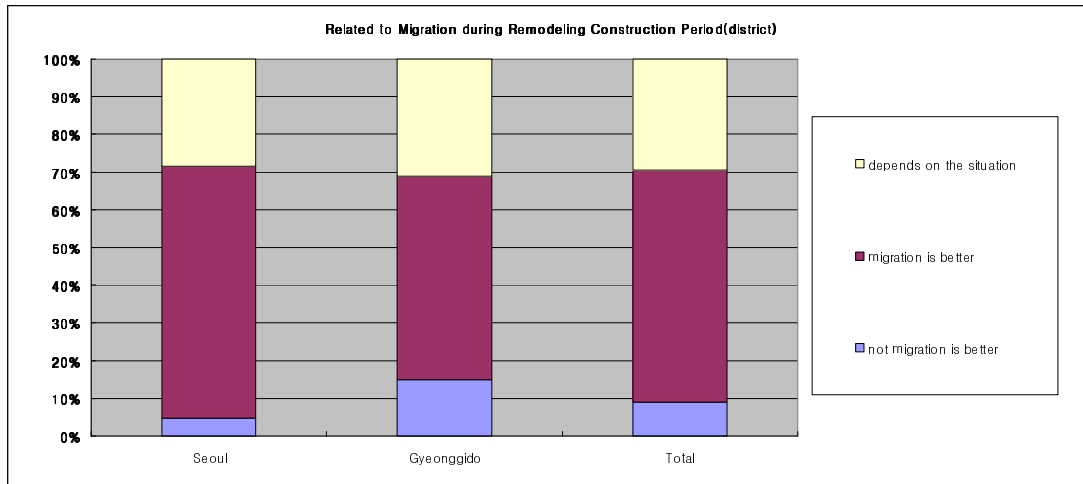


Fig. 2 Related to Migration during Remodeling Construction Period (district)

For people who have responded that [not migration is better] the biggest reason is [hassle of migration and migration back in] and are in the order of [difficulty in finding suitable temporary residence and storage for household goods], [a considerable amount of migration expenses are required], [possible without migration depending on construction plan] and [other].

Table.5 Related to Migration during Remodeling Construction Period (Unit=people)

Related to Migration	Seoul	Gyeonggido	Total	Rank
Because of possibility without migration depending on Construction plan	1	3	4	4
Requires a considerable amount of migration expenses	3	3	6	3
Difficulty in migration and migration back in	4	5	9	1
Difficulty in finding suitable temporary residence and storage for household goods	4	4	8	2
Other	0	2	2	5

In case of the reason for responding that [migration is better], most were [possibility of shortened construction period and improvement of construction quality] and next are in the order of [worried about noise, dust and safety, etc during construction] and [worried about damaging household goods]. As the size of apartment gets bigger [worries about damaging household goods] become stronger.

In case of reason for responding as [depending on the situation], the number of responses was same for [decision by considering expenses] and [decision by considering noise, dust and safety, etc] and next were in the order of [decision by considering the degree of influence on construction quality] and [decision by considering the migration distance]. Up to 3 dependents, the migration distance is more considered as the number of dependents increase and in four or more dependents, the noise/dust and cost is relatively considered a lot. There's tendency of considering migration period as the size of apartment gets bigger.

2.3.5 Appropriation Method for Remodeling Expenses

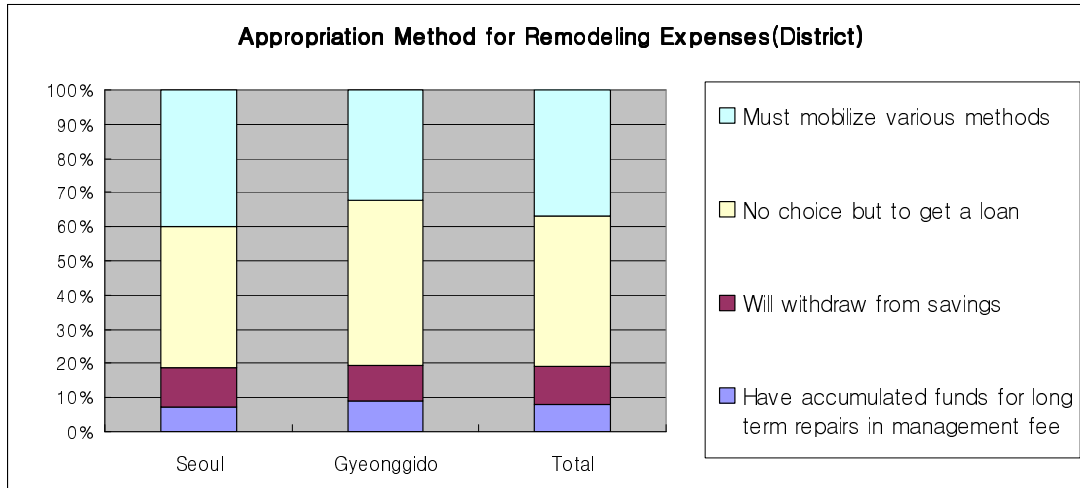


Fig.3 Appropriation Method for Remodeling Expenses (District)

In general, the preparation of resources for remodeling was insufficient with [no choice but to get a loan] 43%, [must mobilize various methods] 36.79%, [have accumulated funds for long term repairs in management fee] and [will withdraw from savings] being about 10%. By areas, [no choice but to get a loan] and [have accumulated funds for long term repairs in management fee] were somewhat higher in Gyeonggi-do than Seoul while [will withdraw from savings] and [must mobilize various methods] were considerably high in Seoul.

By age group, the ratio is relatively high in loans and various method for thirties, loans for forties, various methods for fifties and withdrawing from savings for sixties. By gender, males prefer loans and females preferred various methods.

By sizes, preferences were various methods for under 20 py, loans for 20-29 py, loans and various methods for 30-39 py, withdrawing from savings for 40-49 py and comparing accumulated funds for long term repairs for 50 py or greater. The problem is that there were no accumulated funds or savings as the size gets smaller.

By number of dependents, the concentration was high in loans in case of not having dependents, loans and various methods in case of having 1 dependents, various methods and loans in case of having 2 dependents, loans and various methods in case of having 3 or 4 dependents and various methods in case of having 5 dependents or more.

2.3.6 Desired Project Delivery System

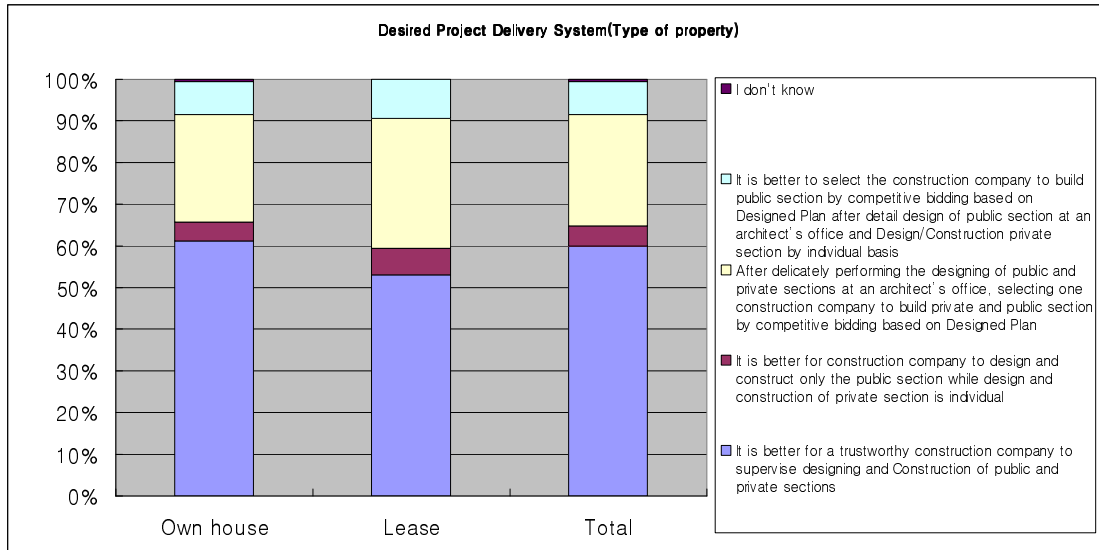


Fig.4 Desired Project Delivery System (Type of property)

The [① It is better for a trustworthy construction company to supervise designing and Construction of public and private sections] is the most preferred method in general as the method preferred by about 60% of total, 68% of Seoul, 74% of forties, 61% of males, 75% of 40-49 Py, 65% of families with 2 and 4 dependents. Gyeonggido prefers this method only by about 50%.

[② It is better for construction company to design and construct only the public section while design and construction of private section is individual.] was the method which is disapproved of the most as 5% of the total. But this was the method preferred by 29% of sixties, 5% of males and 14% of 50 Py or greater and 20% of families without dependents.

[③ After delicately performing the designing of public and private sections at an architect's office, selecting one construction company to build private and public section by competitive bidding based on Designed Plan.] is the method preferred by 26.54% of the total, 34.48%, of Gyeonggido, 32% of thirties, 27% of males, 57% of 50 Py type or greater and 38% of families with 1 dependent.

[④ It is better to select the construction company to build public section by competitive bidding based on Designed Plan after detail design of public section at an architect's office and Design/Construction private section by individual basis.] is the method preferred by 8% of the total 10.34% of Gyeonggido, 16% of fifties, 10.8% of females 12% of under 20 Py type and 28.57% of families with more than 5 dependents.

2.3.7 Consideration of Future Remodeling

It was shown that future remodeling will be considered overwhelmingly in all parts in the order of public finish, private structure, private equipment, public structure, private finish and public equipment. Such availability of future remodeling doesn't have much difference in its trend by area, gender, age group, size, dependents or ownership.

The main conclusions and suggestions from overall analysis of survey are as follows.

3. Conclusion and Suggestions

- 1) The respondents have highest ratio of living in 20-29 Py type, about half (48.6%) have 3 dependents and forties especially have 3 dependents (62.9%) in general. In other words, forties is the baby boom generation of Korea and while they form up the most common family consisted of 4 people at this time, the demand toward floor expansion is high for the time being because many live in small places.
- 2) But looking at the population trend, the expansion of private grounds cannot be considered as general and everlasting even in remodeling because the size of families is decreasing. In other words, it is forecasted that the demand for apartments under mid size than the large size would increase quantitatively in a long run.
- 3) The ten year period from now is very important in remodeling or reconstruction. In the long run, the remodeling market of metropolitan area would seem to circulate as Seoul-Seoul/Gyeonggi-do - Gyeonggi-do - Seoul.
- 4) While thinking of remodeling at this point in time, it is necessary to consider living and migration for 3-4 family members who take up absolute majority and among them, it seems that considerations on families with head of household in his fifties should be discreet.
- 5) About 70% of respondents [forecasted that apartment prices will increase by more than remodeling costs]and the ratio of responding their position as [interested because the there would be property value greater than input costs] is the highest. But looking at remodeling excessively as the concept of investment loses its motive if future real estate market becomes stable so that there is a worrisome side to it.
- 6) The greatest reason for being hesitant about remodeling is [raising funds for appropriation] while the hassle of migration is becoming a great obstacle for remodeling.
- 7) It is necessary to first recommend self dependent methods such as accumulated funds for long term repairs, etc and public support system in financial loans could be considered as necessary. In considering the taxation and support policy of finances toward such remodeling, considering fairness such as being in proportion to dwelling area per 1 person and number of family members, etc seem reasonable.
- 8) For the method of performing the project, the complete supervision of designing and construction is preferred the most and next is complete separation of designing and construction while the method of having different design for private and public sections or having different subject for construction could be called as being avoided. But in case of confirming the range of construction in advance is difficult such as remodeling, signing as contract by total sum is logically unreasonable.
- 9) For considerations of future remodeling, the ratio of [considering future remodeling] showed up as high in all parts of the building. Accordingly, ensuring simplicity in future

remodeling in designing and construction of remodeling is strongly being required.

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