

A STUDY ON THE CONSUMER RESPONSES TO MODEL STEEL HOUSE

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Most houses in Korea are built using reinforced concrete, although occasionally stone and brick are used. Steel houses constructed using 2 by 4 inch studs which are relatively expensive in Korea, have been recently introduced. Steel house suppliers organized a consortium, the Steel House Club to promote their products and build three model steel houses at different locations as a part of their promotion program, one each in metropolitan Seoul, in Kwangyang (southwest side of Korea) and in Pohang (southeast side of Korea). The latter two cities are newly developed industrial areas.

This study was designed to evaluate the consumer's responses to the model steel houses. Questionnaires were collected from visitors to the model houses in June, 1997 (1,550 in total; 508 cases from Seoul, 456 cases from Pohang, and 486 cases from Kwangyang). Data were analyzed in terms of housing value orientation, and function and satisfaction, expectation levels, using statistical methods including frequencies, mean, percentages, chi-square test, and multiple regression.

The major findings are as follows:

1. The subjects were highly educated (64% of them were college graduates) with a monthly income over 2,000,000 won (approximately \$1,540). The average monthly income of the subjects in Seoul, about 4,000,000 won (\$3,070), was much higher than that of other areas. Most of the subjects were condominium owners (72%), who preferred single detached houses or town houses located in suburban areas.
2. Differences in general tendencies among the three regional groups were statistically significant. Most significantly, subjects living in Pohang regarded the reputation of the building construction company as most important. Subjects of all three regional areas, especially in Pohang, emphasized investment value. The price of the steel house was regarded as very important by all the groups tested. The housing value orientation was analyzed in 3 aspects; (1) Facility Plumbing Structure (FPS), (2) Interior space formation Design (ID) and (3) Developmental complex Near Environment (DN). Interior environment level, stability of house structure, and finishing state of interiors were identified as the important factors

in the area of FPS ($p < .05$). The Interior plan organization was the most important factor among ID. As for DN, educational facilities, green areas, and convenience of commercial facilities within the developmental complex were rated importantly.

3. Expectation levels about the function of a steel house were very high, but subjects showed uneasiness about soundproofing. The younger the subject's age, the more negative the attitudes about the functions of a steel house. Female subjects showed more positive attitudes than males in this regard. Subjects having assets under 100,000,000 won (\$ 77,000) answered that steel would be good in the sense of reuse or recycling. Those with income levels of 2,000,000 - 3,000,000 won were positive about the construction time, although moisture prevention and insulation received negative responses.
4. The steel house was accepted more positively by consumers than conventional reinforced concrete houses, but satisfaction levels varied from group to group, depending on their current housing type. Residents living in single detached houses were satisfied with a refinement of the exterior design, but had negative ideas about the size, division of space organization, and the interior noise level and potential wall impact noise. Residents living in multi-family housing were satisfied with the southern orientation, with sufficient sun light, ventilation, and air circulation, but were negative about the exterior design, and the size of the model house. Residents living in row houses were satisfied with the space division of each room of the model steel house.
5. Male subjects were divided into two groups, "extremely satisfied" and "relatively dissatisfied" with the steel house, while female subjects were generally "slightly satisfied" with the steel house.

The following recommendations are made based on the findings:

1. The price of a Steel House should be reasonable, providing an attractive alternative to a certain group of consumers. Enhancing the sound-proof quality, and the interior design plans are also important.
2. Marketing strategies should be designed to appeal to different consumer groups according to age and gender. Age and gender were the most important variables defining attitudes toward a steel house.
3. The older generation preferred the south-oriented house, while the younger showed

no preference in house orientation. When a steel house complex is developed, house orientation should be determined according to the age of the intended consumers.

4. Marketing strategies should be tailored to different consumer groups, because assets, income, house price, and house size were variables highly related to the satisfaction level. To enhance consumer preferences for a steel house, marketing strategies should be involved with all stages from development, to construction, to interior finishing.