Korean Market for 2x4 Homes and Interior Wood Products

Prior to the recent Asian economic downturn, South Korea (Korea) was a growing market for U.S. wood exports. The standard of living for most Koreans has improved phenomenally since the end of the Korean War, and expenditures on housing and secondary processed wood products imported from the U.S. increased. During 1997, Korea imported almost $300 million in primary and secondary processed solid wood products from the U.S., making it the third largest export market for U.S. wood producers. The value of wood frame homes and secondary wood products from the U.S. increased 203% from $14.5 million in 1990 to $43.8 million in 1997. As a result, exports of secondary processed products to Korea, as a share of total solid wood exports, increased from 3.9% in 1990 to 15.8% in 1998. The University of Washington's Center for International Trade in Forest Producs (CINTRAFOR) assessed the Korean market for value-added wood products, including viable end-markets, barriers to trade, and the role of technical transfer and marketing strategies.

The 1998 Asian economic crisis sharply curtailed prior financial growth in Korea, but may have positive long-term impacts on future foreign investment and trade. New policies may directly affect the wood frame construction sector and the market for solid wood interior products. During the past year, the Korean government established a U.S. $23.5 million (~27.8 billion won; U.S. $1= 1184 won) home loan fund, removed a tax on owners of multiple homes, and eliminated a cap on the selling price of new apartments. Legislation passed and programs were established to encourage foreign investment. Foreign companies can now develop land in Korea, the limit on foreign ownership of Korean companies has been increased from 50% to 100%, and the Korean government now requires financial institutions and large conglomerates to adopt detailed cost accounting systems that are accessible to auditors.

		Construction Material			
Year	Total	Concrete	Brick & Stone	Wooden	Other
1989	88,600	70,800	17,100	100	
500	1990	116,400	92,900	22,200	100
1,200	1991	105,200	88,700	14,100	200
2,200	1992	94,700	80,100	11,400	200
3,000	1993	117,800	99,000	12,200	200
6,400	1994	116,211	102,727	8,527	123
4,854	1995	117,327	103,134	9,086	89
5,022	1996	113,820	101,940	7,193	131
4,557	1997	113,374	104,214	5,105	179
3,881					

Source: Foreign Agriculture Service 1998

Table 1. Building permit floor area by construction material (1,000 m^2).

Wood Frame Homes and Interior Goods

Concrete formwork is the leading use of wood in Korea. However, prior to the Asian recession the market with the greatest potential for growth appeared to be wood-frame residential construction. The 2x4 wood frame construction sector in Korea is small compared to other construction types, but it has increased significantly since its introduction. Western-style wood housing starts increased from 97units in 1994 to approximately 800 units in 1996 and an estimated 1,100 units in 1997. 2x4 housing starts were expected to reach 1,200 in 1998, but due to the economic crisis only about 750 2x4 homes were built. Revenues from homes exported from the U.S. increased from $2.2 million in 1992 to over $17 million by 1997. In addition, as indicated in Table 1, floor area for wooden buildings increased from 100 m^2 to 179 m^2 between 1989 and 1997.

Wood frame construction companies reported that consumers generally buy prefabricated wood frame homes and interior finishes from the same country or supplier. Therefore, while no statistics on the U.S. share of the interior wood products market exist, it is estimated that since U.S. manufacturers maintain approximately 60% of the 2x4 prefabricated wood frame home market, they also supply approximately 60% of the interior wood products for 2x4 wood frame home sector. U.S. interior wood product manufacturers are significantly less competitive in the high-rise apartment sector where solid wood and composite products manufactured by lower cost domestic and Southeast Asian producers are common. The Korean mortgage system requires consumers to pay approximately 80% of the home price up front and the remaining loan in 5-20 years, leaving many consumers unable to afford expensive finishes when they initially buy an apartment. Some U.S. manufacturers report that consumers are beginning to replace domestically produced interior goods with U.S. made goods because they are not satisfied with the quality of domestically made products.

Most Koreans live in high-rise concrete apartments, but it is difficult for foreign companies to break into the high rise apartment sector. The ability to extend financing to a construction company is often a determining factor for awarding contracts as opposed to low price or high quality products. Many Korean and non-Korean companies also report that it can be difficult to receive payment from large construction firms. The most promising sector for solid wood interior products thus appears to be single-family and low-rise multi-family residential construction, comprising about 20% of all housing units built in Korea in 1997. Owners of single-family homes are increasingly purchasing higher-priced solid wood products, and for these consumers, product appearance and quality are more important than price.

Viable End-Markets and Barriers to Entry

The Korean public's perception of wood frame homes is generally positive. Korean people view wood homes and wood in general as healthy and aesthetically pleasing. However, the high cost of building materials and restrictive financing limits single-family home ownership to the affluent. Nonmonetary factors also affect the widespread adoption of wood frame housing and nonstructural wood products.

The two most significant barriers are the Korean building code and a lack of technical transfer. The existing building code places provisions on fire standards and accepted height and total floor area of wood frame buildings, yet it does not include detailed requirements for structural aspects such as proper engineering principles, material use, and foundations. The lack of a detailed building code risks the possibility that construction companies without a complete understanding of proper wood frame housing construction may build substandard homes.

The impact of poorly built homes may be compounded by the absence of building inspectors for wood frame housing. While builders who construct dangerous homes can be criminally charged for gross injuries, it may be only after damage occurs that building codes are enforced. A more likely scenario associated with poor construction is a dissatisfied customer. Given the small size of the wood frame home industry and the reliance on word of mouth advertising,the negative impact of a few poorly constructed homes can be widespread.

Technical transfer should be an integral part of promoting 2x4 wood frame construction in Korea. Korean carpenters are either good at concrete work (very rough carpentry) or good at finish work (very fine carpentry); they are less skilled with framing. Framing training, in addition to instruction in proper handling and storage of materials, is critical to the long-term success of wood frame construction in Korea. Although there are a few carpenter-training pro-grams in Korea, many carpenters still do not understand the engineering and construction principles associated with properly building a 2x4 wood frame home. Training architects, educators, and construction workers in the U.S. is one way to disseminate information about proper construction techniques within Korea. Training should include architectural design, engineering design, framing techniques, and maintenance.

North America dominates the prepackaged wood frame home industry, yet North American suppliers must compete with many low-cost producers in the nonstructural wood products market, making the market much more price sensitive. Lower-cost Southeast Asian producers dominate nonstructural product imports. For example, in 1997, Indonesia and Malaysia supplied 80% of the $54 million imported wood door market and almost 90% of wood windows, while the U.S. supplied only 5% of the imported wood door market and 7% of imported wood windows. While U.S. products are not cost competitive with Southeast Asian products on a volume basis, less wood can be used to deliver equivalent durability, making builder education an important part of product sales. An open market is likely to have significant implications for product marketing. Both Korean and U.S. respondents agree that European and Italian manufacturers, in particular, are more aggressive in their approach to the Korean market, which has translated directly into greater market share. In general, U.S. companies can increase their sales if they market their products in Korea more aggressively through increased advertising and builder training.

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