



# Examining the effect of environmental certification, wood source, and price on architects' preferences for hardwood flooring

**Authors:** Natalie Macias and Chris Knowles, OSU

**Description:** Examination of how environmental certification, wood source, and price affect architects' specification preferences for hardwood flooring.

**Methods:** Mail survey

**Data Source:** 402 architects in the Pacific Northwest

**Key Findings:** Architects' specification preferences for hardwood flooring are primarily dependent on price and wood source. Environmental certification of hardwood flooring is considered the least important product attribute.

## Introduction

Over the past two decades, wood flooring has gained considerable domestic market share. Hardwood flooring is of great interest because it comprises 85% of the total wood flooring market. In the past twenty years hardwood flooring has gained market share primarily against carpet; hardwood flooring's increase in market share is only expected to continue in the years to come.

The design and construction of a building incorporates the input and expertise of a wide array of professionals. One such group of professionals is architects. Architects often play an influential role in product specification for both residential and nonresidential construction projects. This influence can be attributed to the fact that architects generate blueprints and that many residential buildings are completed prior to sale, thus limiting homeowners' input. Architects tend to have greater influence on the visible parts of a building than they do on the structure. As a result, much can be learned from their preferences with respect to hardwood flooring.

Due to the prevalence of green building programs, it has become increasingly important to understand how architects make specification decisions. Two of the largest green building programs in the U.S. are Leadership in Energy and Environmental Design (LEED) and Green Globes. Green building programs encourage environmentally re-

sponsible construction, the use of local products, and the inclusion of recycled content. The awards and certifications given by green building programs have caused many architects to specify materials based on their desire to design a green building.

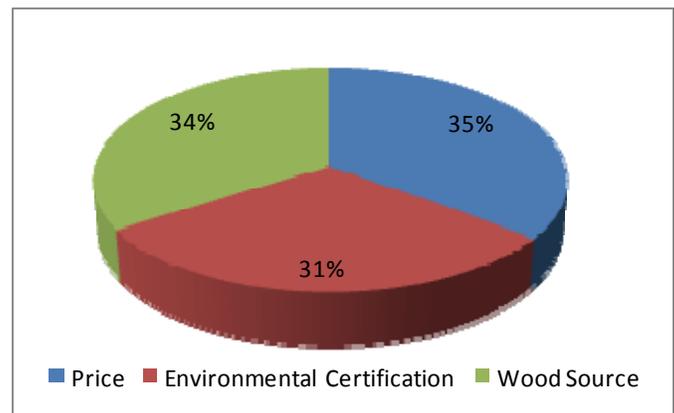
## Methods

Data for this study were obtained from a mail survey sent to architects in Oregon and Washington. Architects were asked to imagine they were specifying 1,000 square feet of hardwood flooring for a custom home. They were then asked to rate nine hardwood flooring products, each with different attributes from the least preferred to the most preferred. Three levels were used for each of the attributes:

1. price per square foot: \$2.50, \$5.00, or \$7.50
2. wood source: Oregon/Washington, other US, or outside US
3. forest certification: FSC ecolabel, other ecolabel, or no ecolabel

## Results

Architects considered price the most important factor when specifying hardwood flooring, followed by wood source (Figure 1). Environmental certification proved to be the least important factor. Based on the hardwood flooring



**Figure 1. Average importance of three hardwood flooring factors.**

products presented to them, architects ranked a product with the following attributes as the most desirable: 1) price of \$2.50 per square foot; 2) from Oregon or Washington; and 3)

has an FSC ecolabel. This result indicates architects in the Pacific Northwest view local wood source as more important than environmental certification. As a result, there may be room for development of local hardwood flooring markets.

After identifying the respondents' preferences as a whole, the architects were divided into three groups based on their level of environmental consciousness. One group consisted of the most environmentally conscious architects, one contained the least environmentally conscious, and one contained those in the middle. Results varied among the three groups, with respect to

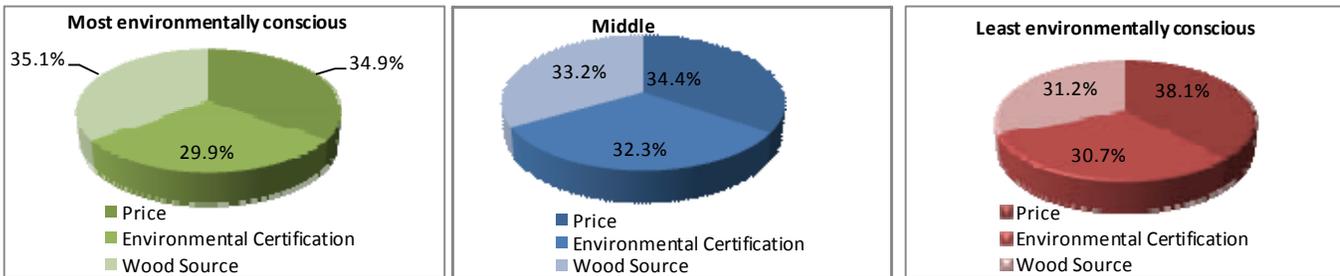


Figure 2. Average importance of three hardwood flooring factors by level of environmental consciousness.

the average importance of the three hardwood flooring attributes (Figure 2).

Architects in the most environmentally conscious group considered wood source to be the most important attribute, while those in the least environmentally conscious group considered price the most important. The middle group considered all three attributes to be almost equally important. Counter intuitively, those in the most environmentally conscious group considered environmental certification to be the least important attribute when specifying hardwood flooring. Across all three groups, environmental certification was consistently the least important factor. This is an interesting finding given the importance placed on environmental certification of wood products by the major green building programs.

It is important to note that this study only examined the preferences for architects in the US Pacific Northwest. The views of architects in other parts of the country may be different.

## Managerial Implications

The results of this study have implications for forest products marketing managers. Of the architects surveyed, price and wood source were the most important factors affecting specification preferences. Environmental certification, on the other hand, was the least important factor. Marketing efforts aimed at architects could benefit by focusing on product sourcing and highlighting local products. The current trend toward "green" products is effective in many sectors, including the forest sector. However, marketers may find that unlike the majority, architects place more impor-

tance on how "local" a product as an important attribute of its overall level of "greenness."

Manufacturers and marketers of wood flooring should consider developing materials to show how their products meet the local requirements of green building programs, particularly those firms located in the Pacific Northwest. This can easily be implemented by providing the location of the manufacturing facility that is producing the material. More sophisticated versions can be created using currently available mapping software to allow the customer to track the distance from the job site to the manufacturing facility.

1) Wagner, E. R., & Hansen, E. N. (2004). Environmental attributes of wood products: Context and relevance for U.S. architects. *Forest Products Journal*, 54(1), 19-25.

2) Roos, A., Woxblom, L., & McCluskey, D. R. (2008). Architects', building engineers', and stakeholders' perceptions to wood in construction-Results from a qualitative study. *Scandinavian Forest Economics*, 42, 184-194.



### Forest Business Solutions

Mission: Develop professionals in forest products marketing and business and facilitate forest industry competitiveness through education and research.

119 Richardson Hall, Corvallis, OR 97330, USA  
Phone: 1-541-737-4240 Fax: 1-541-737-3385

E-mail: [Eric.Hansen2@oregonstate.edu](mailto:Eric.Hansen2@oregonstate.edu)  
<http://woodscience.oregonstate.edu/faculty/hansen/index.htm>  
<http://owic.oregonstate.edu/>