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## RESEARCH ARTICLE

### A REVIEW PAPER AN OVERVIEW OF WOOD CARVINGS INDUSTRY DEVELOPMENTS IN KENYA

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#### ABSTRACT

Most work done to advance sustainable production and marketing of woodcarvings in Kenya is unsystematic and scattered. Therefore, the review was aimed at synthesizing information on production and marketing of the woodcarvings. The woodcarvings industry has a rich history in the country. However, the production and processing of woodcarvings has not fully embraced newer technologies and innovations. The production technologies applied are ineffective and inefficient. This state has often compromised levels of precision and artistic making the industry unable to handle the threat from machine-made products. The market access strategies applied include cooperatives, direct marketing, collective action, contractual arrangements and e-commerce. Collective action including cooperatives and self-help groups is highly applied to market products. Cooperatives are preferred due to their associated benefits in terms of higher site prices hence more profits as a result of bulk marketing. Self-help groups are small associations and are increasingly being preferred as an alternative to cooperatives. Contractual arrangements and e-commerce are least applied strategies. Contractual arrangements often result into income stability and improved efficiency. E-commerce is the least applied although it leads to reduced transaction costs and improved information flow. This, therefore, calls for concerted efforts in terms of technical capacity building for actors in the woodcarvings value chain to apply effective and efficient production and marketing technologies and innovations.

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#### INTRODUCTION

The woodcarvings industry has potential for improving livelihoods of rural communities in the dry lands of Kenya. At local level, woodcarvings have been used to improve rural livelihoods through provision of household utensils, ornaments, wooden jewel, furniture and interior decorations that are sold to generate income. Many households are increasingly relying on woodcarvings industry for their livelihoods. Currently, this industry employs about 60,000 carvers and directly supports over 300,000 people. At national level, woodcarving industry has an annual export worth of US\$20 million and is growing steadily at a rate of 1.8% per annum (Wekesa, 2007). Preference for handicrafts from Kenya on the American and European markets is on an upward trend presenting a lot of opportunities for the local players. In addition, Kenya has signed market and trade protocols in favour of handicrafts. Notable ones include African Growth and Opportunities Act (AGOA) for the American market and Everything But Arms (EBA) for the European Market. The two protocols list woodcarvings as priority export commodities from Kenya with emphasis on compliance to standards for forest products including ethical sourcing and traceability. A study done by UNDP (2006) found out that, the Kenyan woodcarvings sub-sector is plagued by inefficient production and marketing

technologies and innovations making it uncompetitive. The technologies applied are outmoded making them unable to handle the threat to their industry from machine-made products. Craftsmen are not independent enough to resort to direct marketing of their own products. Equally, the increased reliance on conventional wood carving species has often resulted in conflicts that characterize wood harvestings and household income imbalances in rural dry lands. These conflicts have often led to domestic violence promoting social disorder in these areas. In some cases carvers have often been forced to resort to unethical sources of wood especially conserved forested areas accelerating environmental degradation in dry lands. Considerable research and development initiatives have been carried out to advance sustainable marketing of agricultural products in the country. Appropriate marketing strategies have been identified and documented. However, most of the work done is scattered existing as grey literature either lying on shelves or otherwise. This paper, therefore, is part of the efforts to synthesize the information as a useful point in building up a base for production and marketing of wood carvings in Kenya.

#### Production of woodcarvings

The production of woodcarvings is quite comprehensive and is done in stages. However, the technologies applied are outmoded and inefficient. As a rule of thumb, the wood carver begins a new carving by selecting a chunk of wood the

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approximate size and shape of the figure to carve. If the carving is to be large, several pieces of wood may be laminated together to create the required size. Hardwoods are more difficult to shape but have greater luster and longevity. Softer woods may be easier to carve, but are less resistant to damage. Any wood can be carved but they all have different qualities and characteristics. The choice will depend on the requirements of carving being done: for example a detailed figure would need a wood with a fine grain and very little figure as strong figure can interfere with 'reading' fine detail. Once the sculptor has selected their wood, he or she begins a general shaping process using gouges of various sizes. The gouge is a curved blade that can remove large portions of wood smoothly. For harder woods, the sculptor may use a chisel and mallet, similar to a stone carver. Smaller sculptures may require the wood carver to use a knife, and larger pieces might require the use of a saw. No matter what wood is selected or tool used, the wood sculptor must always carve either across or with the grain of the wood, never against the grain. Once the general shape is made, the carver may use a variety of chisels for creating details. For example, a "veiner" or 'fluter' can be used to make deep gouges into the surface, or a "v-tool" for making fine lines or decorative cuts. Once the finer details have been added, the wood carver finishes the surface.

The method chosen depends on the required quality of surface finish. The texture left by shallow gouges gives 'life' to the carving's surface and many carvers prefer this 'tooled' finish. If a completely smooth surface is required general smoothing can be done with tools such as "rasps," which are flat-bladed tools with a surface of pointed teeth. "Rifflers" are similar to rasps, but smaller, usually double ended, and of various shapes for working in folds or crevasses. The finer polishing is done with abrasive paper. Large grained paper with a rougher surface is used first, with the sculptor then using finer grained paper that can make the surface of the sculpture slick to the touch. After the carving and finishing is completed, the artist may seal & color the wood with a variety of natural oils, such as walnut or linseed oil which protects the wood from dirt and moisture. Oil also imparts a sheen to the wood which, by reflecting light, helps the observer 'read' the form. Carvers seldom use gloss varnish as it creates too shiny a surface, which reflects so much light it can confuse the form; carvers refer to this as 'the toffee apple effect'. Objects made of wood are frequently finished with a layer of wax, which protects the wood and gives a soft lustrous sheen. A wax finish is comparatively fragile though and only suitable for indoor carvings.

### Good woods and other alternative carving species

International and local research and development organizations have supported woodcarvings production. Notably, People and Plants (a partnership of WWF-UK, UNESCO and Royal Botanical Gardens of Kew) and Kenya Forestry Research Institute (KEFRI) identified and promoted alternative tree species for wood carving under banner of the "good woods" to avoid over exploitation of preferred indigenous tree species like *Dalbergia melanoxylon* and *Brachleania huliensis*. Some of the main "good woods" promoted for this industry include Neem (*Azadirachta indica*), Mango (*Mangifera indica*) and Jacaranda (*J. mimosifolia*). Farmer groups have also been sensitized and

encouraged to initiate planting and sustainable harvesting of "good woods" for woodcarving. USAID has also funded local wood carvers in product development and design. All these initiatives have emphasized quality products, market access, sustainability, social responsibility, fair trade and ethical sourcing for woodcarvings.

### Marketing of Products

The woodcarvings are marketed in local, national and export market supply systems. Which include farmgate, local trade centres, institutions and towns. Most of the products are sold either to brokers or local traders who then sell either to national traders, exporters, and processors or directly to consumers. Major destinations in export market system are UK, Pakistan, Egypt, Holland, Germany, USA and Europe (Ministry of Agriculture, 2000).

Artisans sell their products either through cooperatives or through self help groups. Farmers also sell directly to consumers or enter contractual arrangements and use e-commerce to market their products. A survey of woodcarvings industry by Wekesa *et al.* (2009) shows that most of the products are sold through cooperatives with 53% of respondents using it to market their products (Table 1). The other strategies applied are self-help groups (24% respondents), direct selling (16%) and contractual arrangements (5%). The least applied strategy is e-commerce with paltry 2% respondents using it to market their products. Artisans interviewed indicated that contractual arrangements are agreements by Wekesa *et al.* (2009) between them and buyers that are reached prior to production of handicrafts or before the completion of a production stage. They were able to distinguish two types of contracts—production contracts and marketing contracts.

Under a production contract the artisan provides a set of services to the contractor, who usually owns the commodity while it is being produced. The contract specifies the services to be provided by the artisan, the manner in which the artisan is to be compensated for the services, and specific contractor responsibilities for payments. Because of the nature of the agreement, artisans and contractors agree upon the terms of production contracts before production begins. Marketing contracts on the other hand focus on the commodity as it is delivered to the contractor, rather than on the services provided by the artisan. They specify a commodity's price or a mechanism for determining the price, a delivery outlet, and quantity to be delivered. The parties in a marketing contract agree to its terms before completion of a handicraft product. The pricing mechanisms may limit an artisan's exposure to the risks of wide fluctuations in market prices, and they often specify price premiums to be paid for commodities with desired levels of specified attributes. The artisan owns the commodity during production and retains substantial control over major management decisions, with limited direction from the contractor, and hence retains more autonomy of decision-making than is available under production contracts. Direct marketing provide wooden handicraft shoppers with greater product access and selection. There is wealth of comparative information about the companies, products and competitors. Face to face marketing and online marketing are convenient for the consumer in that the consumers can do comparative marketing by selection and browsing the

website. Also buying of the wood carvings products is easy and private since customers do not face salesmen or open themselves to persuasion (Kotler and Armstrong, 2002). The COMESA member countries have been encouraging direct marketing in the international trade through their initiative of export credit insurance. This is a high value-added product which allows an exporter in COMESA region, to move up the value chain by selling directly to end users rather than via wholesalers and auction houses (COMESA, 2008) while reducing their cost of financing by using African Trade Insurance Agency (ATI) policy as security for their borrowings. COMESA member countries formed ATI in 2000 to cover the perception of high risk associated with poor public governance and negative political events. However, as earlier stated craftsmen are not independent enough to resort to direct marketing of their own products unless well endowed with marketing information and large capital to cover the transaction costs involved in local or international marketing. Contracts are an integral part of the production and marketing of selected agricultural commodities, such as broilers, turkeys, eggs, milk, fruits, vegetables, sugar beets and wood carvings. Farmers may benefit by being able to expand their operations more rapidly than otherwise possible, perhaps, with less debt and fewer financial risks. Due to uncertainty of weather and markets most banks will not provide individual farmers with agricultural loans or will charge high interest rates for their loans. Moreover, contractors are more informed than banks about marketing fluctuations and have expert staff (Eicher, 1999). By providing financing, contractors become farmer partners and make some growing or carving decisions independent of the farmer's such about which crop to grow or carving to make. As a result the producers begin to lose significant control over their businesses. Growers are in competition with one another for the contracts. This competition depresses the produce market and artisans become price-takers for contractor's services.

According to Economic Research Survey (ERS, 2004) the strengths of agricultural contracts are many. There is income stability, because most contract arrangements reduce risks in comparison with traditional marketing channels, a contracting farmer's resulting income tends to be more stable over time. ERS stated agricultural contracts result into improved efficiency to the extent that management decisions are transferred to the contractor, producers can benefit from technical advice, managerial expertise, market knowledge, and access to technological advances, such as high-quality carving, not otherwise available. There is Market security. Contracts typically convey signals to the producer regarding grades and standards that best meet consumer demands. By entering into these arrangements, the artisan can guarantee that someone will buy the produce if the specifications are met. By varying degrees, market-oriented price risk is partly transferred from the producer to the contractor. Access to capital contracts also provides a means for a farmer to increase the volume of business with relatively limited capital requirements. Income stability associated with contract arrangements may allow a more favorable credit rating for the borrower, thus enhancing access to credit. Artisans use contracts because they desire uniformity and predictability to suit consumers, but they also benefit from lower costs in processing, packing, transport and up-grading.

The artisans benefit by having a guaranteed market, price, and access to a wider range of production inputs, and they can concentrate their management efforts on a particular part of the production process. The contractor and the artisan may benefit from the contracts by controlling input supply. This is because many handicraft processing involve extensive investments in wood; equipment, and labor, artisans must establish an orderly flow of a large volume of uniform products to control operating costs. Improving response to consumer demand by asserting more control over the production process, contractors can better respond to changing market conditions. The market responds to consumer preferences, which may require artisans to alter standards or product form. Artisans and farmers can strengthen their competitive position in the market through contract arrangements by virtue of increased coordination and efficiencies available with larger volumes of business. The artisan has to have large volume of products which are diversified. Even though the contractor accepts a greater share of the market (price) risk with production contracts, the benefits of having a regular supply of uniform goods probably outweigh the costs. Large, integrated firms may also recapture returns in another phase of production. Their financial strength probably allows them to weather periods of low returns longer than processors who depend on open markets.

According to the Organization for Economic Co-operation and Development, (OECD, 2004) e-commerce includes the internet and other information and communication technology (ICT) to facilitate access to information for business transaction. The internet allows automatic packaging and distribution of information (including customized information) to specific target groups. It facilitates the access of artisans and Small and Medium Enterprises (SMEs) to world markets. Further the e-commerce facilitates the marketing of agricultural and tropical products in the global market (OECD, 2004).

In developing countries e-commerce poses the advantages of reduced information search costs and transactions costs (i.e., improving efficiency of operations-reducing time for payment, credit processing, and the like). Therefore artisans and farmers have to be computer literate and accessible to the internet. Surveys show that information on customers and markets, product design, process technology, and financing source and terms is most valuable to SMEs (OECD, 2004). This implies that it assists service-providing enterprises in developing countries by allowing them to operate more efficiently and directly provide specific services to customers globally. Also it facilitates the promotion and development of tourism of developing countries in a global scale. However, there is doubt regarding whether there is enough information on the web that is relevant and valuable for the average SME and artisans in a developing country that would make investment in Internet access feasible. Underlying this is the fact that most SMEs in developing countries cater to local markets and therefore rely heavily on local content and information. For this reason, there is a need to substantially increase the amount and quality of local content (including local language content) on the internet to make it useful especially to low-income entrepreneurs.

The artisans are also ignorant of the benefits bestowed on them by the Government (UNDP, 2006). Wood carvings are sold at least three to four times the price paid to the craftsmen. Improper pricing mechanisms and the intervention of middlemen deprive the artisans from getting their due. Due to high transaction costs that farmers and artisans may experience in the shipment of goods from the farm gate to the local or international market, these producers often opt to use middlemen and other farmer organizations such as cooperatives and self help groups.

### Associations along the Value Chain

There are a number of players along the value chain of woodcarvings (Fig 1). Wekesa *et al.* (2009) observed that there are various marketing cooperatives for woodcarvings in the country. At lower levels are cooperative societies, which are then amalgamated into cooperative unions, for, instance the Kariokor Wooden Cooperative Union in Nairobi and the Machakos District Cooperative Union. These marketing cooperatives search for better markets on behalf of the producers and the cooperatives arrange for the marketing of the final products. In the woodcarvings industry, Wekesa *et al.* (2009) noted the following chains to exist in case of cooperatives.

Artisan → Cooperatives → Wholesalers' → Retailers' → Consumer  
 Artisan → cooperative → Retailers → Consumer  
 Artisan → cooperative → consumer

In a survey by Wekesa *et al.* (2009) the respondents pointed out that most self-help groups are formed by small-scale artisans who have been weary of cooperatives. Their main purpose is to pull the scarce resources together mainly to attract buyers for their products. The groups could own nursery and plant the tress needed for the carving or else make arrangement for the procurement of the wood. The group is also response for searching of the marketing information especially about the prices and the destination of the products. The individual farmers realize economies of scale since the marketing is done in bulk. As a result the site profit is increased due to reduced transaction costs. Self-help groups could also be members of cooperative, for instance the Machakos District Cooperative Union (MDCU), which began in 1987 to market handicraft products for its members locally and internationally. Specifically MDCU works with over 20 women self help groups and 6 handicraft cooperative societies within the marginalized areas, bringing together over 6000 individual members. Education to producer members and provision of social amenities are coordinated by MDCU. MDCU has embarked on an environmental conservation program to rehabilitate the forests. Collective action in form of cooperatives and self-help groups is the highly applied strategy by farmers and artisans to sell their products. Collective action is a positive force for improving risk management in many rural communities. Group formation can contribute to building social capital, which in turn, has positive effects on human welfare, especially as a result of income generation among the poor (Grootaert, 2001). Work by Place *et al.*, (2004) describes a wide variety of other, less formal, self-help groups that have recently emerged in rural sites of the Kenyan highlands. These groups, often numerically dominated by women, undertake many activities that include

income generation, asset building, commodity marketing, and social/cultural functions. Self help groups are loose associations formed by smaller number of farmers and not very rigid so that farmers can join or exit without much formality (Place *et al.*, 2004). Their regulatory mechanism is based on rules defined by the members themselves and draws heavily on community's social capital. Cooperatives have for a long period of time been involved in commodity production and marketing activities whereas self help groups have only recently engaged in these activities. A study undertaken by Coopock *et al.* (2005) found out that groups undertake a wide variety of social and economic activities founded on savings and credit schemes, income diversification, small business development, and expansion of education, health service, and natural resource management functions. Groups have taken an active role in mitigating drought impacts on their members and the scope of drought mitigation appeared to expand as groups mature over time. The study reported that the greatest threats to the sustainability of these women's groups come from external factors such as drought, resource scarcity, poverty, and political incitement as well as internal factors such as unfavorable group dynamics and illiteracy. A study carried out by ILRI (2008) in Turkana district found out that there are self help groups as old as 14 years. The Full Gospel Women's Group (FGWG) involves its members in basket making and wood carvings. The principal products produced include mats, baskets and brooms, and an assortment of wooden goods seats/stools, dolls, spoons, milk jugs, and cow skin jugs comprise the bulk of wood-based products for sale. All product prices are agreed by the group. There are retail shops established by the members where final products are sold. The greatest challenge for the self help groups is lack of market outlet which constrains the profitability of handicrafts and expansion of the businesses (ILRI, 2008). In addition, the same study stressed that the remoteness of producers in the arid and semi arid areas from their terminal markets exacerbated problems associated with market information and market outlets.

The country is credited with having a long history of formal cooperative movements involving smallholder farmers. There are about three million farm holdings who are members of cooperatives. Cooperatives account for 50 percent of marketed production in Kenya (MoA, 2000). Between 1963 and 1999, the number of cooperatives grew by 16 percent per annum as they were the main vehicle through which indigenization of economic activities occurred, playing a key role in collection, transportation, processing and marketing of agricultural produce, provision of inputs, credit and information. However, these cooperatives have over time become riddled with mismanagement; leadership wrangles and splits into smaller units; lack of transparency and as a result withdrawal of members to other types of farmers associations, e.g. self-help groups. Cooperatives are defined by Uhl and Kohl (1990) as a business voluntarily owned and controlled by its member patrons and operate on a non-profit or cost basis. Cooperatives can be categorized based on services offered falling into four broad categories- marketing, purchasing, services and processing associations. On the other hand cooperatives may be grouped on the basis of member affliction and control (Uhl and Kohl, 1990). From this view point they are classified as independent local associations, federated and centralized cooperative

associations. Marketing cooperatives are those through which farmers sell products of their farms. These cooperatives may collect members' products for sale, grade, and package and perform other functions (Togerson, 1991). Usually marketing cooperatives are formed as market access strategies in order to solve the continued complain of farmers having to sell cheaply and buy high as consumers (problem of consumer surplus). According to Togerson (1991) the strengths of cooperatives as market access strategies include enhancing returns through increased efficiency through improved market coordination and greater bargaining power. Cooperatives reduce farmers' costs of marketing products and provide farmers with products or services otherwise not available. Cooperatives expand and stabilize the markets. They enable farmers to move into supply, assembly and processing markets. All these strengths add up to improvement of economic well-being of individual members. Usually cooperatives transfer goods in bulk hence producers may realize economies of scale. In essence, transfer costs are reduced thus the site price is improved.

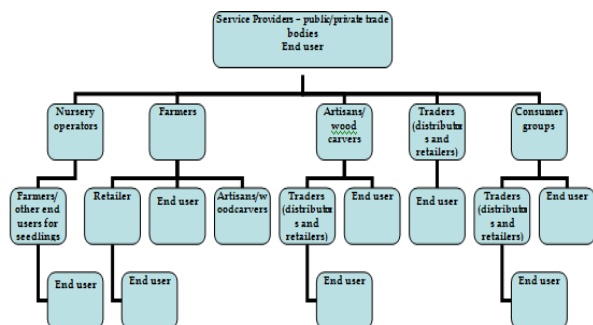


Fig 1: Players within the woodcarvings value chain

Table 3: Market access strategies applied by artisans to sell carvings

Market access strategy	% respondents
Cooperatives	53
Self-help groups	24
Direct selling	16
Contractual arrangements	5
e-commerce	2
Total	100

Source: Wekesa et al. 2009

**Conclusion and Recommendations**

The purpose of the study was to synthesize information on the production and marketing of woodcarvings in Kenya. Further the study also reviewed various marketing access strategies that are available for wood carvings products. It was observed that production technologies applied are outmoded and inefficient. The market access strategies identified were cooperatives, direct marketing, collective action, contractual arrangements and E-commerce. Other market access strategies like networks, strategic partnerships and alliances exist but their application was not observed among those covered. The cooperatives had been used by the farmers and artisans for a long period since the cooperatives result into marketing the products in bulk which translates to higher site price hence more profits. Cooperatives usually search for marketing information, farm inputs and advance credit to the members. However due to mismanagement and globalization, more self help groups have been formed. The

main purpose of self help groups is to pull the scarce resources together and mainly to attract buyers for their produce. These groups have also attracted other services like extension and credit from the private sector. The groups could own nursery tress, plant the tress needed for the carving or else make arrangement for the procurement of the wood. The group searches marketing information especially about the prices and the destination of the products. The individual farmers realize economies of scale since the marketing is done in bulk. As a result the site price is increased due to reduced transaction costs. A farmer or an artisan may market his goods by entering into agricultural contracts. Contractual arrangements are beneficial in that they result into income stability, improved efficiency to the extent that management decisions are transferred to the contractor. Producers can benefit from technical advice, managerial expertise, market knowledge, and access to technological advances, such as high-quality carving, not otherwise available. The e-commerce includes the Internet and other Information and communication technology (ICT) facilitate access to information. The e-commerce reduces transaction costs and improved information search. However the farmer and artisans have to be computer literate and be accessible to the network.

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