

Chapter 10: Interpretation of Interview Results

The results obtained from research in southwest Virginia are interpreted to have better understandings of relationships between important variables of NTFPs, market players, and elements of marketing. This interpretation is based on results of observations and interviews with fifty market players during spring and summer of 1997. Results are presented in table format and the marketing chains previously constructed are analyzed for important relationships among market players and elements of marketing. For policy interventions in NTFP marketing, a better understanding of these relationships are needed. These relationships are developed and critical observations for policy intervention summarized in this chapter. Four types of relationships are developed. First, two important NTFP variables are identified, their values given for each NTFP category, and their linkages discussed. Second, a similar exercise is done for market players in each NTFP category. Third, relationships between two market player variables and five elements of marketing are established for each NTFP category. A tabular format, called a matrix in qualitative studies, is used for developing these relationships. Based on these relationships, critical observations for policy intervention are summarized. Finally, the relationships among market player variables and marketing elements are compared across NTFP categories.

10.1 Analysis and Discussion of NTFP Variables

Two important variables of NTFP categories are raw material and final product. As presented in the previous results chapters, raw materials and final products vary widely between NTFP categories. These variables are summarized and presented side by side for each NTFP category in Table 10.1. The purpose of this section is to facilitate understanding of NTFP collection and final processing by presenting results in table format and interpreting important issues surrounding raw material collection and final

processing. This interpretation is important for a complete understanding of NTFP trade in southwest Virginia. Table 10.2 summarizes the main issues identified in this section.

Table 10.1 Identification of variables important to NTFP trade in southwest Virginia

<u>NTFP Category</u>	<u>Raw Material</u>	<u>Final Product</u>
1) NTFP crafts	1) twigs, branches 2) vines 3) moss 4) flowers 5) greens	1) birdhouses 2) wreaths 3) baskets 4) furniture 5) floral arrangements
2) medicinal/herbal products	1) root bark 2) bark 3) roots 4) leaves, dried	1) tea 2) capsules, pills 3) cosmetics 4) powder 5) potpurri 6) food flavoring
3) specialty wood products	1) boards 2) wood scraps 3) branches 4) roots 5) stumps	1) musical instruments 2) carvings 3) furniture
4) edible products	1) mushrooms 2) fruits 3) berries 4) roots 5) nuts, seeds 6) wildlife	1) fresh 2) dehydrated 3) jams, jellies 4) baked goods 5) frozen

Raw materials utilized in NTFP craft manufacture are twigs, branches, vines, moss, florals, and greens as shown in Table 10.1. These NTFPs are used to various degrees in different NTFP crafts. All are used to manufacture birdhouses. Vines, florals, and greens are used in crafting wreaths and baskets, and vines and branches are used in making furniture. Moss, florals, and greens are used in making floral arrangements. Birdhouses appear to utilize the most variety of NTFPs. In addition, these NTFPs are widely available at little or no cost. However, primary results have shown that birdhouses are the least marketable

of all NTFP crafts. Hence, the reason for poor marketability of birdhouses cannot be raw material supply since supply is plentiful. Further analysis of market players in section 10.2 may suggest another reason, perhaps lack of proper marketing mechanisms.

Table 10.1 shows that medicinal and herbal raw materials collected in the study site are roots, root bark, bark, and leaves. Roots, root bark, and bark can be ground for making bagged tea, capsules, pills, cosmetics, and powders. Leaves can be sold dried as potpurri and food flavoring. Raw materials are available to varying degrees from abundant (i.e. wild ginger) to scarce (i.e. ginseng). Collection is different from NTFP crafts in that certain raw materials are collected only during specific seasons according to biological growth patterns and buyer demands. However, processors of final products generally operate year round and have storage facilities enabling them to buy large quantities of raw material at one time. As a result, prices paid to collectors and raw material supply fluctuate as collectors react to price changes. Raw material prices and supplies in the medicinal and herbal NTFP trade fluctuate as a result of processors' buying activities. This suggests that boom and bust cycles are characteristic of NTFP trade and that the cause of this characteristic is irregular purchases by producers outside of the region.

Raw materials used in specialty wood product manufacture are boards, wood scraps, branches, and tree roots. Only boards are used in making musical instruments. Boards, wood scraps, and branches are all used in carving and furniture manufacture. Wood discarded by logging activities for not meeting specifications can be valuable to manufacturers of specialty wood products. For example, curly maple, a wood commonly used in making instruments, may be discarded at logging sites due its lack of demand by sawmills. Also, the crook of a tree forms wood known as a “burl” which is highly valued by some crafters who turn burls into an attractive artistic design. Logging and sawmill practices could potentially compliment the specialty wood product trade by salvaging raw materials worthless to sawmills but valuable to producers of specialty wood products, thereby reducing waste.

Raw edible NTFPs include mushrooms, fruits, berries, roots, seeds and nuts, and wildlife. Fruits, berries, seeds, and nuts can be consumed fresh and roots and wildlife are cooked before consumption. Fruits and berries are often made into jams and jellies. Other final products include dehydrated, baked, or frozen edible NTFPs. Most households in southwest Virginia have the capacity to produce these final products. Technology is not uncommon or unaffordable and often involves only a stove, oven, refrigerator, jars, and pans. If cultivation is developed which sufficiently supplies edible raw materials, local people could easily process final products and thereby, add all possible value within southwest Virginia.

The relationship between raw material and final product can be described by the locations of raw material collection and final product processing. Raw material acquisition and processing of final products for NTFP crafts takes place entirely within southwest Virginia indicating locally centralized marketing chains. In contrast, only medicinal and herbal acquisition takes place in this region and processing of final products occurs in other locations. Raw material for specialty wood products are obtained locally or are imported. Final specialty wood products are processed within and/or outside of the region. For example, instrument parts are manufactured within the region and then shipped elsewhere for assembly into the final product. Other products are manufactured entirely within southwest Virginia from local materials. Raw material acquisition of edible products occurs in southwest Virginia, however, final products are consumed only in the household and not marketed either within or outside of southwest Virginia.

Table 10.2 Summary of observations critical to policy intervention in NTFP marketing

- 1) **NTFP crafts** - Birdhouses are characterized by poor marketability not due to lack of raw material, but rather due to lack of good marketing mechanisms for final products.
- 2) **Medicinal/herbal NTFPs** - Boom and bust cycles occur potentially due to irregular purchases of raw materials by producers.
- 3) **Specialty wood products** - Sawmills and loggers may waste raw material valuable to producers due to lack of salvage coordination.
- 4) **edible NTFPs** - Local people have the potential to produce final edible products if cultivation ability is developed.

10.2 Identification and Discussion of Market Player Variables

This section summarizes NTFP market players and their functions in table format and identifies a new variable - motive for involvement in the NTFP trade. The tables organize this information as two market player categories and a listing of potential motives. The first market player category includes collectors, producers, dealers, sellers, and consumers and is called the primary market player category. This category is further sub-identified into secondary market player category, which involves more specific terms that describe particular functions of primary market players as presented in the chapters on results. The final variable analyzed in relation to primary and secondary market player categories is motive for involvement in the NTFP trade. These three variables - primary market player category, secondary market player category, and motive are given in Table 10.3 for NTFP crafts, Table 10.4 for medicinal and herbal NTFPs, and Table 10.5 for specialty wood products. There are no market players of edible NTFP trade in southwest Virginia. Hence, this category is excluded from the analysis and discussion. The purpose of this section is to summarize market player variables for each NTFP category, identify potential motives, and identify key linkages between market players and motive. This key linkage is important in further understanding NTFP marketing systems.

Table 10.3 Identification of market player variables for NTFP crafts in southwest Virginia

Primary Market Player Category	Secondary Market Player Category	Motive
1) collector	1) collects wild products 2) cultivates	1) tradition 2) profit 3) hobby
2) producer	1) decorated products 2) undecorated products 3) finished products	1) tradition 2) profit 3) hobby
3) sales	1) craft/gift store 2) craft supply store 3) florist 4) craft show 5) festival 6) home décor store 7) catalog 8) wholesale	1) profit 2) support of local producers
4) consumer	1) local buyer 2) tourist 3) institution/business 4) interior decorator	1) home decoration 2) institution/business decoration 3) gift giving

Linkages exist between NTFP craft market player category and motive which can be identified by analysis of the above variables. First, the same motives of tradition, profit, and hobby are associated with both collectors and producers as shown in Table 10.3 because these market players are often the same individual. The linkage between market player and motive is socioeconomic level. A market player of high socioeconomic level collects and produces NTFP crafts as a tradition and hobby and less for profit than a market player of low socioeconomic level. Producers of decorated products are likely to be less poor than those of undecorated products because they can afford to buy decorations. Poorer producers have less purchasing power to buy decorations and focus on mass production of products for immediate profit.

Second, sales market players operate in a variety of stores, shows, and catalogs as identified in Table 10.3 and are motivated usually by profit, except in the case of the “Appalmade” store which helps poor local producers. The primary linkage between sales market players and motive is business operation. The purpose of most businesses is to earn profit (Mills 1973) and businesses related to NTFP crafts are no different. A secondary linkage may be philanthropy in cases where a business exists for economic benefit of disadvantaged people.

Third, consumers of NTFP crafts are local buyers, tourists, businesses, institutions, and interior decorators who are motivated by the desire to decorate or give gifts as shown in Table 10.3. The linkage between consumers of NTFP crafts and motive is a choice in income allocation. NTFP crafts are an item of non-necessity, meaning that their purchase by consumers is not based on human need such as food or medicine. Therefore, consumers of NTFP crafts usually purchase when their level of expendible income permits. Since profit is a motive for each market player, the entire marketing chain for NTFP crafts depends upon the purchasing power of consumers. Purchasing power depends on annual income, inflation, taxes, and the cost of living in the United States. In poor economic times, consumers may be less willing to buy NTFP crafts and market players will suffer income loss. This shows that the NTFP craft trade is sensitive to fluctuations in purchasing power of consumers. Furthermore, local buyers are the least profitable target market for NTFP crafts due to poor economic conditions in southwest Virginia. Tourists appear to be the most beneficial target market.

In summary, the linkage between collector, producer, and motive is socioeconomic level, between sales market player and motive is business operation, and between consumer and motive is a choice in income allocation. The following Table 10.4 presents a similar interpretation and identification of linkages within the medicinal and herbal NTFP trade.

Table 10.4 Identification of market player variables for medicinal and herbal NTFPs in southwest Virginia

Primary Market Player Category	Secondary Market Player Category	Motive
1) collector	1) sells on market 2) uses in household 3) collects wild products 4) cultivator	1) profit 2) tradition 3) hobby 4) save money
2) dealer	1) local (small scale) 2) outside southwest Virginia	1) profit
3) producer	1) chemical 2) pharmaceutical 3) cosmetic 4) health food	1) profit 2) research/development
4) retail sales	1) over-the-counter drug store 2) pharmacy 3) health food store	1) profit
5) consumer	1) health conscious person 2) natural product user 3) ill/diseased person	1) voluntary choice 2) involuntary

The marketing chain for medicinal and herbal NTFPs is organized much differently than that of NTFP crafts. One additional intermediary in the medicinal and herbal trade is the dealer. Also, collectors and producers are never the same individual as is often the case in the NTFP craft trade. Linkages between market players and motive can also be identified from the above table. First, collectors of medicinal and herbal NTFPs are most often of low socioeconomic levels because collection is a labor and time intensive activity which most people would only do out of income necessity. Therefore, the linkage between collectors and motive is socioeconomic level because generally only lower level people collect. For those who consume NTFPs within the household only, motive is most likely tradition, hobby, or to save money.

Second, dealers are businesses within or outside of southwest Virginia which are motivated by profit as shown in Table 10.4. Producers are chemical, pharmaceutical,

cosmetic, and health food industries which operate as a business. Like dealers, profit is the highest motive for involvement in the medicinal and herbal NTFP trade. A secondary motive includes research and development, especially in the case of medical research. Retail sales centers including pharmacies, over-the-counter drug stores, health food stores, and cosmetic stores, are likewise businesses motivated by profit. The linkage between dealers, producers, sales and motive is business operation based on the primary motive of profit.

Third, consumers of medicinal and herbal NTFPs include the growing population of people, especially in Europe, North America, and southeast Asia, which are becoming more conscious of using natural products to maintain a healthy lifestyle (Mater 1993 and Goldberg 1996). The motive for consumer purchase of products is either voluntary or involuntary choice as shown in Table 10.4. Voluntary choice reflects a decision to use natural as opposed to synthesized products or no products at all. Involuntary choice reflects a medical condition which needs certain medication. The linkage between consumer and motive can be defined as the consumer's health condition. If a consumer is healthy, purchase is motivated by a voluntary choice and if the person is sick, purchase is motivated by involuntary or voluntary choice. Since these choices are based on the basic human need to be healthy, consumers are likely to place high importance on purchase of products. Therefore, the medicinal and herbal NTFP trade is less vulnerable to changes in consumer purchasing power.

In summary, the linkage between collector and motive is socioeconomic level; between dealer, producer, sales market players and motive is business operation; and between consumer and motive is the consumer's health condition. The following Table 10.5 presents a similar interpretation and identification of linkages for the specialty wood products trade.

Table 10.5 Identification of market player variables for specialty wood products in southwest Virginia

Primary Market Player Category	Secondary Market Player Category	Motive
1) collector	1) collects fallen wood 2) cuts tree 3) saws wood	1) profit
2) producer	1) musical instrument maker 2) carver 3) carpenter	1) profit 2) hobby 3) tradition 4) competition
3) sales	1) retail music store 2) craft/gift store 3) craft show 4) music festival 5) wholesale	1) profit
4) consumer	1) musician 2) tourist 3) local person	1) play music 2) collection 3) home decoration

Table 10.5 shows that relationships between market player and motive for involvement in the trade of specialty wood products are similar to those in the NTFP craft trade. Specialty wood products can be considered a kind of craft and like NTFP crafts, their manufacture is highly traditional in southwest Virginia. Collectors of raw material and producers may be the same individual, however, the likelihood is less than in NTFP crafts collection because collection of wood raw material requires more labor and heavy machinery. Linkages can also be identified from this table. First, the collector which does not produce him or herself is motivated by profit only. Hence, the linkage between collector and motive is business operation.

Second, producers are usually first motivated by a hobby because manufacture requires great skill and years of practice. When the manufacturer is able to perfect his or her technique to produce high quality products, profit becomes a motive because consumers are now interested in purchasing. Before this point, a manufacturer has little access to

consumers due to great competition especially among musical instrument producers. Wood carving also requires great skill and years of practice and profit only becomes a motive once perfection in technique is attained. The primary key linkage between producers of specialty wood products and motives is individual preference, since success depends upon a choice to devote much time and energy in learning and improvement. A secondary linkage, business operation, only becomes prominent after years of accomplished production which results from application of the first linkage of individual preference.

Third, sales centers for specialty wood products include retail music stores, craft and gift stores, craft shows, music festivals, and wholesalers as shown in Table 10.5. These centers operate as businesses and like most businesses, are motivated by profit. Hence, the key linkage between sales market players and motive is business operation. Profit in trade of specialty wood products is greater than with NTFP crafts since specialty wood products are usually more expensive. Craft and gift stores which sell these products typically target the tourist market and are located in tourist locations of Abingdon, Virginia and Bristol, Tennessee.

Fourth, consumers which purchase carvings are often tourists. Tourists are people of medium to high economic class who can afford to travel as compared to local people who live in southwest Virginia's depressed economy. The linkage between consumers of carvings and motive is a choice in income allocation. As a result, carvers' profit is dependent upon purchasing power of consumers, like in the trade of NTFP crafts. Tourists are more apt to purchase expensive specialty wood products than local people because they can afford the price. In comparison, NTFP crafts are often affordable for many local people. Motive for tourist purchase of specialty wood products may be to add to a collection and/or decorate their home. Hence, it appears that specialty wood products are capable of reaching a wider, more affluent market than NTFP crafts.

Consumers of musical instruments may be motivated by their musical ability or to add to a collection of instruments. These products are less highly directed toward an affluent market than carvings because even a low income southwest Virginia resident with a love for music may invest in a high quality instrument. The linkage between consumer and motive is also a choice in income allocation.

In summary, the linkage between collector and motive is business operation; between producer and motive is individual preference and secondarily, business operation; between seller and motive is business operation; and between consumer and motive is a choice in income allocation.

10.3 Comparisons of Marketing Elements Across Market Player Categories

Analysis of marketing elements in relation to different market players is essential to a complete understanding of NTFP marketing systems in southwest Virginia. This section uses matrices to compare two important market player variables with elements of marketing throughout the marketing chain. The two market player variables are socioeconomic level and location. Marketing elements included are value addition, product differentiation, pricing, promotion, and distribution. These variables and elements are rated for each market player (collector, dealer, producer, seller, and consumer) in the matrix and then discussed. The study being qualitative in nature rates each variable and element based on relative values and not on quantitative data. Instead, ratings are based on characteristics relative to each market player. The purpose of this section is to establish relationships among NTFP market players and marketing by presenting results in a matrix.

Before matrices are presented, the ratings for market player variables and marketing are explained. First, socioeconomic level is rated low, medium, or high based on capital intensity of the operation and level of education of the market player. Capital intensity

represents capital holdings and thereby estimates market players' economic class. Education is an estimator of social class and is combined with capital intensity to determine socioeconomic class. It is not possible within the scope of this study to rate capital intensity or education quantitatively. Therefore, socioeconomic level for each market player is determined on a scale relative to other market players and only within the trade of NTFPs. For example, a high socioeconomic rating does not necessarily mean the rating is high by North American standards over all trades, but only in relation to other NTFP market players.

Location is described as being in southwest Virginia (swVA), United States (USA), or worldwide (world). Value addition is rated low, medium, or high depending on the relative level of addition performed by each market player. This rating can be estimated based on the relative amount of labor and extra materials invested in a product by a market player. Product differentiation is rated as yes or no, showing whether the market player adds value or develops the product to differentiate it from other similar products. A rating of yes means the market player is capable of differentiating the product in processing to some degree. Pricing and promotion are rated as yes or no, showing whether the market player has control over this aspect of marketing. A rating of yes means that the market player has control over pricing and promotion activities. Distribution is rated as nearby in southwest Virginia, nationwide, or worldwide. Ratings are made based on the NTFP market's characteristic as oligopolistic or having many producers that set prices. As a result, the role of consumer in marketing elements is minimal due to the lack of perfect competition. For this reason, consumers are rated as having no control over NTFP marketing elements.

Table 10.6 shows the matrix ratings for NTFP crafts, Table 10.8 for medicinal and herbal NTFPs, and Table 10.9 for specialty wood products. Comparisons of market players and marketing elements are discussed in detail following the matrix and based on results of comparisons, relationships important to policy intervention are summarized in tables. Table 10.7 summarizes critical relationships among market players and marketing in NTFP

crafts, Table 10.9 for medicinal and herbal NTFPs, and Table 10.10 for specialty wood products. Edible NTFPs are excluded from this analysis because no market players were found in southwest Virginia.

Table 10.6 Ratings of market player variables and marketing elements for NTFP Crafts

Stakeholder	Soc-econ. level	Location	Value Addition	Product Differentiation	Pricing	Promotion	Distribution
collector	low - med.	swVA	low	yes	yes	yes	swVA
producer	low - med.	swVA	high	yes	yes	yes	swVA east USA
sales	low - med.	swVA east USA	low	yes	yes	yes	swVA east USA
consumer	low -high	swVA east USA	no	no	no	no	no

Market players in the trade of average quality NTFP crafts have a relatively uniform socioeconomic level as shown in Table 10.6. For instance, a low level collector or producer is likely to sell in a low level store where low level consumers shop. Conversely, a high level collector or producer is likely to have more access to decorations to produce a more expensive product affordable by higher level consumers. This suggests that market players in the trade of NTFP crafts are predisposed to certain accessible markets. Low socioeconomic level producers are limited to produce products of low quality because they cannot afford decoration. Therefore, they are excluded from the most profitable market of tourists. High socioeconomic level producers can afford decorations and are better able to access the tourist market in high quality craft/gift stores and craft shows.

All market players of NTFP crafts are located within southwest Virginia as shown in Table 10.6. The table also shows that some producers have access to sales centers throughout the eastern United States, which reaches consumers also around the eastern United States. This indicates that the marketing chain for NTFP crafts is locally centralized. Location of a sales market player in rural or urban settings also is related to socioeconomic class.

Lower class craft/gift stores are located in more remote areas and smaller towns. Tourist locations and larger cities have more upscale craft/gift stores or florists and usually run a more profitable business. Businesses located in small towns are not as lucrative because their market is limited. The businesses located in tourist locations such as Abingdon or Bristol can charge higher prices and be more selective as to which products are accepted for sale.

Table 10.6 shows that the highest value addition potential exists at the producer level. Producers can decorate their crafts to various degrees depending on personal taste and available decorations. Producers of high socioeconomic level are able to extract maximum profit due to their ability to invest in decorations and quality materials. They also may live near locations where high quality value addition materials are marketed. Lower level producers may sell products undecorated because travel to a location of decoration supply is too time consuming and costly. As a result, products of higher quality decorations are accepted for sale in more upscale stores and craft shows in locations which reach a wider market. As such, people of lower socioeconomic level are disadvantaged in that their products are unaccepted in the best market locations because of their limited value addition potential.

Table 10.6 shows that all market players except consumers have the ability to differentiate products based on product quality. Since crafting is a type of artistic expression, producers may express their own creativity in making crafts. As a result, great potential for product differentiation exists. Also, the table shows that all market players except consumers have control over pricing based on labor time, cost of materials, and desired margin of profit. Consumers do not have control over pricing in the sense that prices are directly set by producers. Furthermore, promotion can be performed by collectors, producers, and sellers. Promotion is of the person's own prerogative and depends on the size of the business. It can be inferred from Table 10.6 that all market players of NTFP crafts involved with collection, production, and sales have strong control over these elements of marketing - product differentiation, pricing, and promotion.

Table 10.6 shows that distribution of NTFP crafts at the collector level takes place within southwest Virginia because producers reside in southwest Virginia. Distribution at the producer level occurs mainly within southwest Virginia or occasionally, throughout the eastern United States. Similarly, sellers distribute according to their location in southwest Virginia or other locations in the eastern United States. There are two distribution locations most profitable for NTFP crafts: 1) tourist locations within southwest Virginia during the months of summer and early fall and 2) urban locations throughout the eastern United States. Again, high quality producers generally of higher socioeconomic level have best access to tourist locations. Occasionally, a producer markets products in large urban locations such as New York City, Washington, D.C., or Los Angeles. These products are promoted as traditional Appalachian crafts and their producers have found great success in marketing in these areas. However, access to these market locations is difficult because of travel costs and lack of personal connections which would enable a producer to enter the urban market. Critical observations for policy intervention are summarized in Table 10.7.

Table 10.7 Critical observations for policy intervention in trade of NTFP crafts

- 1) Market players are predisposed to certain accessible markets based on their socioeconomic level. The poorest are excluded from the most profitable markets because of poor product quality.
- 2) The marketing chain is locally centralized in southwest Virginia with some spread to other parts of the eastern United States.
- 3) The highest value addition potential exists at the producer level. Market players lower in the marketing chain are disadvantaged because they can't afford materials which add value and would increase their profit.
- 4) All market players have strong control over elements of marketing - product differentiation, pricing, and promotion.
- 5) High quality producers have best able to distribute products in profitable tourist markets. Distribution in distant urban markets is difficult because of cost and lack of personal connections.

Table 10.8 Ratings of market player variables and marketing elements for medicinal and herbal NTFPs

Stakeholder	Soc-econ. Level	Location	Value Addition	Product Differentiaion	Pricing	Promotion	Distribution
Collector	low	rural swVA	low	yes	no	no	swVA
Dealer	med.	urban swVA	med	yes	yes	yes	USA world
Producer	high	out of swVA USA, world	high	yes	yes	yes	USA world
Sales	low - high	swVA, USA world	low	no	yes	yes	USA world
Consumer	low - high	USA, world	no	no	no	no	no

Table 10.8 shows that market players in the trade of medicinal and herbal forest products vary from low to high socioeconomic level. Collectors have low socioeconomic level because capital and formal education required for collection is minimal. Dealers have a higher socioeconomic level based on capital holdings in the forms of a building, storage facilities, scales, computers, and other materials to run a business. Producers have the highest socioeconomic level because of their more sophisticated capital holdings in buildings, laboratories, machinery, and land to operate a national or international business. Often, university-educated specialists are required for certain processing activities performed by producers, such as chemical analysis. Sales and consumer market players have socioeconomic levels from low to high, indicating wide usage of medicinal and herbal final products. The table shows that the lowest socioeconomic level among market players, excluding sellers and consumers, belongs to collectors. This characteristic is consistent with observations made by Browder (1992) and Fearnside (1989). Typically, the market player lowest in the marketing chain for medicinal and herbal NTFPs is the poorest.

Related to socioeconomic level is location. Table 10.8 shows that collectors and dealers are located within southwest Virginia (few dealers are located outside of the region). The region's characteristic of low per capita income, as described in results, supports the finding that collectors and dealers have lower socioeconomic level than market players outside of the region. The same can be predicted for sellers and consumers in southwest Virginia as compared to outside of the region. Producers are not located within southwest Virginia but rather in locations throughout the United States and the world, in particular Europe and Asia. Location of market players has important consequences for value addition opportunity at the local level.

Table 10.8 shows that opportunity for value addition mirrors socioeconomic class among market players. Opportunity is lowest among collectors and generally is limited to cleaning, stripping bark, and drying. Dealers have medium value addition opportunity because they can dry, weigh, bag, bale, and in a few cases, powderize. However, United

States Federal Food and Drug Administration (FDA) regulations limit further processing by dealers (Center for Appalachian Studies and Services 1989). The highest opportunity for value addition belongs to the producer. These businesses have laboratory conditions designed to meet FDA standards and chemical analyses are often performed to check product quality. Sales market players have low value addition opportunity and may add value only by providing an attractive sales environment. These findings show that most value in the trade of medicinal and herbal NTFPs is removed from southwest Virginia, such has been the case with coal, mineral, tobacco, and timber industries.

Table 10.8 shows that marketing elements of product differentiation, pricing, and promotion are controlled by dealers, producers, and sellers. Collectors have little ability to differentiate products since their potential for value addition is low. They also have no control over pricing and generally do not practice promotion of collected raw materials. The ratings indicate that collectors in southwest Virginia have least control over marketing, in addition to being the poorest and having the lowest value addition opportunity. Table 10.8 also shows that collectors have the most limited distribution range out of all market players. Conversely, dealers, producers, and sellers have capability and connections to distribute around the country and world. This indicates that collectors lack of marketing control and narrow distribution range makes them vulnerable to the boom and bust cycles noted as characteristic of the medicinal and herbal NTFP trade in section 10.2. Critical observations for policy intervention are summarized in Table 10.9.

Table 10.9 Critical observations for policy intervention in the trade of medicinal and herbal NTFPs

- 1) Collectors are of the lowest socioeconomic level and producers of the highest. Usage of final medicinal and herbal NTFP products is by people from a wide range of socioeconomic levels.
- 2) Market players of lowest socioeconomic level are located within southwest Virginia.
- 3) Most value addition is performed outside of southwest Virginia by producers. Therefore, most profit is removed from the location most deficient in profit producing activities.
- 4) Collectors have least control over marketing and narrowest distribution range. As a result, they are vulnerable to boom and bust cycles.

Table 10.10 Ratings of market player variables and marketing elements for specialty wood products

Stakeholder	Socioecon. level	Location	Value Addition	Product Differentiation	Pricing	Promotion	Distribution
Collector	low - med	swVA	low	yes	yes	yes	USA swVA
Producer	med - high	swVA, USA	high	yes	yes	yes	USA world
Sales	med - high	swVA USA	no	yes	yes	yes	USA world
Consumer	med - high	swVA USA	no	no	no/yes	no	no

Socioeconomic level of market players in the trade of specialty wood products varies from low to high as shown in Table 10.10. Like in NTFP crafts, the collector, producer, and seller may be the same person and market players are predisposed to certain markets based on their socioeconomic level. For instance, a producer of low socioeconomic level may have access to materials of low quality and as a result, sells products in lower quality

stores. Capital holdings for these businesses is lower than for manufacturers of higher level who can afford higher quality tools and machinery.

Table 10.10 shows that collection of materials for the manufacture of specialty wood products takes place within southwest Virginia, although parts may be made from woods imported from elsewhere. Production takes place in southwest Virginia for producers residing there. Others who manufacture instrument parts transport their products out of the region to major manufacturers, such as Gibson. Sales occurs throughout the United States and world. The table indicates that levels in the marketing chain for specialty wood products are present around the country.

Table 10.10 shows that all value addition opportunity exists at the producer level. Like craft products, specialty wood products are an artistic expression and the producer's own creativity and skill add unique value to each product. As a result, most cost of a product is added at the producer level and changes in producers' techniques or materials influences final product price. For example, great value can be added to musical instruments in the quality and brand of metal parts used in manufacture. However, recently the price of metal parts has increased which has caused manufacturers to increase the prices of their instruments. As a result, local manufacturers lose market share to larger brand name producers because locally made instruments are no longer as less costly as brand name instruments. This phenomena has caused some local manufacturers to cut back on the amount of instruments made.

Product differentiation at the collector and producer levels is high. Collectors differentiate by collecting woods having specific qualities desired by producers. For example, curly maple is prized in musical instruments and tree burls are highly valued in particular wood carvings. Producers differentiate to a great degree by their own style and manufacturing process. Competition is great as in all art forms and producers must create a unique and high quality product in order to enter the market and sell successfully. The

presence of such high competition causes a great degree of product differentiation in specialty wood products.

Pricing is controlled by each market player as shown in Table 10.10. The collector may ask a certain price for materials based on their quality and time spent in collection. Producers charge a price dependent on the labor time, cost of materials and parts, and quality. Music and craft/gift stores add a markup to the price of musical instruments. Consumers occasionally have control over pricing in that they can bargain with local producers. The table also shows that all market players are capable of promoting their own products. Sales market players promote products the greatest through media advertisement. Producers also promote their products by word of mouth and exposing themselves at craft shows and music festivals. These comparisons suggest that local market players in the trade of specialty wood products have control over marketing, however, this control is diminished when an unfinished product is removed from the region such as the case of instrument part manufacture.

Distribution at the collector level occurs within southwest Virginia and throughout the United States since producers in other locations demand raw materials found in southwest Virginia. Producers and sellers distribute to consumers throughout the United States, including southwest Virginia, and worldwide. Lower quality producers distribute mainly within southwest Virginia and higher quality producers distribute more widely because their products are more highly demanded. This indicates that distribution of specialty wood products is related to socioeconomic level in that producers of higher levels can afford more expensive materials to manufacture higher quality products which are demanded around the world. Producers of lower levels cannot afford such materials, thereby being limited to local distribution where their products are acceptable.

Table 10.11 Critical Observations for policy interventions in the trade of specialty wood products

- 1) Market players are predisposed to certain markets of various profitability based on their socioeconomic level.
- 2) Market players in the specialty wood products trade originating from southwest Virginia are present around the United States.
- 3) Producers have the highest value addition opportunity. Therefore, most cost is added at the producer level. Changes in producer technique and materials cause changes in final product price.
- 4) Great competition causes a high degree of product differentiation among collectors and producers.
- 5) Local market players have control over marketing, including pricing and promotion. However, the control diminishes when an unfinished product is removed from the region.
- 6) Potential distribution range is related to socioeconomic level in that producers of high level are able to distribute more widely than producers of low level.

10.4 Comparisons Between Product Categories

In the previous section, relationships between market players and marketing elements were presented within NTFP categories. These comparisons provide a basis for cross comparing NTFP categories. The purpose of this section is to compare market players and marketing elements between NTFP categories. Information is a review of previous discussions and presented in a format where NTFP categories are directly compared on the basis of marketing.

First, market players in the medicinal and herbal NTFP trade always have a different function. Conversely, collectors, producers, and sellers may be the same person in the craft NTFP and specialty wood products trade. One possible reason for the specialization

of labor in the medicinal/herbal trade is the difficulty a single individual has in accessing markets. For example, a collector cannot provide the volume of product demanded by a processor. Therefore, the processor buys from a dealer which can accumulate a greater volume of product. In addition, federal Food and Drug Administration regulations prevent collectors and dealers from producing their own product for market.

Producers in the medicinal and herbal trade and specialty wood products trade have the highest socioeconomic level among market players in the marketing chain, whereas producers in the craft trade typically do not have a class significantly higher than other market players. Craft producers require less capital holdings than producers in the other two trades. Markets for medicinal and herbal and specialty wood products are more profitable than craft products. Prices for finished medicinal/herbal and specialty wood products are often significantly higher than for average quality craft products. As a result, craft NTFP producers remain at a socioeconomic level relatively lower than producers in the medicinal and herbal trade.

Producers of medicinal and herbal products are located outside of southwest Virginia, whereas producers for craft and specialty wood products may be located within southwest Virginia. Medicinal and herbal producers set up businesses elsewhere in locations with more access to urban markets and export capability. Also, these producers may require college-educated specialists as employees who are not attracted to the social and economic conditions in southwest Virginia. Conditions of health care and education and the remoteness of the region discourage not only medicinal/herbal industries from establishing in southwest Virginia, but a wide range of industries are lacked in the region. The current outward migration of residents of southwest Virginia to more industrialized areas does little to encourage the establishment of businesses.

Product differentiation is related to value addition opportunity in that differentiating activities also add value to the product. Product differentiation for producers has great potential in all NTFP categories. Collectors and dealers in the medicinal herbal trade are

severely limited in value addition and product differentiation because of FDA regulations and standards of larger producers. NTFP Crafts and specialty wood products are both forms of art, either functional and/or decorative. As a result, product differentiation and value addition is completely within the control of the producer in these trades.

Pricing for medicinal and herbal products is mainly controlled by the producers. Dealers establish strict price lists for collectors according to the prices set by producers. In the trade of NTFP crafts and specialty wood products, pricing is regulated by all levels in the marketing chain. In addition, pricing is less strict and bargaining may occur especially at the local level. Medicinal and herbal producers also have greatest potential for promotion in the form of printed brochures and media advertisements. Profitability of larger producers may be high enough that high scale advertising is affordable and necessary to reach a wide market. Collectors, producers and sellers of NTFP crafts typically believe that word of mouth advertisement, exposure in craft shows, and prime location of a craft store are the best promotional activities. Local producers of specialty wood products also rely mainly on word of mouth promotion and large manufacturers often print promotional literature.

Distribution of NTFP crafts is not as widespread as medicinal and herbal products and specialty wood products. Some NTFP craft reach markets in distant cities, however, most are sold within southwest Virginia. Conversely, medicinal and herbal NTFPs and specialty wood products are sold in southwest Virginia, nationwide, and worldwide. The demand for medicinal and herbal products is growing and specialty wood products are collected around the world. Craft products in southwest Virginia lack quality and market access which prevents them from reaching wider markets.

The following chapter on conclusions is based on these inter-product comparisons of market player variables and marketing elements. Optimal policy intervention must be sensitive to the relationships and observations presented in this chapter. The comparisons

provide a basis for making general conclusions about NTFP marketing in southwest Virginia.

Chapter 11: Conclusions

This research of NTFP marketing systems in southwest Virginia enables various conclusions to be made. First, conclusions are made regarding research objectives. Conclusions of research results and interpretations are incorporated and related to results of other studies presented in the literature review. These conclusions are discussed for market player variables of socioeconomic level and location and eight elements of NTFP marketing: value addition, product differentiation, pricing control, promotion, and distribution. Second, opportunities for local level NTFP marketing are noted for each product category. Third, this study is discussed in terms of the literature gaps filled or not filled and further studies are suggested accordingly.

11.1 Conclusions based on research objectives

Southwest Virginia has natural features which have isolated it from the rest of the eastern United States. As a result, the region has remained relatively undeveloped with high unemployment rates and low per capita income. In addition, the region's economy is heavily dependent on natural resources because other income opportunities resulting from the industrial revolution have not developed in southwest Virginia. Local industries traditionally involve raw material removal, leaving little value addition opportunity within the region.

Craft, medicinal and herbal, specialty wood, and edible NTFPs are widely collected and produced by hundreds of people in southwest Virginia. These NTFPs provide a source of income and household sustenance for many people in an economy where income opportunity is scarce. Edible NTFPs are collected to a lesser extent and are only consumed in the household, whereas NTFP crafts, medicinal and herbal NTFPs, and specialty wood products are marketed. Marketing systems have evolved over generations and collection and production is highly traditional for local market players. Many

similarities can be seen in the relationships among NTFPs, market players, and marketing in southwest Virginia with other parts of the world.

First, collectors of raw materials and producers of average quality products are typically the poorest market players in the marketing chain. This conclusion is consistent with Browder's (1992) observation that collectors and local level traders have the lowest socioeconomic class. Fearnside (1989:391) observes that, "when the value of products accrues to intermediaries, extractivists remain poor regardless of the amount of wealth they generate." This situation applies mainly to the trade of medicinal and herbal NTFPs in southwest Virginia. However, Browder's (1992) observation that lack of market control is responsible for poor economic conditions of collectors is not entirely true for NTFP crafts and specialty wood products in southwest Virginia. The reason market players of NTFP crafts and specialty wood products remain poor may be more due to lack of market access rather than limited market control.

Most value addition for NTFP crafts and specialty wood products (excluding instrument parts manufacture) occurs in southwest Virginia and for medicinal and herbal products occurs out of the region. Hence, collectors of medicinal and herbal NTFPs may be the poorest. This conclusion is again consistent with Fearnside (1989) in that when value accrues to intermediaries collectors remain poor, as is the case in medicinal and herbal NTFP trade. Everett (1996) also observes in the Pacific northwest that most NTFPs are removed from the region as raw materials. This situation is similar to medicinal and herbal NTFP trade in southwest Virginia.

Finally, local level market players of NTFP crafts and specialty wood products have more control over marketing elements as compared to local market players of medicinal and herbal NTFPs. Hence, fluctuations in prices during boom and bust cycles (Everett 1996) have more impact on market players of medicinal and herbal NTFPs. However, growing medicinal and herbal markets (Mater 1993) and their worldwide distribution areas may lead to increased marketing opportunity for medicinal and herbal market players.

Conversely, the market size and area of NTFP crafts and specialty wood products is more limited. As a result, opportunities for these market players can be enhanced only by policy interventions and new institutional arrangements. Next, conclusions regarding specific marketing opportunities are presented.

11.2 Marketing Opportunities

The greatest opportunity for local level marketing is for NTFP crafts and specialty wood products. First, opportunity for NTFP crafts involves improving market access for producers. One way of expanding market access which has proven successful for sweater makers in Guatemala is use of the internet (Velzeboer 1996). Internet pages can include descriptions and pictures of products from southwest Virginia. These pages will enable producers to access more lucrative and broader markets in urban areas around the country and world. An organization, such as a producers' cooperative, will also be needed to take internet orders and ship products.

Second, opportunity for local level marketing of medicinal and herbal NTFPs is low. However, increased production, such as in agroforestry systems as recommended by Mater (1993), will allow collectors and dealers to have more control over volume and quality of products. As a result, these market players will have greater ability to differentiate their products. Also, if volumes achieved are high enough, the collector may be able to sell directly to producers instead of to local dealers. Or if a dealer is cultivating, greater business can be attracted due to their high volume of products. As a result of this opportunity for NTFP cultivation, potential exists for local market players to develop small businesses. These businesses could have great success in light of rapidly expanding demand for medicinal and herbal NTFPs. In fact, many large processing companies elsewhere in the world are beginning to cultivate products to better provide volumes and quality required (Marshall 1997). This is a very positive opportunity for collectors and dealers since southwest Virginia suffers from scarce employment, low per capita income, and outward migration. Collectors, who are typically poor individuals with little

employment potential would greatly benefit from the opportunity of business development.

Third, opportunity for local level marketing of specialty wood products lies in market expansion and achieving greater market access for producers. One opportunity is the internet which may be valuable in reaching a wider and more lucrative market. Another opportunity is to establish a new intermediary in the marketing chain to link producers in southwest Virginia with buyers in distant urban areas. The functions of this intermediary should be to locate and contract with buyers, transport products at low cost, and promote products in new market areas. Another opportunity involves improving producers' access to raw material by improving coordination between loggers, sawmills, and producers as recommended by Mater (1993). Coordination should allow producers greater ability to salvage discarded wood valuable to manufacture of specialty wood products.

Fourth, opportunity for edible forest products involves cultivation. Currently, species of nuts, fruits, and mushrooms described in results are not marketed in southwest Virginia. However, growing conditions in central Appalachia are suitable for many commercially important edible products. Potential exists for people in southwest Virginia to begin cultivation and marketing of these products. However, this potential is contingent upon sufficient market access, availability of technical expertise, and access of affordable start up materials such as mushroom spore and inoculation materials and nut and fruit tree seedlings. Agroforestry systems incorporating trees which produce edible products and medicinal and herbal products could become profitable for market players in southwest Virginia.

11.3 Remaining gaps and suggested studies

This final section of conclusions involves a discussion of the remaining gaps in knowledge, limitations of this study, and suggestions for future research. This research was successful in filling literature gaps in that previously, no NTFP market chain had been extensively studied and constructed in the United States. Studies in Nepal (Edwards 1996) and Peru

(Padoch 1992) have successfully analyzed marketing systems for selected NTFPs in a similar way as this study has done. However, these studies did not pay particular attention to aspects of marketing, as was the focus of this research in southwest Virginia. As a result of this study, an in-depth description and analysis of marketing chains and systems for selected NTFPs exists which previously did not.

The gaps which remain in the literature after the completion of this research involve quantification of NTFP variables. The qualitative exploratory nature of this research limited it in regards to developing quantitative results. Gaps related to economic issues are the quantification of returns to individual market players, returns from NTFPs per unit area of forest, contribution of returns from NTFPs to total regional income, impact of returns on income distribution, and impact of returns on community and rural economic growth and development. Research which could provide this information is a survey of NTFP market players regarding the aforementioned issues. In addition, surveys could quantify the value of NTFPs traded per year, volume traded per year, and the number of collectors and/or producers within the region.

Gaps related to technical issues include cultivation information of certain NTFPs, particularly medicinal, herbal, and edible NTFPs, and quantified market information which tracks demand trends for NTFPs. A study of technology useful to local level cultivation and processing used in other regions similar to southwest Virginia would be valuable to developing local cultivation and processing potential. This study should target labor intensive rather than capital intensive technology due to the scarcity of work and poor economic conditions of southwest Virginia. As discussed in results, strip mining is an example of technology unsuccessfully used in southwest Virginia because it is capital intensive and under-utilizes the abundant human work force of the region. Locations which may provide good technological examples for southwest Virginia are developing countries such as India. Also, a study of market trends for NTFPs could involve a survey of sales and export outlets for NTFPs in the United States to determine volumes and values of products sold throughout the year. This information would enable market

players to predict and prepare for demand increases or decreases and avoid negative effects of boom and bust cycles.

Gaps related to management issues include ecological requirements for optimal and sustainable NTFP cultivation and wild collection. Valuable research would be a study of volumes collected which constitute sustainable and unsustainable collection. These results could define the point at which collection becomes unsustainable. This information would help develop management plans which include sustainable collection of NTFPs. Another study which would be of importance is a survey of NTFP processors around the country to track NTFP origins. This study would reveal the locations in the United States which are most important in the supply of NTFPs. Consequently, management decisions could focus on those areas most critical to the NTFP trade and economic livelihood of market players.

Appendix

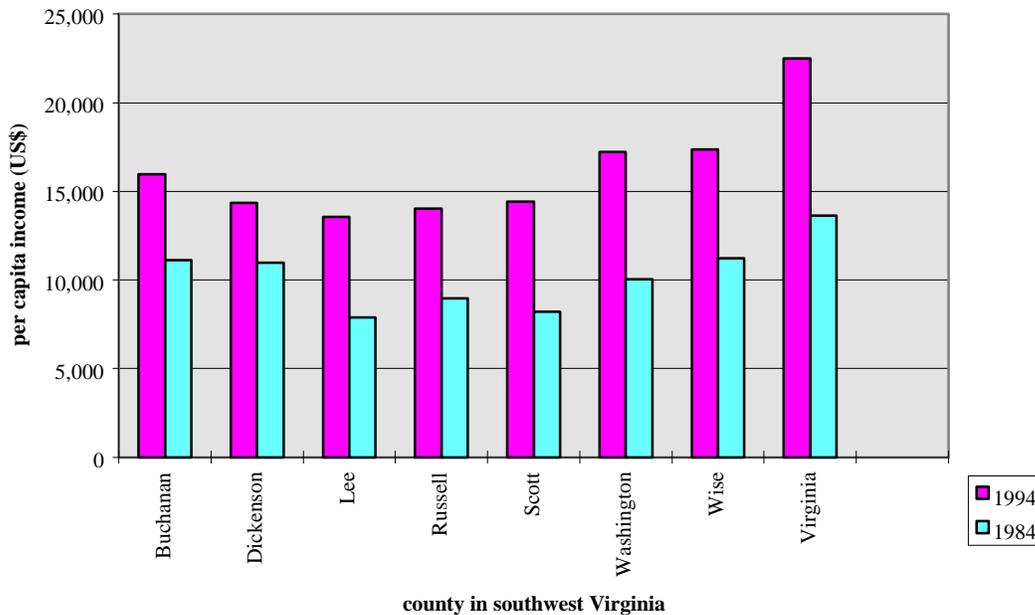
Appendix A. Per Capita Personal Income 1994 and 1984 in southwest Virginia

County	1994				1984		
	per cap. income	state ranking	% of state average	% of nat'l. average	per cap. income	state ranking	avg annual growth rate
Buchanan	15,977	79	71	73.6	11,123	49	3.7
Dickenson	14,353	99	63.8	66.2	10,986	51	2.7
Lee	13,552	104	60.2	62.5	7,870	105	5.6
Russell	14,018	101	62.3	64.6	8,971	95	4.6
Scott	14,424	98	64.1	66.5	8,220	103	5.8
Washington	17,232	59	76.6	79.4	10,042	72	5.5
Wise	17,376	57	77.3	80.1	11,232	48	4.5
Virginia	22,493	14(nat)		103.7	13,640	15	5.1

state average per capita income 1994 \$22,493
national average per capita income 1994 \$21,696
average Virginia annual per capita income growth rate(1984-94) 5.1%
average National annual per capita income growth rate(1984-94) 5.0%

Appendix B. Graph of per capita income in southwest Virginia during 1994 and 1984.

per capita personal income 1994 and 1984



Appendix C. Unemployment in southwest Virginia during 1996

													annual
county	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	avg.
Buchanan	14.6	12.1	11.1	13.1	14.8	19.7	18.2	18.6	18.6	12.6	13.2	13.9	15.1
Dickenson	23.2	22.2	19.3	17.0	20.3	22.8	19.9	22	20.6	19.6	20.5	18.4	20.5
Lee	15.4	13.2	11.1	10.0	10.7	11.9	10.8	10.9	12.3	10.8	11.4	10.9	11.6
Russell	12.6	11.0	11.3	9.0	10.1	12.9	15.4	11.9	11.7	10.0	9.7	9.7	11.3
Scott	10.8	7.3	8.5	6.8	6.2	7.2	6.6	6.9	7.1	6.6	6.6	6.4	7.3
Washington	8.5	8.0	8.9	5.6	7.2	8.1	7.5	8.7	8.4	7.8	7.5	7.2	7.8
Wise	20.0	17.5	15.3	15.2	17.0	17.9	16.0	15.0	15.3	14.1	13.7	13.6	15.9
Virginia	5.3	4.6	4.1	4.0	4.3	4.9	4.5	4.3	4.5	4.2	4.1	4.0	4.4

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Vita

Sarah Marsden Greene was born on June 23, 1973 in Endicott, New York to her parents, Beverly and Edward Greene. She graduated as valedictorian from Tamarac High School in Troy, New York. In December of 1995, Sarah graduated from Penn State University with a Bachelor of Science degree in Forest Science. Her experiences at Penn State and study in Israel, Egypt, India, and Nicaragua interested her in international aspects of forestry. She began a Master of Science degree in Wood Science and Forest Products at Virginia Tech in September 1996 and completed the degree in January 1998. While pursuing this degree, Sarah has studied voice under the direction of Elizabeth Curtis of Christiansburg, Virginia. Singing will continue to be a prominent part of Sarah's future as she is able to focus more of her energy on music. She also began an international marketing and distribution business during her stay at Virginia Tech. In March 1998, Sarah will begin a Fulbright Scholarship in Nicaragua involving work in non-timber forest products and music. Sarah's career goals include excelling as a musician and developing her international marketing and distribution business.