

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/312627376>

Consumer Preferences and Value Proposition Disconnect—Assam Rattan and Bamboo Furniture Industry

Conference Paper in Smart Innovation · January 2017
DOI: 10.1007/978-981-10-3518-0_58

CITATIONS
0

READS
61

3 authors:



Prarthana Majumdar
Delft University of Technology
3 PUBLICATIONS 0 CITATIONS

SEE PROFILE



Shiva Ji
Indian Institute of Technology Guwahati
11 PUBLICATIONS 0 CITATIONS

SEE PROFILE



Sharmistha Banerjee
Indian Institute of Technology Guwahati
11 PUBLICATIONS 0 CITATIONS

SEE PROFILE

Some of the authors of this publication are also working on these related projects:



Social Innovation through Materials Experience. [View project](#)



On-field giner-turmeric processor [View project](#)

Consumer Preferences & Value Proposition Disconnect - Assam Rattan and Bamboo Furniture Industry

Prarthana Majumdar^{1,2}, Shiva Ji^{1,3}, Sharmistha Banerjee¹

¹Department of Design, Indian Institute of Technology Guwahati, India-781039

²Design Engineering, Delft University of Technology, Mekelweg 2, 2628CD Delft, NL

³Department of Architecture, Mizoram University, Aizawl, India-796004

prarthana.majumdar@gmail.com*, arshivaji@gmail.com,
banerjee.sharmistha@gmail.com

Abstract. Rattan and bamboo are important forest resources for the North Eastern Region (NER) of India. Naturally growing in abundance, they find use in a number of industries such as housing, construction, handicrafts, furniture and food industry. Of late, this industry has seen considerable growth outside the NER. But it has not been able to realize its full potential in NER due to significant lack in market orientation of the craftsmen who work from remote areas in NER and try to sell in urban markets. This paper looks into the urban markets, which holds the highest scope for revenue growth for this industry and investigates the gap in the customer preferences and current industry value proposition. The main gaps found are: lack of awareness, limited training focused only on techniques, lack of design awareness and sensitivity (ergonomics, attention to detail, finishing, presentation), lack of branding and marketing knowledge and limited outreach of self help groups (SHG) and clusters.

Keywords: Bamboo and Rattan, Crafts and Furniture Design, Branding, Market induced Design, Rural Craftsmen.

1 Introduction

The last decade saw a growth in eco-consumerism. A number of ethnic groups in South East Asia depend on Bamboo and Rattan (B&R) for varied purposes such as making houses, furniture, containers, high-grade paper, food items and decorative handicrafts. B&R, by being economically valuable to such native communities, can also lead to preservation of forests. Ben-Zhi et al. (2005) report that though forest areas have shrunk worldwide, in China, the total area under bamboo plantations is steadily increasing [2].

Furniture and craft making out of these two materials has continued for centuries in the North-Eastern state of Assam, India (Fig 1). According to the Indira Gandhi National Center for the Arts, both these resources are found in surplus in the forests of Mizo Hills, Mikir Hills, North Cachar Hills, Nowgong and Lakhimpur districts [5]. In view of its importance in the rural economy, the Government has started several programs under the Department of Industries and Commerce (DIC), Government of Assam and has established Industrial Clusters in several districts in Assam [6]. These clusters are each run by an NGO at the management level and employ around 15-20 craftsmen on a part-time or full time basis. The Government provides these clusters with loans and

subsidized machinery. Individual craftsmen in the area can rent this machinery by paying the expense of the electricity used.



Fig 1. B&R furniture in a shop in Guwahati, Assam

B&R furniture (B&Rf) are usually considerably cheaper than wooden furniture. It might hence be expected that the B&R industry will have good market share in the developing South-East Asian countries. But unfortunately, B&Rf have only been able to sell well in local markets with mostly low-income consumers. It has not been able to successfully tap into the high-income urban markets. [1] Reubens et al. (2010) state that this is because the product suffers from negative connotations attached to it by people as being 'low-cost' and 'rustic'. It has not been able to capture the interest of industrial designers who prefer to work with regular flat boards and render designs that are tailored for assembly-line manufacturing. The technology push for the B&R industry is to have both these materials in an industrially processed form, either as flat boards or as composites. But industrializing this handicraft is likely to push the furniture makers further down the value chain ending up as raw material suppliers.

In Assam, Das et al. (2012) state that the Industrial Cluster model has distinct advantages over modest home-based production [3]. It helps in the pooling of resources and attracts higher public investment by providing superior quality products. It also stimulates innovation by promoting knowledge sharing. However, the biggest benefit that clusters have is that they enjoy collective bargaining power with suppliers and can brand their products with their identity.

Despite efforts by the government for higher commercialization of this industry, majority of the furniture makers remain part-time home based business owners. [7] Fabeil et al. (2012) investigate the factors that are responsible for the resistance in moving towards full-time workshop based production for the handicraft makers in rural Sabah, Malaysia. The craftsmen usually engage in such production for their passion for handicrafts but have limitations of time due to trade-off with other income generating activities.

The need to have a good business model is as crucial to this industry as having a competitive product. [8] Chesbrough (2010) discusses how an appropriate business model can set the technical specifications of a product. He cites the example of Xerox, which realigned its strategy to making faster printers since the sale of printer supplies was higher than the sale of printers. [9] Kumar et. al (2000) demonstrate how companies

like Ikea with no significant competitive edge from product innovation, have been able to be market driving through their disruptive business models.

B&R are usually associated with nature and South East Asia. While these connotations make it hard to market B&Rf in urban markets where the demand is usually for industry-processed, fine-finished goods, it also opens up two effective avenues to market these products, namely- ethnic branding and green marketing. Currently B&Rf mostly sell as garden or outdoor furniture. But there is scope to brand these products as 'eco-friendly' and 'ethnic' and increase their market share. [10] Scrase (2005) examines how two online retailers (Craftsbridge and Oxfam) selling Indian crafts, use ethnic branding in the form of stories of the producing communities to appeal to online visitors. [11] Mahoney (2012) describes how Kenyan crafts have become part of western households by highlighting the "tribal" imagery of the products selectively to suit to western tastes. Emphasis is also laid on aspects such as 'Fair trade' and 'Hand made' that western consumers care about. [12] Ittersum (2001) states that some of the most important factors in the buying decision of consumers for products with ethnic labels are quality of the product relative to its alternatives and the consumer's cognitive association with the region of origin. The post purchase behavior is determined by how much the product exceeds expectations or 'positive disconfirmation'. Most urban consumers exhibit environmental consciousness in their buying decisions. [13] Arribas et al. follow the success story of the international Spanish brand, Hoss Intropia that relies on sustainability as its brand strategy. In order to reduce waste, Hoss Intropia distributes overstock among homeless people. It also regulates its production center in India to reduce environmental wastes generated from manufacturing of textiles. [14] Dove (1994) demonstrates that successful marketing of non-timber forest products indirectly leads to preservation of forests when such resources become valuable to the local population. Handicrafts are also extensively marketed through social media. There are three reasons for social media such as Facebook, Twitter, Pinterest, etc. being good as promotional media for the small scale handicraft producers, namely - low cost, global reach and easy recognition. [15] Rahadi et al. (2013) discuss about ways in which handicraft makers in Palembang city in Indonesia are able to brand their products and fetch competitive prices in international market using social media.

Despite the strengths and opportunities, the B&R industry of NER is unable to scale up. This paper seeks to understand the gap in the value proposition of the B&Rf makers and the customer segment profile of the young, urban consumers in Indian cities. The young, urban consumers are of particular interest as they frequently change housing and have a preference for light, economical furniture. B&Rf being both light weight and low cost, this industry has the potential to tap into this market.

2 Research Methodology

Questions. The research was designed to answer the following questions: (1) What are the preferences and buying trends in furniture among urban consumers? What is their perception about B&Rf (2) Do the B&R manufacturers understand the pains, gains and jobs of the urban consumer? (3) Is there a disconnect between the current market

demand and the current products and distribution channels? If yes, then what is it? (4) What are the cradle to market steps involved in B&R? (5) What are the infrastructural support systems available to B&Rf makers? (6) What is the understanding and perception of the B&Rf manufacturer regarding the market?

Participants. The participants in this study fell into two groups: consumers and manufacturers. The consumer group consisted of 47 users living in Indian cities who were either in college, just started working or were in the early phase of settling down with families. They were students and professionals from different industries. The manufacturer group included craftsmen, business owners and employees in a bamboo industrial cluster from three districts in Assam- Nagaon, Kamrup and Barpeta. All the craftsmen, except the ones working full time in the cluster, are part time farmers. Only the industrial cluster has direct access to the urban markets and transports its own furniture via railways.

Table 1. Demography of Consumer Respondents

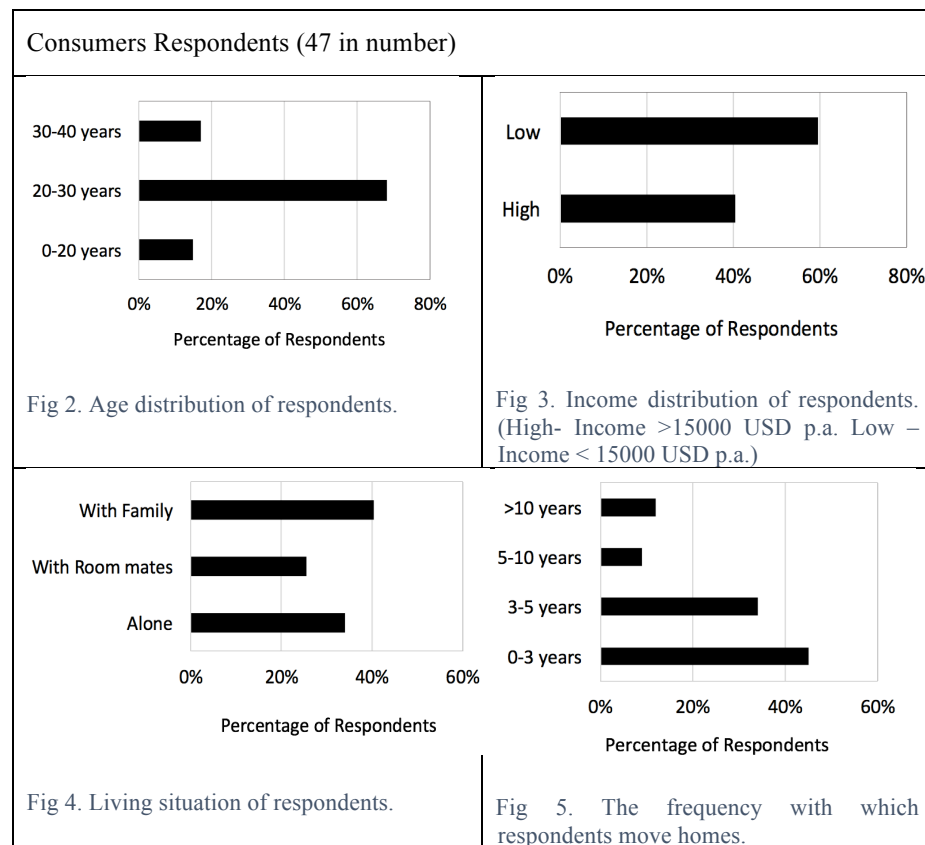


Table 2. Business Organization, Location and Selling Outlets of B&Rf manufacturers

B&Rf Manufacturers				
Type of Business	Number	Employees/ Members	Location	Selling Outlets
Industrial Cluster	1	20 employees	Barpeta	Furniture Showrooms, Expos
Self-help group	2	5-10 members	Barpeta	Expos, Wholesalers
Family Business	3	3-4 members	Barpeta, Nagaon	Wholesalers
Single Owner Business	3	4-5 employees	Guwahati	Wholesaler, Furniture Showrooms

Methodology. We created an online questionnaire for the consumer research with closed and open ended questions. For the manufacturers, one-to-one interviews were conducted in person using a semi-structured questionnaire. Their responses were compiled in the form of a value proposition and this was compared to the customer segment profile to locate mismatches.

Key Findings and Discussions

Perception of B&R. When the users were asked about what comes to their mind when they think of B&Rf, most of the users came up with favorable adjectives like “Beautiful/Aesthetic”, “Eco-Friendly”, “Light-weight”, “Homely” and “Strong”. Unfavorable adjectives included “Obsolete”, “Not durable”, “Not strong” and “Prone to Termite Infestation”. The bubble chart in Fig 6. represents all the user expressed adjectives. The size of the bubble represents the frequency of usage. From the negative sentiments expressed, the most notable perception is that it lacks “modernity” in design and is not structurally strong.

Preference of Consumers. Users were asked to rate eight different themes, namely Rustic, Modern minimalist, Classic, Cottage, Industrial, Contemporary, Eclectic and Elegant Country. The users showed a preference for the modern looking, Contemporary and Minimalist themes (Fig. 7). However, the furniture made by the rural craftsmen mostly fell under the Rustic and Classic themes. While the users liked the clean look of modern designs, the B&Rf have a raw, natural finish and intricate weaves of rattan strips on surfaces. These features heighten the sense of ethnic origins of the furniture and the crude appeal makes it ideal to use them as garden furniture. For indoor purposes, users preferred less intricate designs and vivid colors.

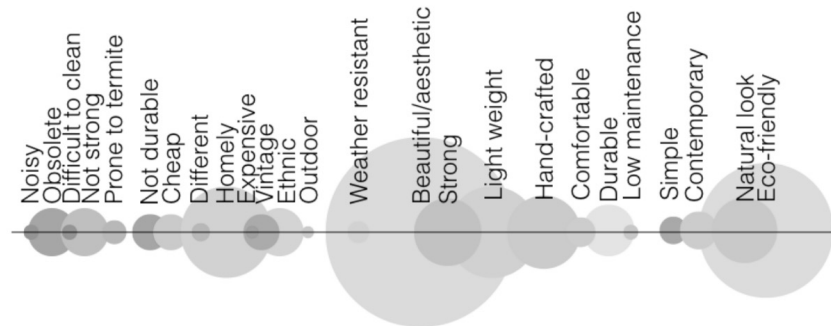


Fig 6. Bubble Chart representing adjectives expressed by respondents for B&Rf

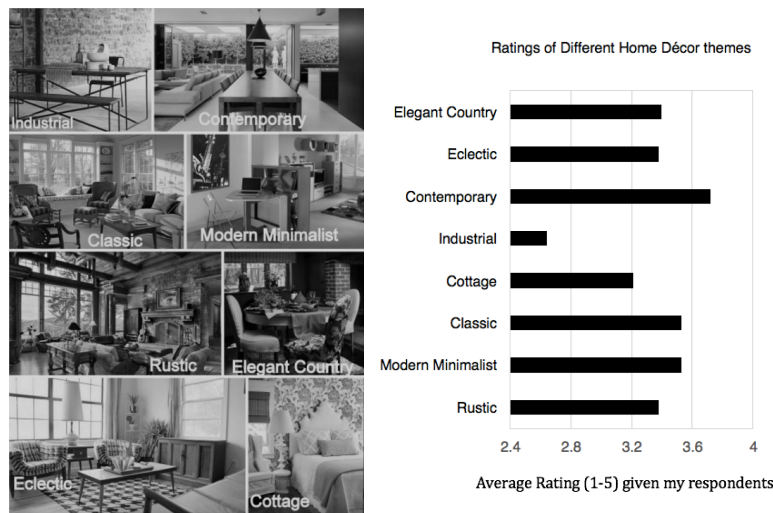


Fig 7. Different Home Décor themes and average ratings (1-5) given by respondents (picture source: Pinterest)

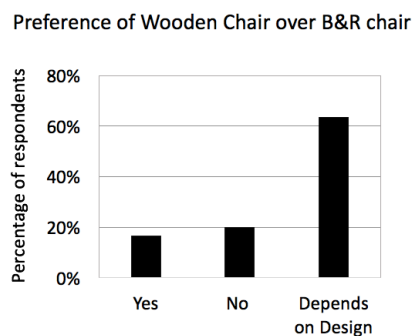


Fig 8. Respondents preferring wood over B&R

The Design. “Design of furniture” emerged as a major factor for consumers. When the users were asked whether they would choose a wooden chair or a B&R chair, a significant majority said, “It depends on design” (Fig 8). On the other hand, the craftsmen suggested that their designs needed new ideas and inputs of market trends from their observations in exhibitions that they attended in cities. However, only the industrial cluster and one independent manufacture reported using the internet to draw inspiration for new ideas. The other manufacturers were unaware that the internet could be used for

ideas. The industrial cluster employees also reported that they “mimicked designs” from furniture made out of materials other than B&R.

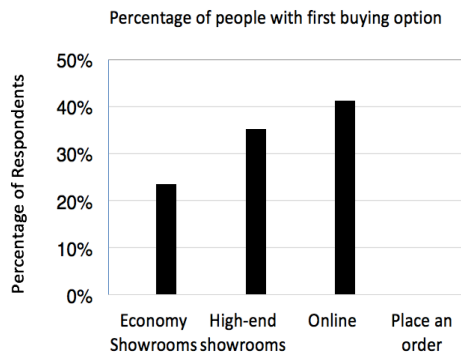


Fig 9. Preference of buying channels of respondents

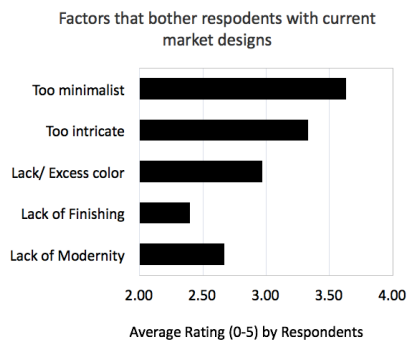


Fig 10. Factors that respondents dislike about current furniture designs in market

Buying Online. When asked which buying channel will they first explore if they had to buy a coffee table, 42% of the users said that they will first look at online retailers such as Amazon, Fab Furnish, etc. (Fig. 9) While high end showrooms and economy showrooms followed suit, no user chose the option of placing an order with a manufacturer. However, none of the B&Rf makers were selling online. The independent manufacturers sold their furniture to the wholesalers according to the orders placed by them. The cluster also sold directly to showrooms and through expos in various cities. Most of these makers showed willingness to learn how to sell online.

Dislike in Current B&Rf. The users assigned the highest dissatisfaction with too much of minimalism, followed by the intricacy of patterns on some furniture, absence of appropriate colors and modernity in the designs (Fig. 10). Lack of finishing also figured as a cause of dissatisfaction. The intricate designs on B&Rf often do not appeal to most users. It is also reported to be “Difficult to clean”. Though users liked the raw color of B&R, but adding colors and finesse to these products might give a new feel and break the stereotype that they are ‘natural products’ only suitable for outdoor purposes.

Branding. The users were asked whether they thought about the environment while buying utility products. Around 32% of the users said that they always thought about the environment, while 53% said that they did not always take this factor into consideration (Fig. 11). The users also reported that ‘Reusability of the material’ and ‘Low carbon footprint of the product’ were factors that inspired them to go green. 53% users also said they connected with a product more if it told the story of the community making it and 36% said that it depended on where the product originated from. On the other hand, the manufacturers only stressed on strength and longevity of the product as marketing tools.

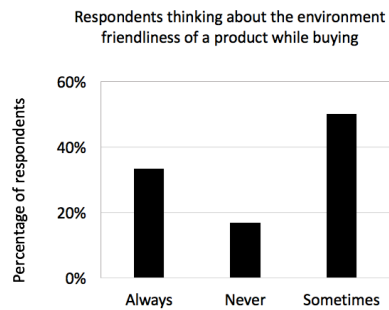


Fig 11. Effectiveness of ‘Eco-Branding’

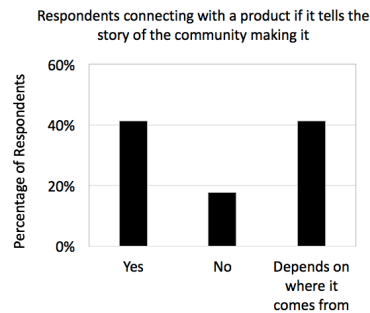


Fig 12. Effectiveness of ‘Ethnic-Branding’

Respondents preferring a wooden chair over a B&R chair

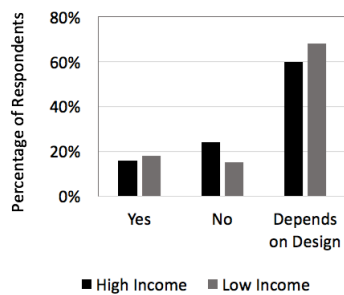


Figure 13. Preference of wood over B&R

To analyze the effect of income on the buying decisions, the respondents were divided into two groups, namely High Income (>1,000,000 INR p.a. ~ 15000 USD p.a.) and Low Income (<1,000,000 INR p.a.). The High Income group showed slightly higher sensitivity to Ethnic Branding versus the Low Income group which demonstrated slightly higher sensitivity to Eco Branding. The high income group also showed slightly higher likeliness to buy a B&R chair. (Fig. 13,14, 15)

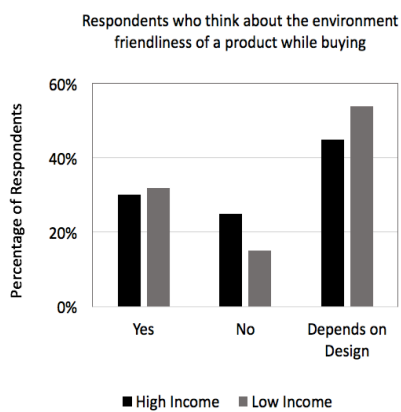


Figure 14. Effectiveness of Eco-Branding

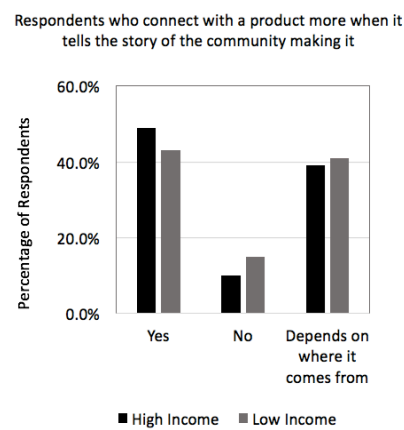


Fig 15. Effectiveness of Ethnic Branding

B&R Manufacturers. There was a marked difference amongst the manufacturers in terms of knowledge of customization of products, pricing and Government aids based on their mode of operation. Individual manufacturers are not part of any network,

exhibited low understanding of market demands, pricing and Government aids. They carry out production on the basis of orders received from wholesale suppliers and do not sell their products in exhibitions directly. They also complain about stagnant prices of finished products and economic exploitation by suppliers. Self-help group organized manufacturers take part in exhibitions and demonstrate some amount of understanding of market demands through the sales analytics that they gather. They do knowledge sharing and have greater knowledge of training and government aid programs. Notably, some of them also used the internet to get ideas for new designs. The Industrial Cluster in Barpeta demonstrated the highest amount of knowledge in pricing, market demand and government aids available. They divide labor based on expertise and have the highest participation in exhibitions and the biggest sale volumes. They use the internet frequently to get new ideas and replicate them. Usually, clustered actors find it easier to obtain government funding due to higher credibility. Hence, functioning as a cluster can help the manufacturers to venture into new modes of production and selling.

Higher co-operation among the manufacturers clearly has an impact on the market orientation of the manufacturers. The poor knowledge of pricing is also a cause of concern as the individual manufacturers expressed discontent that the prices of raw materials were steadily increasing, but the offer price of suppliers have remained stagnant. They showed reluctance in adopting furniture making as their family trade and encouraging their next generation to continue the same. The B&Rf makers, who, in general, demonstrate good manual as well as machining skills, depend heavily on the training programs of the NGO's and the Government Block offices.

3 Conclusion

The B&Rf of NER have not grown outside in non-local markets due to high shipping costs and an underdeveloped transport system in the region. Despite Government assistance, the disconnect between the needs of the urban markets and the manufacturers in remote areas also contribute towards the inability of this industry to tap into new markets. If the Government and NGO's trained the manufacturers on these aspects and ICT besides imparting skills, it will go a long way in helping these craftsmen to venture profitably out of local markets. With this study, we wish to aid in the design of training modules for rural craftsmen in Assam. The other craft industries in Assam suffer from similar deficiencies, such as inability of the craftsmen to understand the changing markets or inaptitude with the use of internet. Training modules developed for such industries also need to focus on these deficiencies.

Recent years have seen considerable technological developments in the context of B&Rf. [4] Van der Lugt (2008) emphasize on the possibility of design by using bamboo ply boards and composites for fine-finished surfaces and techniques like coiling instead of weaving for alternate finishes. Our future research on design intervention to develop more viable products for the B&R industry in NER will focus on the needs and wants of the consumers recognized in this study. Clusters with higher access to government financing, can take to making such market oriented products. They can also work to create their own online store and create an identifiable brand.

Acknowledgements. Our sincere thanks to all the craftsmen and their families, cluster officials and consumers who participated in the study and provided us with valuable information.

References

1. Reubens, R., Brezet, H., & Christiaans, H. (2010, October). Sustainable value chains for bamboo working communities: Integrating the tenets of sustainability through the Rhizome approach. In Knowledge Collaboration & Learning for Sustainable Innovation: 14th European Roundtable on Sustainable Consumption and Production (ERSCP) conference and the 6th Environmental Management for Sustainable Universities (EMSU) conference, Delft, The Netherlands, October 25-29, 2010. Delft University of Technology; The Hague University of Applied Sciences; TNO.
2. Ben-Zhi, Z., Mao-Yi, F., Jin-Zhong, X., Xiao-Sheng, Y., & Zheng-Cai, L. (2005). Ecological functions of bamboo forest: research and application. *Journal of Forestry Research*, 16(2), 143-147.
3. Das, R., & Das, A. K. (2012). Industrial cluster: an approach for rural development in North East India. LAP LAMBERT Academic Publishing.
4. Van der Lugt, P. (2008). Design interventions for stimulating bamboo commercialization. Dutch design meets bamboo as a replicable model.
5. Indira Gandhi National Center for Arts. URL: <http://ignca.nic.in/craft152.htm> (accessed on September 21, 2015)
6. Department of Industries and Commerce, Assam. URL: <http://www.investinassam.com/> (accessed on September 21, 2015)
7. Fabeil, N. F., Marzuki, K. M., & Langgat, J. (2012). Dedicated Vs Modest Commercialization of Small-Scale Handicraft Production in Sabah. *International Journal of Commerce, Business and Management*, 1(1).
8. Chesbrough, H. (2010). Business model innovation: opportunities and barriers. *Long range planning*, 43(2), 354-363.
9. Kumar, N., Scheer, L., & Kotler, P. (2000). From market driven to market driving. *European management journal*, 18(2), 129-142.
10. Scrase, T. J. (2005). Crafts, consumers and consumption: Asian artisanal crafts and the marketing of exotica.
11. Mahoney, D. (2012). Changing Strategies in Marketing Kenya's Tourist Art: From Ethnic Brands to Fair Trade Labels. *African Studies Review*, 55(01), 161-190.
12. Ittersum, K. V. (2001). The role of region of origin in consumer decision-making and choice. Retrieved from: www2.lei.wur.nl/mansholt/files/102749537158.pdf.
13. Arribas, V., Díaz, T., Josa, M. E., Sanmiguel, P., & Sádaba, T. Hoss Intropia: A Spanish brand that is born with sustainability as its main value proposition.
14. Dove, M. (1994). Marketing the rainforest: 'Green'panacea or red herring?
15. Rahadi, D. R., & Abdillah, L. A. (2013). The utilization of social networking as promotion media (Case study: Handicraft business in Palembang). arXiv preprint arXiv:1312.3532.

Appendix

Link to online questionnaire filled by consumer respondents:

<https://www.surveymonkey.com/r/canebamboofurniture>