The Seybold Report

ISSN 1533-9211

DOI 10.17605/OSF.IO/6GRBW

ENVIRONMENTAL FRIENDLINESS OR EFFICIENCY: AN ANALYSIS OF THE ECONOMIC ACTIVITIES OF HANDCRAFTERS IN AN INDUSTRIAL CENTRE

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Abstract

Waste treatment is one of the issues faced by populous countries. The added value of waste treatment presents the society in a handcraft industrial center of a developing country with a source of living. From the economic activity perspective, understanding efficiency and environmental friendliness are essential in managing small and medium enterprises. This research sought to figure out the economic activities of handcrafters in an industrial center, mainly to find out whether the economic activities reflected the values of environmental friendliness or whether they attached importance to the efficiency of the product. The research employed a qualitative research method and the grounded theory approach. The research was conducted at a handcraft industrial center in East Java, Indonesia. The data analysis involved open, axial, and selective coding. The research results showed that handcrafters in the variety handcrafter, prayer aid handcrafter, household utensil handcrafter, and entrepreneur-handcrafter categories derived their understanding of the environmental friendliness values from local wisdom and the religion they adhered to. They engaged in economic activities by treating waste using the reduce, reuse, and recycle methods, from production to distribution and marketing, generating added value through green products, distribution, packaging, and marketing. The economic activity analysis in the scopes of efficiency and environmental friendliness showed that efficiency and environmental friendliness in the handcraft industrial center were integral to each other. This is because efficiency and environmental friendliness complement one another. Efficiency was representative of the economic pillar, while environmental friendliness was representative of the social and environmental pillars. Both efficiency and environmental friendliness belong under environmental sustainability

Keywords: Efficiency, Environmental Friendliness, Green Products, Green Marketing

1. INTRODUCTION

In reducing carbon emissions, economic activities are promoted through various social-environmental institutions and international organizations [1]. Climate change, fuel use, and nature exploitation are among today's environmental problems [2]. Indonesia, as a developing country with a population of 269.603 people, is also faced with a multitude of problems related to the environment [3]. Waste treatment is one of the problems faced by countries with large populations. A variety of government programs and policies have been established to mitigate environmental problems [4]. It is known that the amount of existing waste has reached 24.4 million tons/year, consisting of 16.92% yearly waste reduction, 51.75% treated waste, 68.67% managed waste, and 31.33% unmanaged waste [5]. In response to the amount of waste produced, the government distributes waste treatment facilities in the forms of final disposal

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ISSN 1533-9211
DOI 10.17605/OSF.IO/6GRBW

sites, waste treatment sites employing reuse, reduce, and recycle methods, waste banks, compost houses, and creative products, to name a few.

The government performance that carries the 3R (reuse, recycle, reduce) concept is improved, with green products being given prominence as the output of the program [6]. The green product program is under a government-developed system named the National Waste Treatment Information System (SIPSN). Various creative products have been produced from recycled waste, including, among other things [5], the leading handcraft products of bags, vases, souvenirs, home utensils, and prayer aids. These green products help propel people's economy and support environmentally aware sustainable development programs following the SDGs [7].

Handcraft-industrial-center-establishing micro, small, and medium enterprises as propellers of people's economy must reflect environmental awareness [8]. As reported, an orientation toward green products has a positive effect on and goes along with business performance, and it empirically supports sustainability and entrepreneurship theories in micro, small, and medium enterprise development [9][10]. Another research study on green products revealed a trend of companies practicing green marketing as a strategy to make profits and to protect green marketing mixes for micro, small, and medium enterprise actors, where Eco labeling and branding will attract more attention from consumers [11]. Another advantage companies may enjoy from green marketing is that it will build an image that they take an active part in environmental mitigation [7]. This research aimed to figure out how handcrafters in the industrial center engaged in economic activities: do these economic activities reflect the value of environmental friendliness or do these exclusively attach importance to the efficiency of the product?

2. MATERIALS AND METHODS

2.1 Environmental Friendliness Values

A value is a fundamental belief of a behavior or a final condition of an existence that can be well accepted in both personal and social contexts [12]. It can be defined as a notion or concept of what is considered important by an individual in his/her life [13]. Others are of the view that a value may take the form of a religious belief, freedom, pleasure, ethics, integrity, modesty, or attachment, to name just a few. Meanwhile, environmental friendliness can be defined as an act of respecting and preserving nature and ecological balance by refraining from damaging nature [14]. The awareness of the importance of preserving the environment sets the background for the environmental awareness concept called sustainability [14].

The 3R (reduce, reuse, recycle) concept has three core constituents, namely, reuse, which refers to reusing waste, reduce, which refers to reducing anything that can cause or generate waste; and recycle, which refers to reprocessing waste into something of value [15]. The environmental friendliness value can be construed as an act of extracting benefits or mitigating risks from pollution and waste and, in turn, presenting business opportunities [16][17]. Eco-

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ISSN 1533-9211
DOI 10.17605/OSF.IO/6GRBW

efficiency-related skills and capacities in treating waste are beneficial in reducing production costs [18][19]. The scope of the environmental friendliness values is outlined in the table below

Table 1: An Overview of Sustainability Values

Sustainable Values			
Tomorrow		Today	
Drivers	**Strategy**	**Drivers**	**Strategy**
Disruption	Clean technology	Pollution	Pollution prevention
Cleantech	Develop the sustainable competencies of the future	Consumption	Minimal waste and emissions from operations
Footprint		Waste	

Studies on environmental friendliness education in industrial centers are based on the population density of low- and medium-income countries [20][10]. A mismatch between high urbanization rates and settlements in marginal lands, population density growth, and uncontrolled pollution elevation either in the air, water, or soil, coupled with poor availability of basic infrastructures such as electricity, water, sewage, waste disposal, health care, and education, that will increase disease contagion and cause other environmentally related diseases. Some studies on micro, small, and medium enterprises related to environmental friendliness found that these enterprises understand the risk that entails their activity and that the endeavors they have engaged in are not fully reliant on the existing environmental regulations [14]. A study on environmental problems discovered a lack of knowledge on sustainability, which placed businesses in a dilemma [21][22]. Business players are defined as current issues among consumers concerning business sustainability by raising environmental issues [11]. There also emerges a notion that a business must give precedence to its business sustainability to improve quality of life or life survivability by minimizing environmental damages through economic growth, and it is expected that the business may have programs that are designed in such a way to attain its organizational goals [17]

2.2 Green Products, Green Distribution, and Green Marketing

A green product is produced out of recycled materials [23]. It can also be defined as a product that is designed to solve existing environmental problems. These environmental problems include the use of non-renewable natural resources and the production of waste that is harmful to the environment [24]. Some other terms referring to green products are environmental products, ecological products, environment-friendly products, and sustainable products [25][26]. Some studies define green products concerning environmental capability, environmental protection, environmental friendliness, environmental preservation, reduced production-related waste, environment-friendly production, social quality, and ethical attributes, among other things [24][27][28]. In conclusion, green products are environmentally friendly products that are considered sustainable and are designed to minimize negative effects on the environment throughout their life cycles, including when the products are reused. Green products are characterized by natural materials in place of artificial ones, energy and water saving, environmental safety, renewables, the state of biologically decomposable, and the exclusion of harmful substances in the products [29].

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DOI 10.17605/OSF.IO/6GRBW

Green distribution can be defined as an effort to alternate ways of distribution by considering the impacts of distribution on the environment, and it is inclusive of changes in consumers' perspectives on how distribution implementation can offer added value [30]. Green distribution is driven by such factors as consumers' demands, the company's reputation, and technological developments, among other factors [31]. Green distribution is positively influential not only to the environment but also to the company or business actor in terms of profit-making [32][31]. A large share of existing data-generating research reports that to overcome environmental impact, business actors must establish environmental policies, including generating solutions to product packaging problems, keeping in mind that the products produced contribute to an immense flow of waste. This has propelled green distribution movement regulation within the legislation framework [31].

Meanwhile, green marketing refers to a marketing process that is directed toward environmental preservation [33][34]. The process must be beneficial to the environment. In other words, it must not damage the environment. Green marketing encourages entrepreneurs to produce environmentally friendly products [28][26]. Green marketing is otherwise [34] defined as the act of combining a variety of activities with a greater degree of environmental friendliness, including product modification, product process modification, packaging modification, and advertising modification. Green marketing entails fundamental aspects such as (1) retailing, which refers to the marketing of products that are safe for the environment, (2) social marketing, which refers to the development and marketing of products that are designed to minimize negative impacts on the environment, and (3) the environment, which refers to the company's effort to produce, promote, package, and reclaim products in a way that is ecologically responsive [23]. The objectives of green marketing are [35] the satisfaction, needs, wishes, and desires of the consumers in maintaining and preserving the environment. Some studies describe that many companies raise environmental issues for branding purposes to give the impression that they are also participating in the preservation of the environment [36]. Such a measure has proven effective in terms of marketing and in saving the company's budget for promoting its products [37][11][27].

2.3 Method

This research is a qualitative study with a grounded theory approach. The focus of this research was to develop a theory from the ground using data from the field [38]. Data were collected through interviews and field observation. Interviews were carried out with 20 handcrafters within the environment of a handcraft industrial center. Data analysis was performed by open coding, axial coding, selective coding, and conditional matrix development. The theoretical framework used in this research is provided below

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DOI 10.17605/OSF.IO/6GRBW

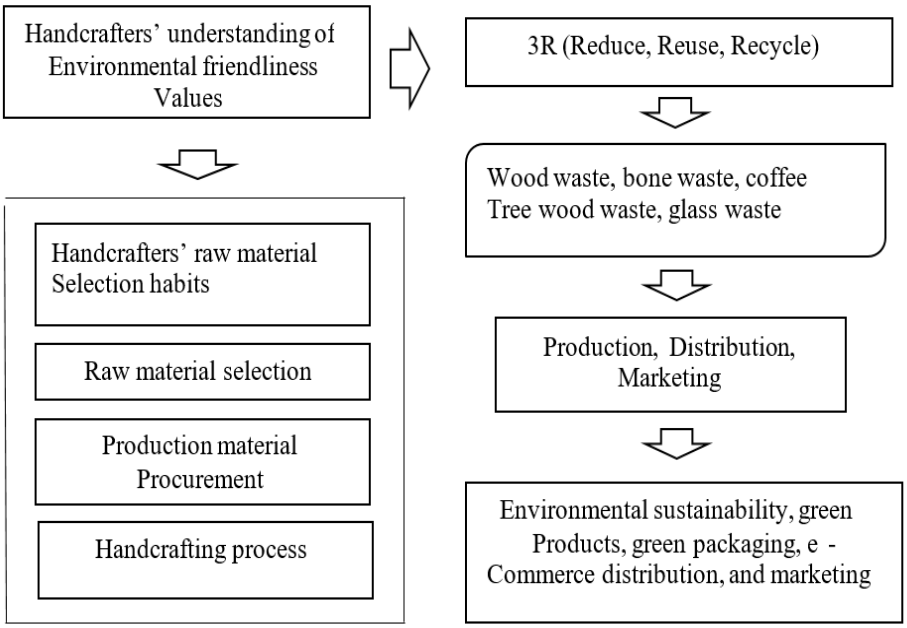

Figure 1: Research Flow Chart

The research was conducted at one of the handcraft industrial centers in Indonesia, with handcrafters' distribution as illustrated below.

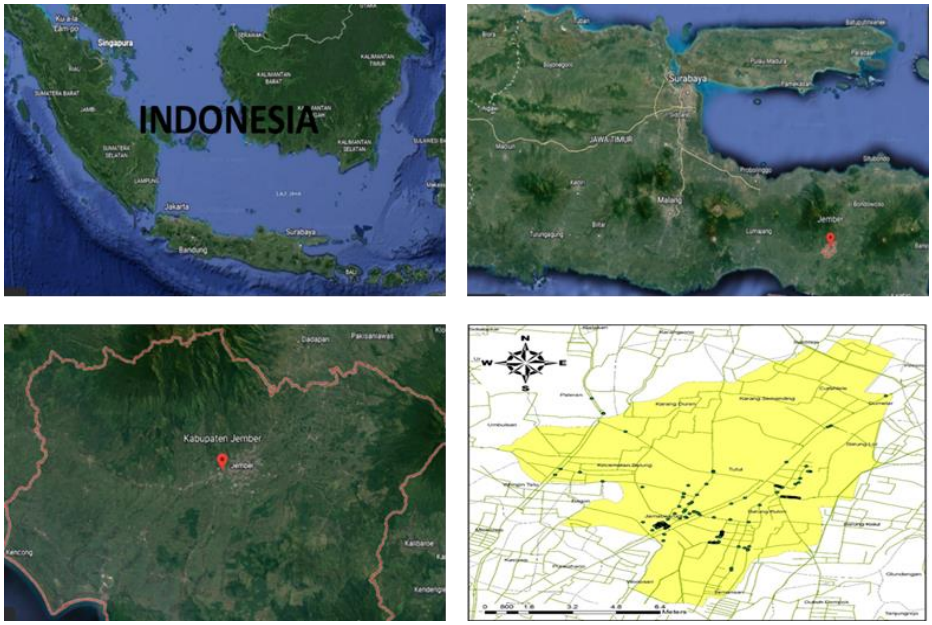

Figure 2: Research Location

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ISSN 1533-9211
DOI 10.17605/OSF.IO/6GRBW

3. RESULTS

3.1 Handcrafters' understanding of environmental friendliness values

3.1.1 Environmental friendliness values understanding of handcrafters in the variety of handcraft field

Results of interviews with several handcrafters revealed that handcrafters, to be precise those who produced necklace crafts from bone waste, gained an understanding of environmental friendliness values from the socioeconomic conditions and social environments of the people. People of low economic backgrounds were left with no other option but to survive in the social conditions they were living in. The following is an interview excerpt from one of the handcrafters in the industrial center in which this research was conducted:

"When I pick up remnants of animal bones and I use them as the raw materials of my creations, it is more than just environmentally friendly; it is extremely environmentally friendly."

Some handcrafters gained knowledge from other handcrafters with success stories in managing their respective businesses. These successful handcrafters inspired those within their proximity to follow in their footsteps in business. The handcrafters used waste that was produced in the neighborhood as raw material to create products and infuse them with added value. The following is an excerpt from an interview with a handcrafter:

"I come to be the way I am today after being apprenticed to a handcrafter. I came to be acquainted with crafting and ended up running a business of my own by making use of bone waste."

The environmental friendliness concept the handcrafters subscribed to was to adopt the social environment in the industrial center. Their understanding of waste reuse did not come from their awareness of the environment, nor did it come from the initiative to take part in environmental preservation, but it did from economic pressure. Handcrafters of low economic backgrounds were forced to create crafts with raw materials that they could access for free to make a living and meet their daily needs.

The basic values of environmental awareness by preserving the environment through keeping the environment clean were instilled along with the prevailing local culture. Managing domestic waste that was generated from consumption was a value imprinted by the family from an early age in the community in the industrial center. The local wisdom on domestic waste treatment prevailing in the industrial center also stemmed from religious teachings as well as from the ancestors.

3.1.2 The environmental friendliness values understanding of handcrafters in the prayer beads and necklace handcraft field

Results from interviews with handcrafters engaged in prayer beads and necklace crafting revealed that prayer beads and necklace crafting were environmentally friendly, given the abundance of waste available in the area. The existence of a plantation area supported the use

ISSN 1533-9211

DOI 10.17605/OSF.IO/6GRBW

of wood waste for an added economic value. The following is an interview excerpt of a handcraft-er in the prayer beads and necklace field:

"As we are near PTP, there are coffee trees, and old coffee trees are felled. If you ask whether it is environmentally friendly, then I would say it is. We use what remains of coffee (trees). When the tree reaches an advanced age, it will no longer grow."

The environmental friendliness concept the handcrafters in the prayer beads and necklace field understood was that they made use of waste from coffee trees in their surroundings. This use of the waste from coffee trees provided them with a business opportunity to increase their incomes. Their understanding of the use of coffee tree waste in their immediate environment was gained from their experience learning about other handcraft enterprises. The following is another excerpt from a handcrafter in this field:

"I used to work for Pak Kusman, but then I gave a try to establishing a business of my own for my personal development."

Gaining knowledge from past works gave the handcrafters a degree of resilience and self-confidence in starting up their businesses. The experiences that they had earned served as a foundation for starting a new chapter in their lives. Their understanding of the craft-making process helped them increase their creativity following their knowledge. Their expectation of increased incomes motivated them to enhance their crafting creativity. This is evidenced by the number of craft orders they received from abroad.

3.1.3 Environmental friendliness values understanding of entrepreneur-handcrafters

Results from interviews with entrepreneur handcrafters revealed that they gained knowledge of environmental friendliness values from college. The education from which they gained knowledge of marketing basics allowed them to directly take an active part in building businesses. To be precise, this knowledge was received from the marketing science course when they were attending an undergraduate program at a higher education level. The following is an excerpt from some entrepreneur handcrafters:

"In terms of costs, of course, I calculate the production cost, the transporting cost, and the selling price. I have an undergraduate education in marketing."

"Not all materials available in the surrounding are viable to be used as raw materials, but the materials we use are indeed derived from the surrounding. It is more profitable as it eliminates the transporting cost."

Studying at an undergraduate university level, the entrepreneur-handcrafters realized that not all waste available in the surrounding could be used as raw materials for crafting. Certain products required procurement of materials from somewhere else. There is a considerable demand from consumers for craft products from rare materials that are valued at high prices. The harder the raw materials were to obtain, the higher the economic value of the finished products. It was not uncommon, therefore, for some entrepreneur-handcrafters to acquire the raw materials demanded at all costs, even if they had to stray from the environmental

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ISSN 1533-9211
DOI 10.17605/OSF.IO/6GRBW

friendliness values. The following is another excerpt from an entrepreneur handcrafter in this category:

"Information will be readily available if you have a network. I usually use wood as raw material, and to acquire wood, I must follow the applicable legal procedure. I do my best not to violate the regulation realizing that wood is a sensitive matter. The small profits generated are not worth the risk of getting schooled (involved in litigation). It's a nuisance."

From the excerpt above, it can be concluded that efficiency was given precedence in craft-making from waste. The entrepreneurs' network with traders was key to their businesses' sustained existence. Regulations concerning the use of raw materials were a consideration in acquiring raw materials, which constitutes an element of environmental sustainability. The permit to extract raw materials from wood as a highly valued commodity must be derived from relevant parties. The entrepreneur handcrafters stressed the regulatory aspect of the use of raw materials as a commodity to be marketed. Such a consideration was also based on the potential profits to be generated

3.1.4 Environmental friendliness values understanding of handcrafters in the household utensils field

From interview results, it was known that household utensil handcrafters' understanding of environmental friendliness values was reflected in their processing of palm trees that had already been exhausted of fruits and sap. The wooden waste of palm trees was used as raw material for crafting various household utensils, including mortars and pestles, cutting boards, and spatulas, to name a few. The following is an excerpt from an interview with a handcrafter in this category:

"It is true if you call it waste because after starch is extracted from the stem, the remaining part of the tree becomes waste. It is a good and robust material for making ladles, spatulas, mortars, and many more."

The handcrafters procured wooden waste of palm trees from their surroundings, but when the order volume was high, they would usually procure it from certain other areas. Wooden waste from palm trees was not the only material used, however. The handcrafters also used teak wood sold by plantations. Teak wood was used as raw material when the market demanded products of different quality. Teak purchases as craft raw material must be issued with documentation from relevant parties. A permit is required in the distribution of teak wood as craft material for it not to be categorized as illegal logging.

The understanding of environmental friendliness values of handcrafters in the household utensils field was passed down in a family, where a handcrafter inherited skills and networks from his/her family. Networks were formed within distribution, supply chain, and marketing systems. Among the items that were passed down to the following generations were the criteria of materials fit for use to create crafts, among which were the types of wood that could be used to make various household utensil crafts.

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3.2 The economic activities of handcrafters in treating waste through reduction, reuse, and recycling processes

Waste-based handcraft production involved reduction, reuse, and recycling processes. The recycling process used waste materials such as wood waste, coffee tree wood waste, and bone waste. The handicrafts produced were necklaces, prayer beads, kitchen utensils, and artworks. The production process used skills, machinery, and artificial paints. The craft production process is outlined in the table below.

Table 2: Handcraft Production Process in the Industrial Centre

Raw Material Types ***(Recycle)***	**Production Process**	**Products**	**The Waste Generated** ***(Reduce & Reuse)***
Wood Waste	• Using a cutting machine • Using handcrafters' skills and creativity in making crafts • Using paints	Kitchen utensils Personal hygiene kits Musical instruments	Wood chips Sawdust Varnish
Bone Waste	• Using a cutting machine • Using handcrafters' skills and creativity in making crafts • Using paints	Necklace crafts Blind crafts Suction device crafts	Bone powder Bone chips Stain
Coffee Tree Wood Waste	• Using a cutting machine • Handcrafters' skills and creativity to make crafts • Using paints	Prayer aid crafts Painting kit crafts	Wood chips Sawdust Varnish

According to Table 2, the handcraft production in the industrial center used small industry and plantation waste as raw materials. It was carried out conventionally with the aid of cutting machines. The products produced were to serve various functions. The waste (reduce) generated from the production process was still reusable (reuse) or still had economic value. The wood chips resulted could be reused as fuel or for making other products, and sawdust was sold for a high economic value. This handicraft production process from waste is illustrated below

Figure 3: The production process for handicrafts made from wood waste and bone waste

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ISSN 1533-9211
DOI 10.17605/OSF.IO/6GRBW

Upon the completion of the production process, the handcraft products produced were distributed by direct distribution, indirect distribution, intensive distribution, and exclusive distribution. In direct distribution, the products were sold directly to consumers, while in indirect mechanism, the products were distributed to agents or handcraft shops. Intensive distribution was applied to best-selling products, e.g., prayer aids, which were highly demanded by visitors to religious sites. Demands for prayer aids increased at certain moments, such as during religious holidays. Lastly, executive distribution was conducted to sell or distribute products in high volumes. Typically, this type of distribution requires an agreement between two parties, namely, the handcrafter and the reseller or agent, to benefit both. An illustration of direct distribution and executive distribution is provided below.

Figure 4: Types of Direct Distribution Processes and Executive Distribution

Figure 4 depicts the direct distribution and executive distribution handcrafters performed for the products to reach the consumers. Handcraft products were displayed in existing outlets and spaces. Executive distribution was commonly implemented by handcrafters to distribute handcraft products to certain regions due to high demands for such products in the regions.

Marketing as one of the economic activities conducted by handcrafters took various forms, one of which was word-of-mouth marketing (WoMM), where a consumer gained information on a product from another consumer in person-to-person interaction. Marketing was also conducted digitally by uploading photographs of the products to be marketed on social media or marketplaces. Digital marketing was considered highly beneficial to handcrafters in marketing their brands due to the minimal costs involved. Another method of marketing the handcrafters was engaged in was direct selling, where handcraft products were sold directly at traditional markets, shopping centers at tourist destinations, and MSME outlets. This last marketing method enhanced interest in the industrial center as it corresponded to the demand. Orders came both from home and from abroad after samples of the product were sent. Some importing countries included Japan, China, Dubai, and the U.S., among others.

3.3 Analysis of economic activities within the scopes of efficiency and environmental friendliness in the industrial center

An analysis of efficiency and environmental friendliness was based on several indicators that were present in the process. These indicators are detailed as follows:

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Table 3: The scopes of efficiency and environmental friendliness in the handcraft industrial center

Indicators	Efficiency	Environmental Friendliness
Handcrafters' understanding • Raw material selection habit	• Streamlined transporting process • Minimized transporting cost • Minimized labor in raw material procurement	• Use of reusable and valuable materials • Raw material selection based on the condition of the surrounding
• Raw material selection	• Minimal labor is required in selecting raw materials due to the short traveling distance • Relative effectiveness concerning the time required for selecting raw materials • Relatively low costs incurred from selecting raw materials	• Selection of raw materials from plantation waste • Selection of raw materials from domestic waste • Selection of raw materials from wood waste • Selection of raw materials from home industry waste
• Production material procurement	• Reduced transporting cost • Legal compliance in material procurement to minimize transporting and other costs	
• Handcrafting process	• Use of cutting machines to speed up the production process • Involvement of the handcrafter's skills and creativity in crafts making • Generation of economically valuable waste	• Production with clean technology • The production process generates neither pollution nor environmentally harmful waste
Economic Activities • Production Process	• Handcrafting process implementation based on independent learning • Order-based production • The production process is conducted manually or with women's or housewives' labor	• Use of non-environmentally friendly dying agents • Generation of reusable production waste
• Distribution Process	• Direct distribution • Indirect distribution • Exclusive distribution • Intensive distribution	• Use of green packages • Reduced plastic use
• Marketing Process	• Word of Mouth Marketing • Direct Selling • Online marketing	• Product marketing considered environmentally safe • Informing consumers of the product's environmentally friendly nature during the promotion • Classifying and targeting environmentally aware consumers

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DOI 10.17605/OSF.IO/6GRBW

According to Table 3, activities classification by efficiency and environmental friendliness encompassed indicators under handcrafters' understanding, including raw material selection habit, production material procurement, and handcrafting process, as well as economic activity indicators such as production, distribution, and marketing factors. The analysis of efficiency and environmental friendliness in the economic activities in the handcraft industrial center showed that handcrafters' understanding and economic activities that included production, distribution, and marketing were inextricably linked. Within the scope of efficiency, the handcrafters' understanding indicator of raw material selection habit was judged based on the appropriateness of the selection timing, the resources used, and the calculation of the costs incurred. Environmental friendliness could be considered from how handcrafters used recyclable materials from the surroundings. The values the handcrafters were upholding in employing renewable natural resources were sourced from the prevailing local wisdom. The raw material selection and production mate-rial procurement indicators had higher values of efficiency than environmental friendliness. This can be seen from the labor, cost, and travel time involved in selecting and procuring raw materials. Reduced production cost and legal compliance were assigned to the efficiency category as there would arise external costs if raw material procurement was conducted illicitly. Cost and time could also become inhibiting factors in the handcraft production process. Environmental friendliness in handcrafters' understanding of raw material selection was only restricted to raw material extraction from plantation waste, industrial waste, and domestic waste. In terms of raw material extraction, no environmentally friendly element was found as transportation was conducted using vehicles that had yet to contribute a positive impact on the environment due to the profuse carbon emissions produced

The indicators of handcrafters' understanding of craft-making differ from those of economic activities in the production process. The handcrafting process based on the handcrafters' understanding of indicators in terms of efficiency stressed the use of clean technology and creativity. Meanwhile, based on the economic activity indicators, it emphasized how the handcrafters gained knowledge and what they did to increase profits. In the scope of environmental friendliness, based on the handcrafters' understanding of the production process category and the economic activity category under the indicator of production, the handcrafting process used clean technology, and the production waste generated could be repurposed. However, the handcrafting process involved artificial dying to increase sales, which was against the principles of environmental friendliness. In conclusion, the handcrafting process within the scope of environmental friendliness has yet to reflect environmental friendliness. The handcrafting process within the scope of efficiency in the economic activity indicators of the production process and marketing process stressed effective distribution methods and slightly costly marketing, which was reflected by the types of distribution implemented: direct distribution that involved transactions in site, indirect distribution, exclusive distribution, and intensive distribution. In the same indicators within the scope of environmental friendliness, the handcrafting process emphasized distribution with reduced plastic use in packaging and the use of green packaging in its place. The packaging of handcrafted products in bulk allowed for

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DOI 10.17605/OSF.IO/6GRBW

minimal use of plastic. High-volume product shipment in product distribution used recyclable cardboard packaging, hence producing zero plastic waste.

Within the efficiency scope under the indicator of the marketing process, the handcrafting process was focused on green marketing through word-of-mouth marketing, direct selling, and online marketing. These methods were selected as they could quickly attract new customers and demonstrate effectiveness in product selling. Within the environmental friendliness scope, marketing was performed by targeting market shares using clean or environmentally friendly brands. The implementation of green marketing strategies combined various activities that were environmentally friendlier, including product modification, product process modification, packaging modification, and advertising modification. Green marketing was carried out to meet consumers' satisfaction, needs, wishes, and desires about environmental maintenance and preservation. Hence, green marketing is a requirement in today's business world. In conclusion, all the indicators presented had high levels of efficiency, with the environmental friendliness aspect underpinning economic activities within the efficiency scope in the handcraft industrial center. The following is the flow chart of the analysis of the efficiency and environmental friendliness scopes in the handcraft industrial center.

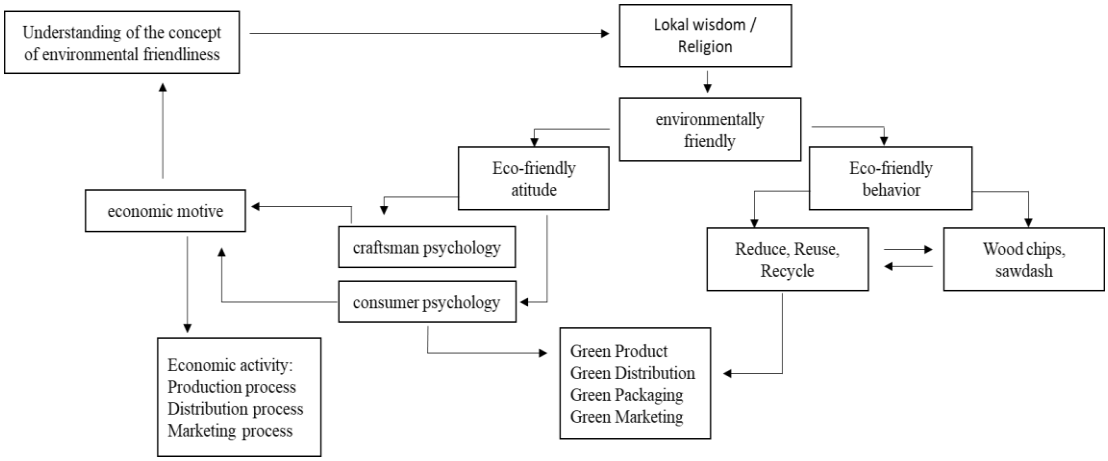

Figure 5: Analysis of economic activity in terms of efficiency and environmental friendliness

4. DISCUSSION

Handcrafters' understanding of environmental friendliness values was classified by types of handcraft products produced, including a variety of handcrafts, prayer aid handcrafts, handcrafts produced by handcrafter-entrepreneurs, and household utensil handcrafts. In creating handcrafts, the handcrafters' understanding of environmental friendliness values was underpinned by various motives, one of which was the low-income economic condition, hence the strong influence of economic motive on the handcrafters. This economic motive was personal. Such a personal motive was centered on needs fulfillment and improvement of quality of life, increased profits along with increased creativity in handcraft production, earning rewards along with increased creativity in handcraft production, broadened networking, and,

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DOI 10.17605/OSF.IO/6GRBW

with broader networks, increased economic power. The handcrafters' understanding of using environmentally friendly raw materials was gained from their work experience, which taught them how to capture opportunities, perform processing, and make crafts from waste. Another source for such an understanding was local wisdom. The tradition was a dominant factor in handcrafters' activities as well as in their awareness of the environment. It is local wisdom that raised the handcrafters' well-being. Religious knowledge provided a basis for running a business and establishing an eco-friendly attitude and eco-friendly behavior.

An eco-friendly attitude is a psychological reaction to the environment demonstrated by an individual, and it influences how the individual behaves. It is related to the degree of interest the individual has in the environment. The dimensions that come with an eco-friendly attitude include the importance of being environmentally friendly and the importance of buying environmentally friendly products. Consumers do not always purchase environmentally friendly products, but they tend to make eco-friendly purchasing decisions. An eco-friendly behavior, on the other hand, is the behavior of a consumer in taking every consumption action that applies environmental friendliness. The actions involved are to reduce, reuse, and recycle. The behavior reflecting the first of the trio is to reduce consumption that can cause environmental pollution, and shifting toward environmentally friendly consumption is a simple step that can leave an impact on the environment. Pollution reduction can be performed by using clean technologies, reducing plastic use, and saving energy. To reuse means to make use of a reusable product to reduce existing waste. In the context of this research, using waste as raw material is one of how the reuse concept is applied. Recycling refers to recycling waste into new material. In this research, some handcraft products were made by hand-crafters from wood waste as raw material.

In conducting economic activities to produce handcraft products, handcrafters adopted an eco-friendly behavior. The implementation in some stages of production still generated unrecyclable waste (e.g., the waste from the use of painting agents that could pollute the environment, although it could increase efficiency in the effort to increase the product's attractiveness). In the implementation of distribution, there was an improvement in terms of eco-friendly behavior that is, minimizing the use of packaging from plastic and shifting to environmentally friendly packaging materials. This shows that concerning packaging, green packaging was implemented. Green packaging was an effort to attract consumers using environmentally friendly packaging. Packaging was one of the attributes present in product marketing and reflective of the image of the product sold. Marketing was conducted under the green marketing concept, where green products were marketed by online marketing, direct selling, and word-of-mouth marketing. This concept was employed as it was capable of stimulating and retaining environmentally friendly consumer behavior. The marketing of handcrafts that were considered clean products fit perfectly with the green marketing concept

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ISSN 1533-9211
DOI 10.17605/OSF.IO/6GRBW

5. CONCLUSION

Handcrafters' understanding of environmental friendliness values in the industrial center was reflected in their raw material selection habit, raw material selection, and how they processed the raw materials. The use of waste as craft material was a reflection of local wisdom, which can be broken down into eco-friendly attitudes and eco-friendly behavior. An eco-friendly attitude was exhibited in the handcrafters' understanding, while eco-friendly behavior was in their economic activities, including the production, distribution, and marketing processes. The production process emphasized the use of waste as raw material and the use of clean technologies, the distribution process did green packaging practices, and the marketing process the use of product "greenness" as a marketing attribute. Efficiency and environmental friendliness in the handcraft industrial center were two inseparable elements as they were complimentary to one another. Efficiency was representative of the economic pillar, while environmental friendliness was of social and environmental pillars, all of which belong under environmental sustainability.

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