
**Revitalization of Traditional Markets to Keep the Local Culture
of Sustainable Culture in Denpasar-Bali, Indonesia
Case Study In Sanur Sindu Market In Terms Of Ergonomic
Aspects**

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ABSTRACT

The revitalization of traditional markets in Bali is an Indonesian government program with the aim of empowering micro and medium business actors. The local wisdom-based approach has been applied in an effort to maintain the sustainability of Balinese culture. One market that has undergone a revitalization process is the Sindu Market in the Sanur area. The purpose of this paper is to examine the use of local wisdom in revitalization to maintain the sustainability of traditional markets in the Sindu Market in terms of ergonomics. The study was conducted through observation to locations in Sindu Market, Denpasar, Provinsi Bali, Indonesia. The analysis was carried out based on eight aspects of ergonomics and explored explosively. The results showed that the implementation of local wisdom in revitalization was able to prepare Pasar Sindu that meets ergonomic standards. This is sourced from the local wisdom of traders who place working conditions in accordance with the elements to interact with God, interact with humans and interact with the environment. This causes ergonomically, the arrangement of working conditions meets ergonomic standards so as to create a sense of security, comfort, health in activities and is able to encourage increased buying and selling activities in the market. Thus the existence of traditional markets will be maintained in a sustainable manner. It can be concluded that traditional market revitalization based on local wisdom is able to push the market to meet ergonomic standards and provide a sense of security, comfort and health in a sustainable trading process.

KEY WORDS: *revitalization of traditional markets, local wisdom, ergonomic, sustainability*

INTRODUCTION

In the current era of globalization, all things are faced with complexity, competition and change or 3 C (Manuaba, 2005). Careful and appropriate action is needed to deal with it in order to be able to be superior and stay afloat. The traditional market is one that has to face 3C, so that its existence is maintained. For the people of Indonesia, the existence of traditional markets is still very necessary, seen from the large number of traditional markets in Indonesia. Based on the results of the 2018 Market Profile Survey, the number of

traditional markets in Indonesia is 14,182 markets or 88.52% of all markets in Indonesia and the number is not balanced with the population in Indonesia. In Indonesia, around one million residents are still served by 52 markets or one market serving 19,231 residents. While in the country of Malaysia, one market serves 6,667 people or around one million people are served by 150 markets (RMOL, 2011; Munthe, 2011). This indicates that traditional markets still have great opportunities to be developed.

The existence of traditional markets was also attacked by modern markets such as supermarkets and minimarkets. Traditional markets will not survive and be sustainable if they do not immediately update the image of slums, muddy, dirty, smelly, chaotic, which has been inherent. Traditional markets are still needed because they have advantages. So far, several reasons people continue to visit traditional markets are able to meet all the needs of consumers, the price is cheaper, and can do the bargaining process of prices. This opportunity is also supported by the government through the traditional market revitalization program (Suprpto, 2011).

Traditional market revitalization is a government program through the Ministry of Trade and the State Ministry of Cooperatives and Small Business Affairs with the aim of empowering micro businesses that have been growing in markets that do not yet have proper, healthy, clean, and comfortable business transaction facilities, as well as owned and managed by the traders themselves in a cooperative setting (Paramitha and Ayunigsari, 2013).

One market that has undergone revitalization is the Sindu Market in Sanur, Bali Province, Indonesia, which has an area of 5,200 m², and a main building area of 3,700 m². This market has a high opportunity to be developed, because its location is located in the tourist area of Sanur Beach, Bali Province. Aside from being a market, it also has a tourist attraction for foreign tourists who are interested in wanting to visit traditional markets.

This study aims to examine the use of local wisdom in revitalization to maintain the sustainability of the traditional market in Pasar Sindu, Bali Province by using an ergonomic study.

MATERIALS AND METHODS

This research was conducted through observation to locations in Sindu Market, on Jl. Pasar No.1, Sindu, Denpasar, Bali Province, in April 2019. The analysis was carried out based on eight aspects of ergonomics and explored explosively. Observations included stalls, booths, toilets, landfills, cleaning attitudes of traders, how traders work, height of booths, activity in markets and physical environmental conditions such as lighting, ambient temperature, humidity, and noise. Interviews were conducted with traders and janitors. Interview with 6 janitors using purposive sampling. Measurements for work plane height for booths and hallway width between booths, by random sampling. The measurement of environmental conditions is also carried out randomly at several market points and booths. Temperature measurement using sling thermometer in °C, humidity measurement using psychometric charts in% RH, lighting using Krisbow KW06-288 brand lightmeter in lux, noise using soundlevel meter in dB.

RESULTS AND DISCUSSION

Traditional markets were places where sellers and buyers meet directly, meaning that between sellers and buyers in conducting transactions interact directly and meet face to face (Nur and Hadi, 2014). Buildings in traditional markets usually consist of stalls or outlets, booths and open bases by sellers or market managers. Traders generally sell daily necessities, such as fresh food ingredients in the form of fish, fruit, vegetables, meat, and eggs. There are also those who sell basic necessities, such as granulated sugar, cooking oil, rice, soap, detergent, clothes fragrances, and others. There are also those who sell clothing needs, such as clothes, pants, shirts, cloth, etc., electronic goods, or services (Nur and Hadi, 2014). Traditional markets are not much different from modern markets, but in modern markets sellers and buyers do not transact directly, but buyers see the price tags listed in the goods (barcode) (Sinaga, 2008).

Sindu Market is one of the traditional markets in Sanur, Bali Province, Indonesia which is managed by the Sanur Pembina Foundation (YPS) and its members are representatives of 27 banjars in Sanur. The revitalization of Pasar Sindu was carried out in 2009 and officially resumed operations on August 4, 2010, carrying the concept of "fresh and friendly". The term for a fresh and friendly market is very much in line with the traditional market revitalization program as one of the economic centers, and it is hoped that the goods sold are local goods.

After undergoing renovations, the number of booths for traders in Sindu Market became 150 booths and 78 shops. The stalls are divided into five stalls, named as stalls A, B, C, D, and E with a total of 30 stands each. The size of the booth is 1.8 x 2 meters. The kiosk is on the edge, circling the booth with a size of 3 x 4 meters. Within a year traders in each stall are required to pay a rental fee of Rp 1,000,000.00. In this paper, Pasar Sindu is examined through eight aspects of ergonomics consisting of energy, muscle power utilization, work attitude, environmental conditions, social culture, time conditions, information conditions, human-machine interaction (Manuaba, 2003).

Energy (Nutrition): With regard to energy, six observers are taken as observations. Based on the IMT calculation, the average IMT of the janitor at Sindu Market is 22.50 kg/m², which means that the IMT of the janitor is normal. Because the BMI is normal, the nutritional status can be called quite good, and officers can work optimally in maintaining market hygiene.

Utilization of muscle power: Muscle energy is needed especially when traders drop off their wares and are transported to their respective booths. The average weight of merchandise when transported is 10 kg. Pick up and transport by traders is done manually from the parking area to the front of the market entrance, after that the trader uses a trolley to carry his wares to their respective booths. Within a day, traders carry out lift-and-carry activities twice.

Work attitude: In connection with work attitudes, the surface height of the work field at merchandise stands is 90 cm. This is in accordance with the type of work. The type of work traded is not classified as heavy work, and traders do not use their work to work a lot. Field of work is only for displaying merchandise. For traders who sell meat when cutting meat, then the height of the surface area is appropriate, that is below the height of the elbow when standing.

The janitor works from 04.00-15.00 WITA, lifting and transporting garbage by trolley to the garbage truck.



Figure 1. High surface of the field of work for traders in Sindu Market (left) and the work attitude of the cleaning staff, at Sindu Market Denpasar, Bali Province



Figure 2. Traders when selling

Environmental conditions: Buildings for the market are made in accordance with the regulations of the Ministry of Industry and Trade, where ventilation takes precedence. The market is also equipped with eight exhausters. The market lighting has 20 lighting points, with an intensity of 158 lux. Ambient temperature 28-29⁰C with 65% humidity and 65 dBA noise level.

In general, clean environmental conditions due to routine cleaning by janitors. Each stall trader is provided with three sets of trash bins for organic waste, plastic types, and food scraps, while for the buyers there are two trash bins in each corner of the Pasar Sindu building. For sanitation, Sindu Market has eight toilet units that can be used by buyers and traders. Waste produced is taken twice a day by a janitor. Waste management in Sindu Market is managed like a five-star hotel with a modern system. This waste treatment is the only one in Indonesia that refers to waste treatment standards, based on biological oxygen demand (BOD) recommendations and chemical oxygen demand (COD) standards, where all market waste is reprocessed, then used for other purposes, such as water the plants found around the city of Denpasar.



Figure 3. Cleanliness conditions that are always maintained at Sindu Market

Socio-cultural conditions: Most of the traders in Sindu Market are Hindu, so it is not separated from the local cultural system. In all the booths to trade are provided a place of worship in accordance with Hindu religious beliefs. The shrines are neatly arranged, making them attractive for buyers and tourists, as seen in Figures 4.



Figure 4. Place of worship for traders neatly arranged in Sindu Market

Time conditions: Traders in the Sindu market start trading at 04.00-14.00 WITA. At night, in the parking area of Sindu Market it is used as a trading place for 54 clothing and toy traders, as well as 32 food and beverage traders. Traders at night sell from 16.00-23.00 WITA. Market halls are closed and guarded by two security officers who tour the market area every night. This time arrangement is set by the management of Sindu Market, so there is no overlap between morning traders and night traders.

Information conditions: To facilitate buyers when shopping, traders who sell at Sindu Market have been arranged according to the type of merchandise sold. The stalls of traders

are divided into five namely A, B, C, D, and E. Each stall is divided into two rows, namely left and right. Each series, both left and right consists of 15 stalls. So, the total for one unit consists of 30 stalls. The application of ergonomics is indicated by the presence of information boards on the stalls of traders and types of goods sold at the market entrance, as shown in Figure 5. From the size of the writing, it can be read at a distance of two meters. Then, another application is giving the color and number in each booth to trade. Between one booth and the other booths are given different colors, namely red A booth for traders of ceremonial materials and fruits; yellow lot B for groceries, vegetables and Balinese snacks; green los C for tofu, tempeh, egg, chicken, beef, and pork traders; blue los D for local snack, vegetable and groceries traders; los E is brown for traders of fruits, vegetables and rice. Grouping booths are done according to the type of goods, to facilitate maintenance of cleanliness and market hygiene, and facilitate consumers to get their needs.



Figure 5. Boards informing booths and types of merchandise at the entrance of Pasar Sindu and Los E 27 is a fruit trader

Human-machine interaction: The distance between the right and left rows for one booth is separated by a road that is wide enough to exceed the width of two adult shoulders (± 2.5 -3 m), allowing people to move around (as shown in Figure 6), or using conveyance aids, such as trolleys.



Figure 6. The width of the hall in Pasar Sindu

CONCLUSIONS

We conclude that traditional market revitalization based on local wisdom can encourage markets to meet ergonomic standards and provide a sense of security, comfort and health in the process of sustainable trade.

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