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Escuela Académico Profesional de Ingeniería Industrial
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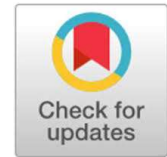
Tesis

**Influence of procurement management on the
production costs of cardboard packaging using
recycled material**

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INFLUENCE OF PROCUREMENT MANAGEMENT ON THE PRODUCTION COSTS OF CARDBOARD PACKAGING USING RECYCLED MATERIAL

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Abstract

The objective of this research was to determine the influence of procurement management on the production costs of cardboard packaging using recycled material in Peru. The methodology adopted was a quantitative, longitudinal research with a non-experimental design, using a neural network map that explains the logistic management system for a correct procurement. The sample was constructed from data belonging to the company Trupal, which were distributed in a monthly period from January 2017 to July 2021, with 54 observations for each study variable. The results found allowed to make a projection of production costs for the next seventeen months. There is an increasing trend of production costs for the next months reaching up to S/ 201,000.00. In conclusion, this research affirms that supply management has a negative influence on the company's production costs through storage and inventory management, and a positive influence through purchasing management.

Keywords: Procurement management, production costs, recycled material.

1. Introduction

According to Yanes (2001), one of the worst difficulties that all countries are facing today is environmental pollution and all its impacts caused by the daily generation of solid waste. Cordero (2012) refers that the generation of solid waste causes the degradation of environment, increasing global warming through the emission of greenhouse gases and carbon dioxide, resulting in climate change. According to Yu et al. (2019) and Lafforgue and Lorang (2020), recycling is an optimal strategy that allows the mitigation of climate change, reducing the consumption of primary resources, also according to Villalobos and Bermudez (2000), recycling when incorporated into an economic or industrial sector can provide sources of employment and growth.

According to Laurijssen et al. (2010), Area (2017) and The World-Wide Fund for Nature - WWF (2021) the cardboard and paper industry are in an excellent position due to the generation of policies in environmental improvement, since its recovery generates less use of 1900 kWh of energy, CO₂ emissions (-1100 kg CO₂/t) less felling of 18 trees; 1.1 barrels (176 liters) of oil, 26,000 liters of water. Likewise, Moussavi and Aghanejad (2014) point out that water recovery has always been a momentous task in the pulp and paper industry and with recent progress has made it possible not only to reduce water consumption and environmental impacts, but also to recover treated water. Finally, Arce and Suarez (2019) argue that today the cardboard industry has recycled cardboard boxes as raw material and for this they must have a correct supply management.

The procurement of materials is a concept linked to the logistics of a company. According to Tang (2018), logistics is a concept designed to meet customer needs, it is the basis of the productive activities of any organization. Today, there is still an unknown for its correct management; on the one hand, the correct inventory is the value that many people are trying to achieve after balancing the initial demand and supply. In today's market with rapid globalization under the influence of information and communication technologies, logistics is becoming a new factor of competitive differentiation. Even in the local market, companies located in remote areas, supported by high quality logistics, have experienced significant increases in production and service-related competition. Having good logistics