Quality Of Life And Salary Reward Of Colombian Workers

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Abstract

In recent decades, economic growth, industrial development and modern technology have brought a new level of comfort and prosperity to our lives, resulting in increased consumption of goods and services. The following article presents a study of the circular economy, which aims to maintain and strengthen socioeconomic development for current and future generations, including the creation of jobs in a sustainable manner, without compromising ecosystem functions and conserving natural resources. The purpose of the circular economy concept definition is to fundamentally change the current linear system of production and consumption, linking the use of natural resources with negative external consequences for well-being and development. It is about replacing a linear economy based on extraction, production, consumption and disposal with a circular model in which waste materials are used to produce new products or raw materials. Material reduction, reuse, recycling and recycling are essential processes in this planning. As for the Cross Docking model, this is a distribution system where goods received at a warehouse or distribution center are not stored, but are immediately prepared for the next shipment. Cross docking has therefore become one of the most efficient distribution systems for logistics transport.

This translates into significant savings for companies, as they do not have to allocate resources to inventory and do not have to worry about inventory. Therefore, cross-docking in distribution is considered an effective strategy that requires cooperation between the agents involved in the process (i.e., customers and suppliers). According to the research of each topic, several conclusions will be drawn at the end, so that the issues raised will be considered as known.

Keywords: Circular Economy, Enterprise Resource Management, Cross Docking Method, ERP (Enterprise Resource Planning), Optimization.

Introduction

"By definition, the circular economy is restorative and regenerative with the objective of ensuring that products, components and resources always retain their usefulness and value. This concept distinguishes
between technological cycles and biological cycles. The economy consists of a continuous cycle of active development that preserves and enhances natural capital, optimizes resource use and reduces systemic risk by managing finite stocks and sustainable resource flows. Moreover, it works at all scales” (Ellen MacArthur Foundation, 2017).

Therefore, we can say that the circular economy is a new economic model, whose purpose is to change the way of production and consumption in society and to realize a sustainable production system. It proposes to recycle elements that are currently considered waste for a more efficient use of resources. In this way, waste can be transformed into raw materials that return to the production system to create new goods.

The concept of circular economy comes from various reference sources on eco-intelligence. Eco-intelligence is the ability to live in a way that minimizes damage to nature, including understanding its consequences on the environment, making decisions every day and choosing the most beneficial decisions for the health of the planet (Ramírez and Galán, 2012).

The circular economy is an attractive and viable alternative that is already being explored by companies (EMF, 2015a and 2015b).

The circular economy distinguishes between the technical cycle and the biological cycle. The very design of the first items sought means that they can be reused. At the same time, the biocycle is the regeneration of waste in such a way that it is reintegrated into nature. In this way, the combination of both cycles can achieve greater efficiency, both economically and ecologically.

The circular economy is restorative and restorative by design and aims to always ensure the highest level of use of products, components and materials.

This concept distinguishes between biological chains and technological chains. As conceived by its creators, the circular economy is a continuous positive cycle of development that preserves and enhances natural capital, optimizes resource efficiency, reduces systemic risk and manages limited stocks and flows of renewable resources. It works at any scale.

**Principles underpinning the circular economy.**

The circular economy is underpinned by three very basic principles, each of which is defined according to (Cerdá, E., & Khalilova, A, 2016):

Protect and enhance natural capital, manage finite stocks and balance renewable resource flows.

Principle 2: Optimize resource efficiency by always reusing products, components and materials at the highest level of utility in the technical and biological cycles.

Promote system efficiency, develop patents and programs to prevent negative externalities.

Based on the defined concepts and principles, we can point out the following main characteristics of the
circular economy (EEA, 2016):
The main characteristics of the circular economy are:

- Emissions reduction.
- Preserve the value of products, components and materials in the economy.
- Reduce investments and use fewer natural resources.
- Sharing more energy, natural resources and renewable resources.
- Reduce material loss and waste.

**Reduce investment and use fewer natural resources.**

- Effective use of all natural resources.
- Reduce dependence on imported natural resources.
- Reduce and optimize raw material extraction while delivering more value with less material.
- Reduction of total water and energy consumption.

**Benefits of the circular economy for business and society.**

The circular economy benefits both society and business, as it is more profitable to reuse resources than to create them from scratch, which has financial and production costs. Protect the environment by avoiding the spread of waste and focus on recycling in this model. It is a cost-effective system. By reducing, reusing, repairing and recycling, companies can do more with materials.

It allows for the innovative development of economic and social structures that provide a new.

**Basic instrumental factors of the circular economy.**

Innovative business models, eco-design, product life extension and waste prevention programs. The circular economy requires significant changes in many different areas of the current socioeconomic system. These are some of the most important technological, economic or social enablers that drive and accelerate the transformation process.

**Product service system.**

It consists of a mix of tangible products and intangible services designed and combined in such a way that together they can satisfy the primary needs of consumers. The concept is based on two pillars:

(i) Use the functionality or satisfaction that users want to achieve as a starting point for business development.

(ii) Business systems that provide such functionality are formulated with a mindset that does not view existing structures and practices and the state of the business as fixed and unshakable (Tukker and Tischner, 2006).

**Second life of materials and products.**
It works if a company can effectively recycle and recover its products after use and then market the same products to earn a second or third income.

**Product transformation.**

Not all products can be fully regenerated, but most have certain valuable ingredients. Materials (rather than products) often have a built-in energy content that makes them more valuable than raw materials.

**Recycling 2.0.**

Innovations in recycling technology (Recycling 2.0) are developing rapidly and enable the production of high quality products with excellent sustainability results.

**Collaborative consumption.**

Collaborative consumption (or collaborative economy) is defined as the interaction of two or more people, whether or not using digital media, to satisfy an actual or potential need of one (or more) of them.

**Cross Docking Model**

Over the years, cross-docking has played an increasingly important role in logistics operations, reducing unnecessary time and processes and, therefore, reducing costs, in an effort to benefit all those involved in the chain, especially the end customer (Steve Haskell, 2011).

**Definition:**

Cross-docking is defined as an operational strategy that avoids warehousing by moving items through consolidation or cross-docking centers. Due to the need to clear inventory faster, more and more logistics managers are resorting to cross-docking, but the successful execution of this strategy depends on good planning, dynamic planning and coordination (Zhengping Li 2011).

Author Alberto Montoya (2010). He interprets it as a model that allows receiving orders from suppliers in distribution centers dedicated to different stores and seeks a single delivery without the need to store merchandise to distribute the flow.

Urzela (2006), for his part, classifies the cross-docking area as a transit platform, a kind of logistics warehouse, where goods remain for only a few hours, implementing the combination and division (distribution) of platforms, thus ensuring that "Product logistics and truck coverage" (p. 70).

A distribution system where a supplier receives materials at a distribution center where the material is not warehoused but managed for the next shipment. The goal is to reduce idle inventory, lead times and distribution costs. Some significant benefits are extended product shelf life due to constant product rotation. Widely distributed in FMCG, perishables, supermarkets, etc. (J. Bartholdi, & K. R. Gue.).
There are two types of cross-docking:
Pre-distribution and consolidation (direct and indirect), first, the units to be sold are already ordered so that they can be conveniently shipped to the final consumer, they do not require further processing to be transferred to their point of sale. Output. The second is exactly the opposite, the units are not ordered in advance and we are working to ship them to the appropriate export point. The latter occurs more frequently when running product campaigns (D. Agustina, K. Lee, and R. Piplani). The choice between the two types of Cross docking described above depends mainly on:

- Type of product: fresh, non-perishable, etc.
- The distribution model used by the retailer.

The main objective of cross-docking is to eliminate unproductive inventory in retail and wholesale distribution centers. It eliminates time and reduces handling and distribution costs, EAN International (2000).

Cross-docking is designed to guarantee very short lead times. Authors such as Moore & C. (1998), Alvarez, Gonzalez & Fowler (2009) and Schaffer (1997) discuss important factors for the successful implementation of cross-docking.

The main advantage of this tool is that it improves the flow of goods and reduces inventory levels due to the constant rotation of distribution centers, Enderer, Contardo and Contreras (2017).

In addition, it reduces the physical area required by occupying only areas such as midpoints. It is used more for consolidated orders where you can access information on how products are performing. Associates should invest in information technologies such as electronic data interchange (EDI), barcodes and radio frequency scanning to track product flow and exchange information quickly, securely and concisely. As described by Kalenatic, Lopez, Gonzalez and Velasco (2008).

EAN International (2000). He said that Promodés, one of the largest retailers in France, mainly uses cross-docking to deliver large volumes of products to several countries in Europe and South America. By using the two defined types of cross-docking, very significant benefits are achieved in optimizing material flow, Li, Lim and Rodrigues (2004).

Another example of the use of this tool is Debenhams, one of the UK's largest department store retailers, whose profits come mainly from continuous products for which demand is generally constant. The company has a high degree of trust among each of its suppliers and ensures high quality and accuracy in the items and quantities required. The frequency of shipments from one source or another is 3 to 5 times per week Mora (2014).

According to activity, Arenal (2020). Classifies cross-docking as pre-distribution cross-docking, which is considered a basic model in which the supplier prepares and organizes the product and the product is
received and shipped with little or no labor intervention; integrated cross-docking, where orders are adjusted according to demand, and therefore some Operations to adjust it to the final customer, while hybrid cross-docking, this kind requires a place to prepare orders when they are received from the truck, which requires coordination of all tasks.

When we hear topics such as direct cross-docking and indirect cross-docking, we wonder where we can apply each of these definitions because drawbacks arise in the country that makes it difficult to implement the most desirable cost reduction based plan for each company in this era. (Erica Perez, 2012)

In the same vein, Meléndez (2018). Specifies that in cross-connected (direct) pre-allocation, products are received sequentially so that they can be easily shipped to customers with low levels of processing; in consolidated (indirect) cross-linking, products must be organized and more processing is required to ensure delivery to customers, the choice between the two depends on the type of product, i.e., characteristics such as perishable, non-perishable, as well as the retailer's distribution model and delivery time constraints.

In most cases, pre-allocation or direct interfacing is used to handle high turnover, small size and high SKU products.

In this case, the products are received in boxes, pallets or other logistic units, which are moved to the departure dock together with other logistic units from different suppliers, which are assembled in vehicles, where they will be delivered to customers.

In indirect cross-docking, goods are received in pieces or are to be marked, placed in new logistics units, then these units are transported to the port of departure, the goods are assembled on a delivery vehicle, the choice of the splice.

-Dockage depends on the characteristics of the goods, their volume and dimensions, the reference quantity, the delivery time and the distribution model used (Diario Logística, 2019).

Another way to classify cross-docking is to find single-pin cross-docking based on the number of landing points or stages where products are handled only once as they are received and loaded directly onto an outbound truck. A two-pin or single-level cross-docking that receives the product and places it on the platform before loading for outbound shipment, and a multi-pin or two-level cross-docking that receives and ships the product. This is used to prepare the product for subsequent shipment (Gonzalez & Becerra, 2017).

**Operation and implementation process.**

Regarding the operational process cross-docking follows the following steps (Mora L. A., 2014):

a) The supplier prepares the order.

b) The store continues to print the purchase order.

c) Delivery of the purchase order to the supplier.
d) The supplier separates the goods for the respective deliveries.

e) After the warehouse has cleared the goods, the order is shipped through the warehouse.

f) Shipment of goods.

These stages can be divided into four phases, the first is the arrival of goods at the receiving location, the second is the identification and selection of goods, indicating their destination, the third is the redistribution of products according to their destination, and the fourth is loading ..., according to dealer organizations (IEBS, 2018).

Method

Therefore, a company needs to know its financial capabilities and the time requirements to recover its investment. Deciding. The second and third element, the commitment of top management and all areas of the organization for a successful implementation (Jaramillo, L. C. and Marín, L. D., 2016).

The last element requires implementing tools that can "respond effectively to consumers" (Jaramillo, L. C. & Marin, L.D., 2016, s. 7). Adopt fast, efficient, high-quality products and low-cost fulfillment strategies.

Bunisess School (2019). Five technologies were presented to optimize the cross-docking process, including RFID, an information system that enables "re-engineering, automating delivery-related decision-making processes" and a warehouse management system (WMS) software that provides information on warehouse operation and availability. Electronic Shipping Notice (ASN) generates accurate real-time data on inbound inventory and outbound orders, and data integration tools capture real-time data and information in the cloud to help track and monitor information.

Results and Discussion

In December 2015, the EU published the European Commission's statement "Closing the Loop: The EU Circular Economy Action Plan" (EC, 2015). This is a 2-page document and a 5-page annex outlining the EU’s proposed strategy for moving towards a circular economy.

The Action Plan focuses on valuable actions across the EU. As the document points out, implementing a circular economy requires long-term commitment at all levels, from Member States to regions and cities, businesses and citizens.

In manufacturing, a distinction is made between the product development phase and the production process phase. Better design can make products more durable or easier to repair, upgrade or replace, and can help recyclers disassemble products to recover valuable components and materials.
The current market signals do not seem to be sufficient to make this possible, since the interests of producers, users and processors are not aligned and it is necessary to create incentives to improve product design while maintaining a single market. Promote competition and innovation.

In terms of consumption, the following aspects should be noted:

a) Member States are encouraged to provide incentives and use economic instruments, such as taxes, to offer products whose prices better reflect the value of environmental costs, as price is a key factor affecting the value chain and the final consumer's purchasing decisions.

b) The Commission will consider the possible use of the ecological footprint of a product to measure and communicate environmental information.

c) Take steps to identify expected expiration dates and stop processing them.

d) Take measures to reduce the amount of household waste.

e) Approval of green purchasing initiatives.

f) The Council supports consumption patterns and new businesses created in connection with the adoption of Horizon 2020 and Cohesion Policy. In a circular economy, recycled materials are reinvested in the economy as new raw materials, increasing security of supply.

But the current article only recycles a small portion of Materials used in the EU, with some exceptions such as paper or steel. One of the obstacles for companies using recycled raw materials is uncertainty about their quality.

Section 6 of the Communication states that support for research and innovation is an important factor contributing to the transition to a circular economy, as well as to the competitiveness and modernization of EU industry. It will also launch a pilot project to assist innovators facing regulatory barriers, such as unclear regulation, in contracting with stakeholders and authorities.

**Conclusion**

The circular economy is an alternative to the linear model of "take, produce, consume, throw away". The circular economy converts obsolete raw materials into resources for other raw materials, closes the cycle in industrial ecosystems and reduces waste. In this article, we attempt to provide an overview of the circular economy and explain its concept, as well as its principles, main features and key tools. Direct cross-docking operations are more efficient than indirect cross-docking operations. Direct cross-docking operations are cheaper than indirect cross-docking operations and the higher the number of manual movements in non-automated operations, the higher the number of errors made.

Developing this article related to this topic, it becomes clear that it is important to ensure the flow and stability of the processes related to the warehouse and then the processes to create a supplier certification...
process to further reduce the delivery time, quality and quantity of products. In this way, you will create less cost for the supplier because it uses fewer people for deliveries and time. Vehicles have shorter lead times, so you can use them for other deliveries.

It can be concluded that Cross Docking is a logistics mode or process that ensures that goods are received and transshipped from the point of origin, assembled and shipped without warehousing. Its implementation is efficient, saves intermediate stages, avoids large investments and wear and tear on equipment, reduces space and storage, saves technology and reduces personnel in the process, simplifies the operation and reduces costs.

Cross-docking is one of the best opportunities for chains to improve their processes, as it ensures proper movement of goods, consolidation of products, efficiency in planning, high productivity of shipping fleets, adequate order cycle times and management of quality, quantity and availability. Product availability in the store, under different conditions, all depends on price.

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