

DOI: 10.5281/zenodo.18775003

# INTEGRATING THE CIRCULAR ECONOMY INTO STRATEGIC FINANCIAL MANAGEMENT: EVALUATING THE ECONOMIC FEASIBILITY OF A USED DENIM MANAGEMENT PROJECT

Pedro Jácome-Onofre<sup>1\*</sup>, Pompeyo Quechulpa-Pérez<sup>2</sup>, Guillermo Alfredo Arrijoja-Carrera<sup>3</sup>, José Ulises Roa-Rosas<sup>4</sup>, Fernando Iván López-Matamoros<sup>5</sup>, Carlos Alfonso Paz Molina<sup>6</sup>, Samantha San Basilio Guillén<sup>7</sup>

<sup>1</sup>Departamento de Ingeniería Mecánica Tecnológico Nacional de México/Campus Orizaba, Veracruz, México. [pedro.jo@orizaba.tecnm.mx](mailto:pedro.jo@orizaba.tecnm.mx), <https://orcid.org/0000-0003-3698-8893>

<sup>2</sup>Departamento de Ingeniería Mecánica Tecnológico Nacional de México/Campus Orizaba, Veracruz, México. [pompeyo.qp@orizaba.tecnm.mx](mailto:pompeyo.qp@orizaba.tecnm.mx), <http://orcid.org/0009-0004-3947-6003>

<sup>3</sup>División de Posgrado: Maestría en Economía Social y Solidaria Tecnológico Nacional de México/Campus Orizaba, Veracruz, México. [guillermo.ac@orizaba.tecnm.mx](mailto:guillermo.ac@orizaba.tecnm.mx), <https://orcid.org/0000-0003-3170-699X>

<sup>4</sup>Departamento de Ingeniería Química Tecnológico Nacional de México/Campus Orizaba, Veracruz, México. [jose.rr2@orizaba.tecnm.mx](mailto:jose.rr2@orizaba.tecnm.mx), <https://orcid.org/0009-0009-3145-7111>

<sup>5</sup>Departamento de Ingeniería en Gestión Empresarial Tecnológico Nacional de México/Campus Orizaba, Veracruz, México. [fernando.lm@orizaba.tecnm.mx](mailto:fernando.lm@orizaba.tecnm.mx), <http://orcid.org/0009-0003-3572-1799>

<sup>6</sup>Departamento de Ingeniería Industrial Tecnológico Nacional de México/Campus Orizaba, Veracruz, México. [carlos.pm@orizaba.tecnm.mx](mailto:carlos.pm@orizaba.tecnm.mx), <http://orcid.org/0009-0009-8687-0608>

<sup>7</sup>Departamento de Ingeniería Industrial Tecnológico Nacional de México/Campus Orizaba, Veracruz, México. [samantha.bg@orizaba.tecnm.mx](mailto:samantha.bg@orizaba.tecnm.mx), <https://orcid.org/0009-0002-3217-5000>

Received: 11/12/2025

Accepted: 02/02/2026

Corresponding Author: Pedro Jácome-Onofre  
([pedro.jo@orizaba.tecnm.mx](mailto:pedro.jo@orizaba.tecnm.mx))

## ABSTRACT

*The increasing environmental pressures, resource scarcity, and market volatility have encouraged organizations to integrate sustainability principles into financial decision-making. This study evaluates the economic feasibility of a circular economy project for the management of used denim in Orizaba, Veracruz, from a Strategic Financial Management perspective. The proposed model incorporates upcycling, textile recycling, and community participation to reduce waste, optimize resource utilization, and generate diversified revenue streams. A comprehensive analysis was conducted using market segmentation, benchmarking, SWOT-CAME strategic assessment, and a Business Model Canvas to examine the project's operational and strategic viability. The financial evaluation included the estimation of fixed and variable costs, contribution margin, sales projections, income statements, cash flow analysis, Net Present Value (NPV), and Internal Rate of Return (IRR) over a five-year period. The results indicate that the circular business model is economically viable and capable of generating sustainable financial returns while simultaneously delivering environmental and social benefits. The project demonstrates strong alignment with global sustainability trends and the Sustainable*

*Development Goals, particularly responsible consumption and climate action. Despite operational challenges related to scale, processing time, and market competition, strategic partnerships, process optimization, and gradual scalability can enhance long-term performance. The findings confirm that integrating circular economy principles into Strategic Financial Management enables organizations to achieve profitability while creating social and environmental value. The proposed model offers a replicable framework for sustainable business initiatives in local and regional contexts.*

---

**KEYWORDS:** Circular economy; Strategic financial management; Financial feasibility; Used denim recycling; Upcycling; Textile waste management; Sustainability; Net Present Value (NPV); Internal Rate of Return (IRR); Business model innovation; Sustainable development.

---

## 1. INTRODUCTION

In the current context of high economic volatility, environmental pressure and transformation of traditional production models, Strategic Financial Management is consolidated as a fundamental axis for organizational decision-making aimed at sustainability, competitiveness and the creation of long-term value. The growing scarcity of resources, the increase in industrial waste and social and regulatory requirements have forced us to rethink classic financial schemes, integrating environmental and social variables into the economic-financial analysis. In this scenario, circular economy models emerge as a viable alternative to articulate financial efficiency, social responsibility and reduction of environmental impact. This work develops a Circular Economy project for the Management of Used Denim in Orizaba, Veracruz, from a Strategic Financial Management perspective, integrating market analysis tools, benchmarking, strategic matrices (SWOT-CAME), Canvas business model and, centrally, a financial evaluation that supports the economic viability of the project. Unlike purely environmental or social approaches, this study incorporates a rigorous financial analysis that allows evaluating the economic sustainability of the proposed circular model, considering fixed and variable costs, contribution margin, sales projections, income statement, cash flow, Net Present Value (NPV) and Internal Rate of Return (IRR). The relevance of the project lies in its ability to demonstrate that circular economy models are not only desirable from an ethical or environmental perspective, but also viable and strategically sound from a financial point of view. Through the reuse of denim garments through upcycling, textile recycling and community participation processes, a productive scheme is proposed that reduces costs associated with virgin raw materials, reduces waste and generates diversified sources of income, while strengthening the local social fabric. This approach allows the project to be aligned with the Sustainable Development Goals, particularly SDGs 12 and 13, without compromising economic profitability. From the perspective of Strategic Financial Management, the paper analyzes how correct cost structuring, pricing based on the contribution margin and medium and long-term financial projection become key tools for managerial decision-making. Likewise, the risk inherent to the project is evaluated and entry barriers, strategic alliances and growth opportunities are identified, providing a comprehensive vision that transcends the short term and guides financial management towards the creation of sustainable

value. In short, this work seeks to demonstrate that the integration of the circular economy within the Strategic Financial Management is not only possible, but necessary, offering a replicable model for productive initiatives that seek to balance profitability, social impact and environmental responsibility in local contexts such as that of Orizaba, Veracruz.

## 2. ACTIVITY 1. SEGMENTATION OF THE CONSUMER MARKET AND INDUSTRIAL MARKET

### 2.1. Consumer Market

*Table 1: Market segmentation. (Source: Adapted from Dr. Ortega's Financial Projection, 2025).*

VARIABLES	WHAT TO CONSIDER?	CASE STUDY
<b>GEOGRAPHICAL</b>		
<b>Geographical location:</b>	Establish the country, region, city in which the people to whom the company's products or services will be offered live.	In Orizaba, Veracruz. At the Tecnológico de Orizaba, the Innovation product will be developed.
<b>DEMOGRAPHIC</b>		
<b>Gender:</b>	Gender of the people to whom the product or service is focused.	It is focused on all people, from women, men, and children.
<b>Age:</b>	There are certain age groups that share similar characteristics or tastes by which a product can be segmented.	There are no ages
<b>Socioeconomic level:</b>	It is a vital feature to segment the target audience to which we focus the product, since it tells us about the average income that a person or family has, therefore, we can know whether or not they will be in a position to buy the product or service.	It is for all social classes, because a strategy such as Leasing will be carried out; where the public will be able to exchange 3 used denim garments for a fully remanufactured garment.
<b>PSYCHOLOGICAL</b>		
<b>Customer Needs:</b>	What need is going to be met with the product/service? How do they currently meet these needs?	The need to be addressed is to give denim another opportunity for use, that is, to be able to remanufacture these garments, and to be able to provide sustainability, subject to the SDGs 2030, applying environmental circularity.

Identify what the distribution channel of your product would be and which economic agents will participate in it up to the end consumer.

The project will have three main products/services:

- Refurbished denim garments (upcycling and repair).
- Recycled raw material from denim (recovered fibers).
- Collection, classification and community participation service.

With this, a solid and professional distribution channel can be built and the economic agents involved until it reaches the end consumer.

What is Upcycling: Upcycling is the practice of transforming objects or waste materials into new products of greater value and utility, while preserving the integrity of the original materials.

## 2.2. Proposed Distribution Channel For The Project

### 2.2.1. Product: Refurbished Denim Garments

Proposed distribution channel (selective - short and omnichannel)

- Community Provider/Collector
- Collection and sorting center
- Repair/upcycling workshop
- Point of sale
- End consumer

### 2.2.2. Economic Agents Involved

- Community collectors (citizens, volunteers, educational institutions)
- Collection centers (municipality, civil associations, your organization)
- Local sewing workshops (artisans, seamstresses, entrepreneurs)
- Allied businesses (local clothing stores, bazaars, sustainable boutiques)
- Digital platforms (Marketplace, Instagram,

TikTok Shop, Etsy)

- End consumer (youth, women 18–60, green consumers)

### 1. Product: Recycled Denim Fibers (Raw Material)

- Distribution channel (industrial - specialized)
- Collection Center
- Crushing and defibering plant
- Marketer of recovered fibres
- Textile manufacturers
- Companies that produce new products
- End consumer

### 2. Economic agents involved

- Textile recycling centres
- Defibrating and crushing machinery operators
- Companies that buy recovered fibers (textile, automotive, packaging)
- Manufacturers of new products (insulation, fillers, recycled fabrics)
- Final consumers (users of manufactured goods)

### 3. Service: Collecting and engaging community in denim management

- Distribution channel (service - community)
- Collection Points
- Community Sorting Center
- Workshops and partnerships
- Refurbished or recycled products
- User community

### 4. Economic agents involved

- Schools, universities, colonies, DIF, cultural centers
- Municipality or environmental area
- Civil associations (environmental NGOs, collectives)
- Community Transformation Workshops
- Beneficial Owners (Vulnerable Families, Participants, Schools).

## GENERAL DIAGRAM OF THE DISTRIBUTION CHANNEL (integrated for all 3 products).



Diagram 1: Follow-Up of A Distribution Channel and Product Logistics. (Own Source).

## 3. ACTIVITY 3: BENCHMARK ANALYSIS

### STEP 1

### 3.1. Determination of requirements:

Think and write in the following table which parameters are the most important to know about your competition. For example: Product prices, technologies used, market served, etc. You can append more rows to table number 2.

**Table 2: Comparison of Parameters to be Used. (Own Source).**

Parameter 1	Product Pricing
Parameter 2	Quality
Parameter 3	Time
Parameter 4	Environmental impact
Parameter 5	Social impact

#### STEP 2: Company identification:

Identify and write in the following table which companies you can consider to carry out the benchmarking study. Consider companies that belong to the sector of your product/service. You can append more rows to the following table 3.

**Table 3: Identification of Competing Companies in the Same Activity. (Own Source).**

Company Identification	
Company 1	Your project (Orizaba, denim)
Company 2	MUD Jeans
Company 3	Levi's SecondHand
Company 4	Patagonia Worn Wear
Company 5	GoTrendier México

#### STEP 3: Benchmark Comparison

Place in the following table the parameters and the companies chosen to carry out the Benchmark study and carry out the research in official sources.

**Table 4: Analysis of Results to Companies and Parameters Indicated. (Own Source).**

TABLE FOR BENCHMARK ANALYSIS	Parameter 1	Parameter 2	Parameter 3	Parameter 4	Parameter 5	
	Price	Perceived quality	Time/Ease	Environmental impact	Social/Community Impact	
Company 1	Your project (Orizaba, denim)	Medium-low	Medium-high (unique piece, local)	Medium (takes process)	Very low (reuse, recycling, local)	Very high (education, community)
Company 2	MUD Jeans	Medium-high	High (European sustainable mark)	Medium (online, Europe)	Very low (recycling, leasing, circularity)	Medium (customer community, not local)
Company		Medium	Alta (recognized)	Alto (web, US stores)	Bottoms vs new jeans	Low-medium (more)

Company 3	Levi's Second Hand		brand, vintage)		(CO <sub>2</sub> savings and waste)	commercial approach)
Company 4	Patagonia Worn Wear	Medium-High	Alta (durable technical clothing)	Medium (high chemical processes)	Very low (repair + reuse + recycle)	Medium-high (education and culture of care)
Company 5	GoTrendier México	Medium-High	Variable (depends on user/seller)	High (app, home delivery)	Low-medium (second-hand without technical recycling)	Media (online community, responsible consumption)

#### STEP 4

Analysis of the results obtained from the comparison:

- Who is my strongest competitor(s)? Why?
- How can I take a competitive advantage?
- Does my product have a high degree of differentiation?

You can attach your own questions that will help you analyze your results, since these depend on the parameters you decided to evaluate.

parameters to compare (but not specific companies), is to make a strategic benchmarking by comparing; the project (circular economy with denim used in Orizaba). Vs:

- Fast fashion store (new denim, commercial chain type)
- Traditional second-hand clothing store
- Industrial textile recycler without a community approach

### 3.2. Summary Benchmarking vs Project

A comparison where the project looks strong in environmental and social impact, although with longer times due to repair and recycling work.

#### 1. MUD Jeans (Netherlands - circular denim brand)

- Denim brand that works with a complete circular model: leasing of jeans (Lease-a-Jeans), repair, resale as vintage and recycling of denim to produce new jeans with recycled cotton. MUD Jeans+3MUD Jeans+3Circular X+3
- He receives used jeans, classifies them: if they are good, he resells them; if not, it recycles them into fiber for new denim.

#### 2. Levi's SecondHand (United States - big brand with denim recommerce)

- Levi's used jeans and jackets purchase and resale program: the customer delivers used garment, receives credit and the brand resells

it on its Levi's SecondHand platform. Levi Strauss & Co+4Levi's Second Hand+4Levi Strauss & Co+4

- It is part of its circular economy strategy to reduce CO<sub>2</sub> and waste associated with the production of new denim.
- 3. Patagonia - Worn Wear (United States - repair, reuse and recycling)**
- Worn Wear Program: Customers can repair, exchange, and purchase used Patagonia clothing; if it is no longer usable, the brand recycles it. I Love Ski ® +6Patagonia Worn Wear®+6Patagonia Worn Wear®+6
  - Strong focus on environmental education, repair, extending life and preventing clothes from reaching landfills.
- 4. GoTrendier Mexico (Second-Hand Fashion Platform)**
- Mexican digital platform where second-hand clothes are bought and sold, with the explicit objective of giving a second life to garments and promoting responsible consumption and circular economy. gotrendier.mx+6gotrendier.mx+6gotrendier.mx+6
  - It works as a community, with a lot of participation from users who upload their garments and resell them among themselves.

**ACTIVITY 4: Cross SWOT Matrix (CAME)**

*Table 5: SWOT cross matrix. (Own source).*

Strengths (F)	Opportunities (O)	FO Strategies
F1. Focus on circular economy F2. Triple impact F3. Denim available F6. Educational approach F8. Differentiated proposal	O1. Growing sustainable fashion O2. Trend to recommerce O3. Institutional support O6. Integration into local chains O8. SDGs 12 and 13	FO1: Create the 'Orizaba Circular Brand'. FO2: Partnerships with universities and NGOs. FO3: Exclusive upcycled denim line. FO4: Integrate local workshops and boutiques.

**2. DO Strategies (Weaknesses + Opportunities)**

Weaknesses (D)	Opportunities (O)	DO Strategies
D1. Slow processes D2. Limited capacity D3. Material variability D5. Lack of initial capital D7. Lack of marketing	O1. Sustainable fashion in growth O3. Institutional support O4. Financing Programs O7. Digital platforms O8. SDGs aligned	DO1: Seek support and financing. DO2: Create classification system. DO3: Educational marketing. DO4: Digitize sales and workshops.

**3. FA Strategies (Strengths + Threats).**

Strengths (F)	Threats (A)	FA Strategies
---------------	-------------	---------------

F1. Circular economy F2. Triple impact F4. Productive flexibility F6. Environmental education F8. Clear differentiation	A1. Fast fashion A2. Digital competence A5. Stigma A6. Local businesses A7. Low turnout	FA1: Differentiate through traceability. FA2: Workshops and educational campaigns. FA3: Fairs and barter. FA4: Agreements with local businesses.
---	---	---

**4. DA Strategies (Weaknesses + Threats).**

Weaknesses (D)	Threats (A)	DA Strategies
D1. Manual processes D2. Low capacity D5. Lack of capital D6. Need for training D7. Weak marketing	A1. Fast fashion A2. Massive platforms A4. Market volatility A5. Stigma A7. Low turnout	DA1: Standardize processes. DA2: Continuous training. DA3: Volunteer program. DA4: Diversify products.

**ACTIVITY 5: AWESOME MATRIX**

Perform internal and external analysis of your company, product or service. And then determine the FO, FA, DO, and DA strategies. the SWOT – CAME cross-matrix fully adapted to your project (used denim, circular economy, recycling and community participation in Orizaba). Table 6 shows the analysis.

*Table 6. SWOT Stratified Project for Decision Making. (Own Source).*

AWESOME MATRIX		INTERNAL ANALYSIS	
		STRENGTHS F1: Clear focus on Eco. circular F2: Triple impact (environmental, social and economic) F3: Constant availability of Raw material	WEAKNESSES D1: Manual and Slow Processes D2: Possible lack of initial capital D3: Irregular Income at the Beginning
EXTERNAL ANALYSIS	OPPORTUNITIES O1: Growing interest in Sustainable fashion O2: Global trend towards reuse, Recommerce and textile recycling. O3: SDG 12 and SDG 13	FO <i>To create a "Circular Brand of Orizaba" based on upcycling and recycling to position it as a sustainable alternative to fast fashion.</i>	DO <i>Request municipal support, environmental funds and circular economy calls to acquire machinery and increase production capacity.</i>
	THREATS A1: Strong presence of Fast Fashion in the Region A2: Risk of sick leave Participation community A3: Possible blocks by	FA <i>Differentiate the project through local certifications, traceability and clear communication of the real environmental impact (CO<sub>2</sub>, water, waste avoided).</i>	DA <i>Formalize a process standardization plan (sorting, repair, recycling) to increase efficiency.</i>

	part of shops traditional		
--	---------------------------	--	--

**4. SWOT CONCLUSION (THESIS-READY TEXT)**

The SWOT analysis shows that the project has significant strengths linked to its ability to generate positive environmental and social impact, as well as to align with global trends in the circular economy and compliance with SDGs 12 and 13. It also presents a wide field of opportunities derived from the growth of sustainable fashion, the availability of digital platforms and the possibility of establishing alliances with institutions and companies. However, the project faces weaknesses associated with its operational scale, production times, and reliance on community engagement. Finally, threats such as competition from fast fashion, the lack of specific regulations and fluctuations in the market for recycled products are identified. These elements will allow the design of mitigation, diversification and strengthening strategies to ensure the viability of the project in Orizaba, Veracruz.

**ACTIVITY 6: BARRIERS TO MARKET ENTRY**

Table 7. Possible barriers to entry into the market of the product/ service are identified. Placing if it is a STRONG, MEDIUM or WEAK barrier and describing each one.

*Table 7. Sample of the barriers to entry to the market. (Own source).*

BARRIERS			DESCRIPTION
1	Economies of scale	Strong	Prototypes are worked on for testing and working on a research scale

			and being able to test innovation.
2	High initial investment	High	The investment is high because prototypes have to be designed to fray the denim and fade it, and to acquire articles and advice from other institutions.
3	Access to suppliers	Media	Yes, there will be suppliers who can supply materials, raw materials, everything would be in the same Mexican territory.
4	High differentiation from an existing product	Media	This project does not have the application of this service in Mexico, in other European countries it may already be implemented.
5	Lack of industry experience	Weak	In this project, there is strong experience, and on the part of all the members.
6	Legal or regulatory barriers	Weak	It is a project in which it is institutional, it is only respecting the regulations established by a call.

**ACTIVITY 5: BUSINESS MODEL CANVAS**

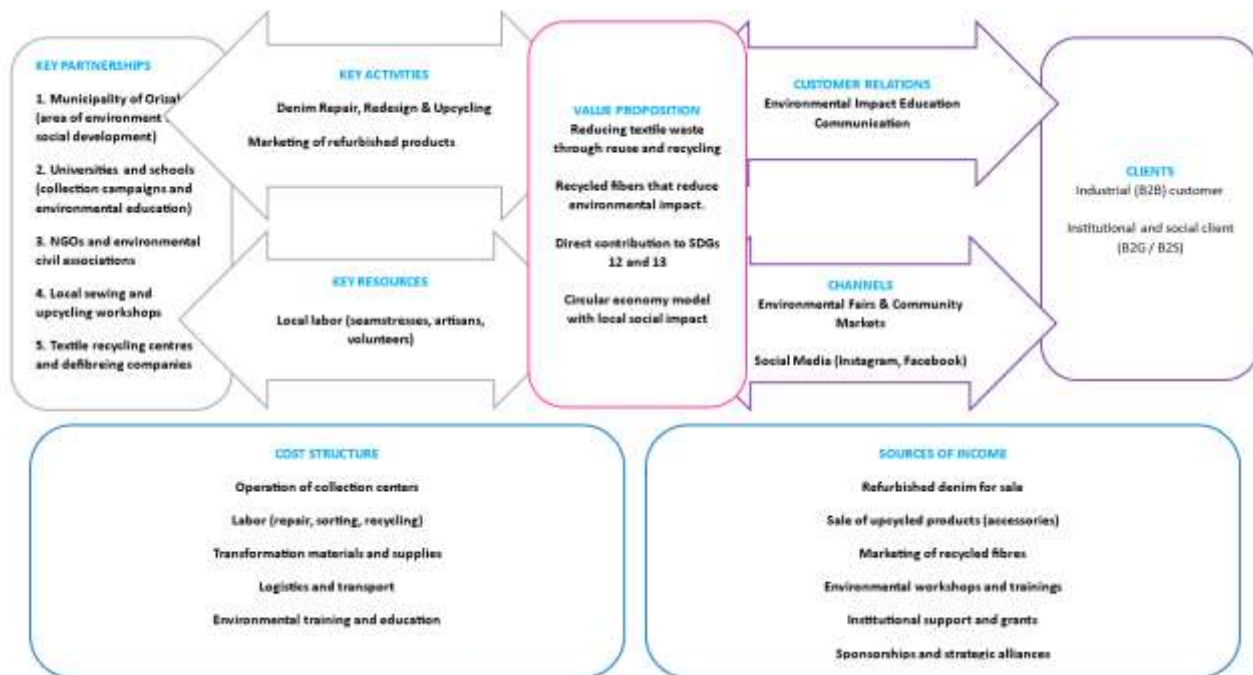


Diagram 2. Project: Circular Economy for the Management of Used Denim in Orizaba, Veracruz. FINANCIAL BUDGET.

TO PROJECT  
5. CIRCULAR ECONOMY FOR THE MANAGEMENT OF USED DENIM IN ORIZABA, VERACRUZ

Table 8. Denim remanufacturing project expense budget. (Own source).

PRESUPUESTO PEI 20126	
NOMBRE DE LA EMPRESA: Proyectos JASOR	
NOMBRE DEL PROYECTO: Economía Circular para la Gestión de Mezclilla Usada en Orizaba, Veracruz	
Entregable	
Escribir número de actividad (se pueden reducir e incrementar)	Total
GASTO CORRIENTE	
Viajes y viáticos	
Servicios externos especializados 30% del total	
Gastos de estancias académicas	
Uso de laboratorios externos	\$2,500.00
Gastos de operación	
Materiales de consumo	
Diseños en Autocad y Solidwork	\$10,000.00
Uso de SEM (Microscopia electronica de Barrido).	\$12,500.00
Uso de sustancias químicas	\$3,500.00
Destinado de mezclilla con tratamientos químicos	\$4,000.00
Acervos bibliograficos en PDF	\$5,000.00
Asesoría a personal involucrado	\$2,500.00
horas de investigación profunda de tecnologías	\$ 15,000.00
fabricación de maquina deshilachadora de mezclilla	\$ 45,000.00
Total de gasto corriente	
GASTO DE INVERSIÓN	
Equipo de computo	\$ 30,000.00
Multifuncional	\$ 5,000.00
Total de gasto de inversión	
Gasto total del proyecto	
	\$135,000.00

With the data in Table 8 and once the fixed and variable costs had been determined, the contribution margin was calculated, considering the revenues considered.

Table 9. Fixed And Variable Costs -Contribution Margin. (Source: Financial Projection By Dr. Ortega, 2025).

		Customers	Costs	
Fixed Cost	\$ 115,000.00	100	\$ 1,150.00	82%
Variable Cost	\$ 20,000.00		\$ 200.00	14%
Total Cost	\$ 135,000.00		\$ 1,350.00	96%
Contribution Margin		4%	54.00	3.8%
Price per garment			\$ 1,404.00	100%

Table 10. 5-year sales budget (inflation included). (Own source).

DETERMINING THE PRICE OF THE PROJECT			
	FIXED COSTS	115000	77%
+	VARIABLE COSTS	20000	13%
=	TOTAL COSTS	135000	91%
+	CONTRIBUTION MARGIN	10%	13500
			9%
=	PROJECT PRICE	148500	100%
			%

Table 12: Input data. (Source: Dr. Ortega Financial Projection, 2025).

RESUMEN		NOTA	
Nombre de la Organización		FAVOR DE LLENAR ÚNICAMENTE LOS ESPACIOS EN GRIS	
PROYECTOS JASOR			
Nombre del Proyecto			
ECONOMIA CIRCULAR DE LA MEZCILLA EN ORIZABA, VERACRUZ			
Nombre del Producto			
PROYECTO DE REMANUFACTURACION			
INVERSION TOTAL DEL PROYECTO		\$ 135,000.00	
ESTRUCTURA DE COSTOS			
Ingreso por concepto de ventas			
Programa de ventas anuales	Producto/Servicio en unidades vendidas	Precio de venta	VENTAS NETAS
2025	36000	\$ 2,500.00	\$ 90,000,000.00
2027	21600	\$ 2,874.67	\$ 62,092,872.00
2028	21600	\$ 3,257.00	\$ 70,351,200.00
2029	36000	\$ 3,373.27	\$ 121,437,720.00
2030	36000	\$ 3,499.70	\$ 125,773,200.00
ESTRUCTURA DE COSTOS			
% De costos Variables		30%	% De costos Variables
% Costos fijos		40%	% Costos fijos
% ISR		30%	
% P.T.U.		10%	
Tasa de descuento		6.87%	

Table 13: Projected sales program of JASOR Projects. (Source: Financial projection by Dr.Ortega, 2025).

PROGRAMA DE VENTAS PROYECTADO					
PROYECTOS JASOR					
Nombre del Proyecto					
ECONOMIA CIRCULAR DE LA MEZCILLA EN ORIZABA, VERACRUZ					
Inversión Inicial Total	\$ 135,000.00				
Nombre del producto					
PROYECTO DE REMANUFACTURACION					
Año de Operación					
Concepto	2025	2026	2027	2028	2029
Su producto	\$90,000,000.00	\$62,092,872.00	\$70,351,200.00	\$121,437,720.00	\$125,773,200.00
	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
<b>VENTAS NETAS</b>	<b>\$90,000,000.00</b>	<b>\$62,092,872.00</b>	<b>\$70,351,200.00</b>	<b>\$121,437,720.00</b>	<b>\$125,773,200.00</b>

Table 14. Income statement. (Source: Dr. Ortega's financial projection, 2025).

ESTADO DE RESULTADOS PROYECTADO					
Nombre de la Organización					
PROYECTOS JASOR					
Nombre del Proyecto					
ECONOMIA CIRCULAR DE LA MEZCILLA EN ORIZABA, VERACRUZ					
Nombre del Producto					
PROYECTO DE REMANUFACTURACION					
Concepto	2025	2026	2027	2028	2029
<b>INGRESOS</b>					
Su producto	\$90,000,000.00	\$62,092,872.00	\$0.00	\$70,351,200.00	\$121,437,720.00
0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
<b>VENTAS NETAS</b>	<b>\$90,000,000.00</b>	<b>\$62,092,872.00</b>	<b>\$0.00</b>	<b>\$70,351,200.00</b>	<b>\$121,437,720.00</b>
<b>Costos variables</b>					
CV del producto X	\$27,000,000.00	\$18,627,861.60	\$21,105,360.00	\$36,431,316.00	\$37,731,960.00
	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
<b>Total costos variables</b>	<b>\$27,000,000.00</b>	<b>\$18,627,861.60</b>	<b>\$21,105,360.00</b>	<b>\$36,431,316.00</b>	<b>\$37,731,960.00</b>
<b>Margen de contribución</b>	<b>\$63,000,000.00</b>	<b>\$43,465,010.40</b>	<b>\$0.00</b>	<b>\$49,245,840.00</b>	<b>\$85,006,404.00</b>
<b>Costos fijos</b>					
CF del producto	\$36,000,000.00	\$24,837,148.80	\$28,140,480.00	\$48,575,088.00	\$50,309,280.00
	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
<b>Total costos fijos</b>	<b>\$36,000,000.00</b>	<b>\$24,837,148.80</b>	<b>\$28,140,480.00</b>	<b>\$48,575,088.00</b>	<b>\$50,309,280.00</b>
<b>Utilidad antes de impuestos</b>	<b>\$27,000,000.00</b>	<b>\$18,627,861.60</b>	<b>\$0.00</b>	<b>\$21,105,360.00</b>	<b>\$36,431,316.00</b>
I.S.R. (30%)	\$8,100,000.00	\$5,588,358.48	\$0.00	\$6,331,608.00	\$11,319,588.00
P.T.U. (10%)	\$2,700,000.00	\$1,862,786.16	\$0.00	\$2,110,536.00	\$3,643,131.60
Total Obligaciones	\$10,800,000.00	\$7,451,144.64	\$0.00	\$8,442,144.00	\$14,572,526.40
<b>UTILIDAD NETA</b>	<b>\$16,200,000.00</b>	<b>\$11,176,716.96</b>	<b>\$0.00</b>	<b>\$12,663,216.00</b>	<b>\$21,858,789.60</b>
<b>MARGEN DE UTILIDAD</b>	<b>18.00%</b>	<b>18.00%</b>	<b>18.00%</b>	<b>18.00%</b>	<b>18.00%</b>

Table 15. Cash flow from the JASOR Project. (Source: Dr. Ortega's financial projection, 2025).

FLUJO NETO DE EFECTIVO PRO-FORMA						
Nombre de la Organización						
PROYECTOS JASOR						
Nombre del Proyecto						
ECONOMIA CIRCULAR DE LA MEZCILLA EN ORIZABA, VERACRUZ						
Nombre del Producto						
PROYECTO DE REMANUFACTURACION						
AÑO DE OPERACION						
Concepto	0	2027	2018	2019	2020	2021
Inversión Inicial	\$135,000.00					
<b>ENTRADA DE EFECTIVO</b>						
Su producto	\$90,000,000.00	\$0.00	\$62,092,872.00	\$70,351,200.00	\$121,437,720.00	\$125,773,200.00
0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
<b>Total Entradas de Efectivo</b>	<b>\$90,000,000.00</b>	<b>\$62,092,872.00</b>	<b>\$70,351,200.00</b>	<b>\$121,437,720.00</b>	<b>\$125,773,200.00</b>	
<b>SALIDA DE EFECTIVO</b>						
Total costos variables	\$27,000,000.00	\$0.00	\$18,627,861.60	\$21,105,360.00	\$36,431,316.00	\$37,731,960.00
Total costos fijos	\$36,000,000.00	\$0.00	\$24,837,148.80	\$28,140,480.00	\$48,575,088.00	\$50,309,280.00
Total obligaciones (I.S.R. y P.T.U.)	\$10,800,000.00	\$0.00	\$7,451,144.64	\$8,442,144.00	\$14,572,526.40	\$15,092,784.00
<b>Total Salidas de Efectivo</b>	<b>\$73,800,000.00</b>	<b>\$0.00</b>	<b>\$50,916,155.04</b>	<b>\$57,687,984.00</b>	<b>\$99,578,930.40</b>	<b>\$103,134,024.00</b>
<b>FLUJO NETO (CONSIDERANDO INVERSION INICIAL)</b>	<b>\$16,095,000.00</b>	<b>\$0.00</b>	<b>\$11,176,716.96</b>	<b>\$12,663,216.00</b>	<b>\$21,858,789.60</b>	<b>\$22,639,176.00</b>
<b>FLUJO NETO ACUMULADO</b>	<b>\$16,095,000.00</b>	<b>\$16,095,000.00</b>	<b>\$27,271,716.96</b>	<b>\$39,934,932.96</b>	<b>\$61,793,722.56</b>	<b>\$84,432,898.56</b>
<b>FLUJO NETO (SIN CONSIDERAR INVERSION INICIAL)</b>	<b>\$16,200,000.00</b>	<b>\$0.00</b>	<b>\$11,176,716.96</b>	<b>\$12,663,216.00</b>	<b>\$21,858,789.60</b>	<b>\$22,639,176.00</b>
<b>FLUJO NETO ACUMULADO</b>	<b>\$16,200,000.00</b>	<b>\$16,200,000.00</b>	<b>\$27,376,716.96</b>	<b>\$40,039,932.96</b>	<b>\$63,898,722.56</b>	<b>\$86,537,898.56</b>
Periodo de Recuperación de la inversión inicial (P)	11 AÑOS					

Table 16. Net Present Value (NPV) and Internal

**Rate of Return (IRR) (Own Source).**

VALOR PRESENTE NETO (VPN) Y TASA INTERNA DE RETORNO (TIR)					
Nombre de la Organización	PROYECTOS JASOR				
Nombre del Proyecto	ECONOMIA CIRCULAR DE LA MEZCLILLA EN ORIZABA, VERACRUZ				
Nombre del Producto	PROYECTO DE REMANUFACTURACION				
	AÑO DE OPERACIÓN				
Concepto	1	2	3	4	5
Inversión Inicial	\$135,000.00				
FNE <sub>n</sub>	\$ 16,200,000.00	\$ 11,176,716.96	\$ 12,663,216.00	\$ 21,858,789.60	\$ 22,639,176.00
(1+i) <sup>n</sup>	1.07	1.14	1.22	1.30	1.39
(FNE <sub>n</sub> )/(1+i) <sup>n</sup>	\$ 15,158,603.91	\$ 9,785,941.93	\$ 10,374,724.83	\$ 16,757,254.76	\$ 16,239,833.37
Σ(FNE <sub>n</sub> )/(1+i) <sup>n</sup>	\$ 68,316,358.80				
Tasa de descuento	6.87% se determina considerando la tasa fija (CETES) y la tasa variable (bursatil)				
8	-				
VPN=	\$ 68,181,358.80				
TIR=	11900.57%				

The development of the Circular Economy project for the Management of Used Denim in Orizaba, Veracruz allows us to conclude that the Strategic Financial Management plays a decisive role in the viability and sustainability of alternative production models based on circularity. Throughout the analysis, it is evident that the incorporation of rigorous financial tools not only strengthens decision-making, but also provides economic certainty to initiatives that have traditionally been perceived as socially or environmentally valuable, but financially uncertain. The results of the financial analysis show that, through an adequate structuring of fixed and variable costs, as well as a correct determination of the contribution margin and the price of the project, it is possible to build an economically sustainable model. The financial projections, reflected in the income statement, cash flow, NPV and IRR, indicate that the project has the potential to generate value in the

**REFERENCES**

- Brigham, E. F., & Ehrhardt, M. C. (2020). *Financial management: Theory and practice* (16th ed.). Cengage Learning.
- Elkington, J. (1997). *Cannibals with forks: The triple bottom line of 21st century business*. Capstone Publishing.
- European Commission. (2015). *Closing the loop: An EU action plan for the circular economy*. Publications Office of the European Union.
- Ghisellini, P., Cialani, C., & Ulgiati, S. (2016). A review on circular economy: The expected transition to a balanced interplay of environmental and economic systems. *Journal of Cleaner Production*, 114, 11–32. <https://doi.org/10.1016/j.jclepro.2015.09.007>
- Kaplan, R. S., & Norton, D. P. (2008). *The execution premium: Linking strategy to operations for competitive advantage*. Harvard Business School Press.
- Kotler, P., & Keller, K. L. (2016). *Marketing management* (15th ed.). Pearson Education.
- Porter, M. E. (2008). The five competitive forces that shape strategy. *Harvard Business Review*, 86(1), 78–93.

medium and long term, provided that strategies for operational efficiency, gradual scalability and strengthening of key alliances are implemented. This confirms that the circular economy can be a driver of profitability and not just an environmental mitigation mechanism.

From a strategic perspective, the SWOT analysis and the CAME matrix made it possible to identify that the main strengths of the project are concentrated in its differentiation, its alignment with global trends of responsible consumption and its triple impact (economic, social and environmental). However, weaknesses and threats related to operational capacity, production times and fast fashion competition are also recognized, which underscores the importance of flexible financial management, capable of adapting to changing scenarios and mitigating risks through strategic planning. Likewise, the Canvas business model shows that the diversification of sources of income, collaboration with public, educational and community institutions, and the use of digital channels are key elements to strengthen the financial sustainability of the project. In this sense, the Strategic Financial Directorate is not limited to budgetary control, but becomes an instrument of articulation between the social, environmental and economic vision of the enterprise. Finally, this work demonstrates that the application of circular economy principles, when supported by a sound financial analysis and a well-defined management strategy, can generate viable, scalable and replicable business models in other territorial contexts. The experience of the project in Orizaba, Veracruz, provides academic and practical evidence that sustainability and profitability are not opposing concepts, but complementary, as long as Strategic Financial Management is used as a central axis of decision-making.

- Porter, M. E., & Kramer, M. R. (2011). Creating shared value. *Harvard Business Review*, 89(1-2), 62-77.
- Ross, S. A., Westerfield, R. W., & Jordan, B. D. (2022). *Fundamentals of corporate finance* (13th ed.). McGraw-Hill Education.