



University of Azuay

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**COMPARATIVE ANALYSIS OF MARKET
INTELLIGENCE IN THE IMPORTATION OF WPC
PRODUCTS AND TRADITIONAL PRODUCTS IN THE
CONSTRUCTION AND DECORATIVE FINISHING
SECTOR IN THE CITY OF CUENCA.**

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Cuenca – Ecuador

2024

DEDICATORY

I dedicate this thesis with all my love and gratitude to my parents, Manuel and Anita. Throughout the years, their unconditional support has been my guide and strength. Their wise advice and loving care have been beacons on my path, illuminating every step of my college career. This thesis reflects your dedication and love and would not have been possible without your constant presence in my life. Thank you, from the bottom of my heart, for being my inspiration and most significant support.

ACKNOWLEDGMENTS

I want to express my deepest gratitude to my entire family. To my parents and my siblings, David, Paul, and Adriana, for always being there, giving me their unconditional support, and helping me resolve any concerns. Their love and understanding have been fundamental pillars in my life.

I am also very grateful to the company Tapitex for providing me with the valuable information and resources that made this thesis possible. Their collaboration, from the initial research to the final stages of writing, has been crucial for the development and success of this work.

Finally, I want to thank life for allowing me to be here, full of dreams and possibilities, and for allowing me to accomplish many things. Every moment lived and every challenge overcome has made me grow and brought me closer to the culmination of this project.

ABSTRACT

The research work focuses on evaluating the advantages and disadvantages of Wood Plastic Composite (WPC) products compared to traditional products in the construction and decorative finishing sector. The research uses the market intelligence methodology to analyze factors such as durability, costs, maintenance, sustainability, aesthetics, and local market demand. International and local suppliers are studied, emphasizing Tapitex M&B and identifying opportunities and challenges in importing WPC to make informed decisions and maximize the potential of these products in Cuenca. The analysis also covers purchasing management, freight quotations, and insurance, providing a comprehensive approach to importing and commercializing WPC products.

Keywords: Market intelligence, Wood Plastic Composite, traditional products, import, decorative, durability, sustainability, finishing sector, Tapitex M&B.

RESUMEN

El trabajo de investigación se centra en evaluar las ventajas y desventajas de los productos del Wood Plastic Composite (WPC) en comparación con los productos tradicionales en el sector de acabados de construcción y decorativos. La investigación analiza factores como durabilidad, costos, mantenimiento, sostenibilidad, estética y demanda del mercado local, empleando la metodología inteligencia de mercado. Se estudian proveedores internacionales y un local, con énfasis en la empresa Tapitex M&B, identificando oportunidades y desafíos en la importación de WPC para tomar decisiones informadas y maximizar el potencial de estos productos en Cuenca. El análisis también abarca aspectos como la gestión de compras, cotizaciones de fletes y seguros, proporcionando un enfoque integral para la importación y comercialización de productos WPC.

Palabras clave: Inteligencia de mercado, Wood Plastic Composite, productos tradicionales, importación, decorativos, durabilidad, sostenibilidad, sector de acabados, Tapitex M&B.

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INTRODUCCTION

The incursion of Wood-Plastic Composite (WPC) products in the construction and decorative finishing sector represents an increasingly relevant trend in the industry. WPC products are a combination of wood and plastic fibers that offer several advantages in terms of durability, strength, low maintenance, and aesthetic versatility.

WPC products are used in various building and decorative finishing applications, such as wall cladding, flooring, fencing, outdoor furniture, and decorative elements. Their popularity is due to their ability to mimic the appearance of traditional materials such as wood, stone, or ceramics while offering superior characteristics regarding resistance to weathering, moisture, termites, and other environmental factors.

WPC products in this industry have opened up new design and construction possibilities, allowing professionals and consumers to access high-quality materials that combine aesthetics with functionality and durability. WPC products are also known for their easy installation and low maintenance requirements, making them attractive for residential, commercial, and industrial projects.

However, in this situation, the incursion of WPC products also poses significant challenges and considerations. Researching the importation of WPC and traditional products in the construction and decorative finishing sector is crucial. Specifically, a comparative market intelligence analysis is essential.

Specifically, in Ecuador and the rest of the countries, WPC has achieved an essential position within the construction and decorative sector. The case of the city of Cuenca, known for its architectural heritage and its focus on high-quality construction and decoration, is presented. This city serves as the specific environment for this comparative analysis.

The following research objectives are thus formulated:

General Objective

Build a comparative analysis of market intelligence on importing WPC products and traditional products in the construction and decorative finishing sector in Cuenca.

Specific Objectives

1. Analyze and diagnose the product in the international market and the company Tapitex M&B.
2. Define the best characteristics of the suppliers and compile information at a global level.
3. Comparative analysis of suppliers.

In this sense, this research aims to build a comparative analysis of market intelligence in importing WPC products and traditional products in the construction and decorative finishing sector in Cuenca. The objective is to evaluate the advantages and disadvantages by considering factors such as durability, cost, maintenance, sustainability, aesthetics, and local market demand, specifically through the management of the importing company Tapitex M&B.

Thus, the first chapter presents WPC products, their composition and properties, applications and uses, advantages and disadvantages, sustainability, and market trends. It also presents the importing company Tapitex M&B and its management system.

In the second chapter, the topic of market intelligence in the importation of WPC products and traditional products in the construction and decorative finishing sector in the city of Cuenca will be presented.

The third chapter will present the results of the comparative analysis of market intelligence in importing WPC products and traditional products in the construction and decorative finishing sector in Cuenca.

CHAPTER 1

1. WOOD PLASTIC COMPOSITE WPC PRODUCTS

1.01 Composition and properties

WPC materials have 5 to 15 years of warranty against staining and discoloration from sunlight. For example, according to Tekno Step (2024), a WPC façade can last up to 100 years with proper use. Similarly, it adds that the WPC façade can be damaged if it is impacted by sharp objects, abrasives, or scratches from pet claws that are not covered by the warranty.

The properties of WPC may vary depending on the specific composition and manufacturing process used. However, in general, WPC exhibits the following WPC properties according to Beltrá (2022),

- **Durability:** It is known for its strength and durability. The combination of wood and plastic fibers provides greater resistance to moisture, rot, insects, and other environmental factors than natural wood.
- **Weather Resistance:** WPC is resistant to UV rays, rain, wind, and other weather elements. This makes it suitable for outdoor applications such as facade cladding or garden furniture.
- **Low maintenance:** WPC requires minimal maintenance compared to natural wood. There is no need to regularly sand, stain, or paint the material to maintain its appearance and performance.
- **Dimensional stability:** WPC has good dimensional stability, which means it is less prone to expansion and contraction due to changes in humidity and temperature. This makes it suitable for use in flooring and cladding.
- **Aesthetic versatility:** WPC can be manufactured in various colors, textures, and finishes to suit different design styles and aesthetic preferences (Beltrá, 2022).

It is important to note that the properties and performance of WPC can vary depending on the quality of the material, the product design, and the manufacturing process used.

Figure 1
Finished product

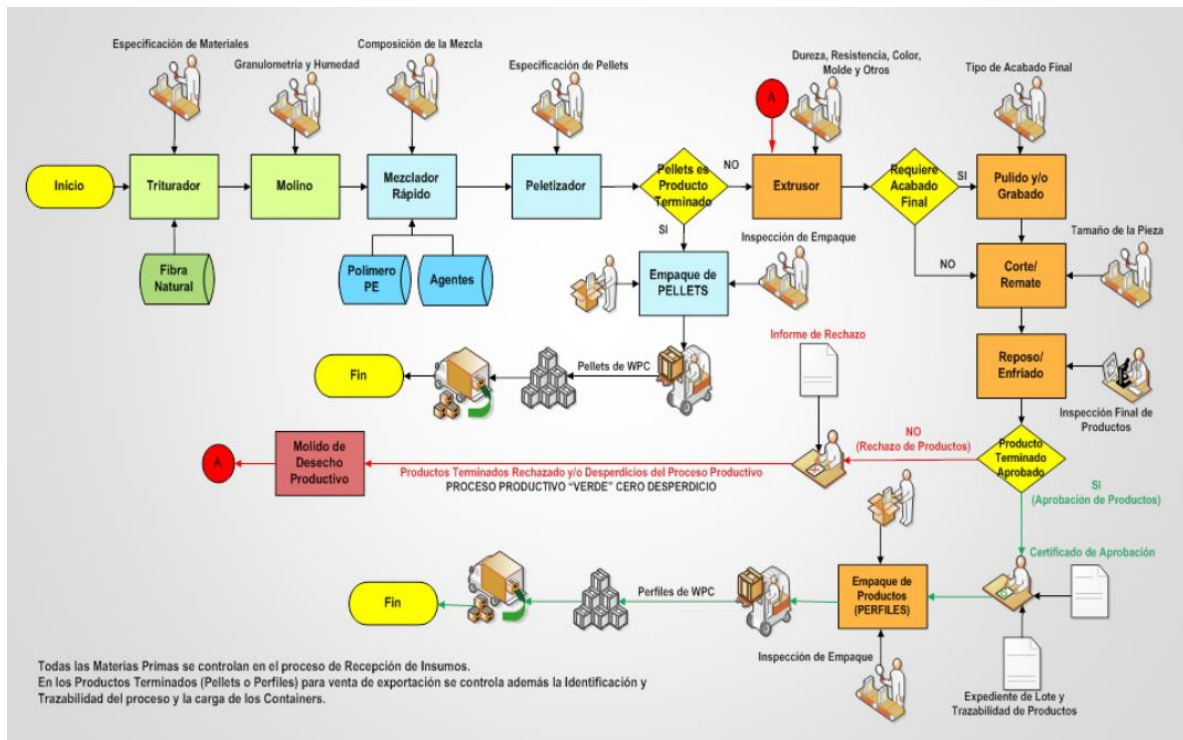


Note: An image of the product has already been applied to an exterior construction finish. Taken from Tongsan (2024).

In this sense, WPC is a composite building material that combines wood and plastic fibers to create a product with specific properties. The exact composition may vary by manufacturer and product type, but in general, WPC is composed of the following components, according to Acosta and Traslaviña (2022):

- **Wood fibers:** Wood fibers used in WPC can come from different sources, such as wood chips, sawdust, or wood scraps, especially poplar wood.
- **Plastic:** The plastic used in WPC is generally high-density polyethylene (HDPE), polypropylene (PP), or PVC (polyvinyl chloride). The plastic provides strength and durability to the composite material.
- **Additives:** can be added to WPC to improve its properties or processability, as shown in the figure below. These additives may include UV stabilizers to protect the material from degradation caused by sun exposure, coupling agents to improve adhesion between the wood fibers and the plastic, and pigments or colorants to achieve the desired appearance.

Figure 2
Fabrication process of WPC



Note: The figure shows the summarized process of WPC production, starting with crushing the material, adding the additives, mixing all the ingredients, then granulating the material, followed by heat molding at a suitable temperature and with the appropriate mold, and in the last steps the product is sanded and brushed to give texture to the material and finally the packaging. Taken from G&B Import Latinoamérica, C.A. (2024).

Raw materials include poplar wood powder, PE plastic particles, lubricants, compatibilizers, colorants, and additional auxiliary materials such as anti-light solvents and antioxidants. Below are the data sheets from Witop Decor and Haining UV Decoration Material CO., LTD detailing the components.

Table 1
Witop Decor WPC Technical Data Sheet

SHANDONG WITOP DECORATION MATERIALS CO. LTD	
DESCRIPTION OF PRODUCTS: OUTDOOR WPC FLOORING AND WAL PANEL	
DETAILS OF PRODUCTS	
WIDTH: 140MM 145MM 156MM	
THICKNESS;25MM 20MM 21MM	
LENGTH:2900 MM OR CUSTOMIZED	
COMPOSITION	
INGREDIENT	PERCENT/%
HDPE	35
WOOD POWDER	55

Note: The figure represents the chemical composition of the product and its corresponding percentages. It was taken from the Witop Decor factory in 2024, Shandong, Linyi, China.

Table 2

Datasheet of WPC Haining UV Decoration Marial CO., LTD.

WPC WALL PANEL	
ANALYSIS CERTIFICATE	
COMPOSITION MATERIALES	REFERENCE CONTENT (%)
HDPE	30%
Wood Fiber	60%
Additives	10%

Note: The graph represents the chemical composition of the product and its corresponding percentages. Taken from Haining UV Decoration Marial CO., LTD, 2024, Xi'an, Shaanxi, China.

As seen in the images above, the composition of the WPC is similar in both companies, as the same components, i.e., HDPE, Wood Powder, and Additives, are detailed, with a difference of 5% between DHPE and Wood Powder.

1.02 WPC Market situation

Global analysis of the WPC (Wood-Plastic Composite) market reveals steady growth in recent years. The demand for WPC products, which combine wood and plastic, has increased due to their versatility, durability, and environmental benefits. This market is witnessing increasing adoption in various sectors, including construction and furniture. The market size is currently estimated at [specific figure], with a projected growth rate of [specific percentage] over the next [specific period]. Moreover, further momentum is expected as its advantages in terms of strength, reduced maintenance, and sustainability are recognized (Garzon, 2024).

Specifically, after their origin in the United States, composites known as WPC were also developed by companies in Europe and Asia, especially in China. Some companies interested in other parts of the world have ventured into this field. In the last ten years,

WPC consumption in the construction market has experienced an average annual growth of 15%, according to Garzón (2024).

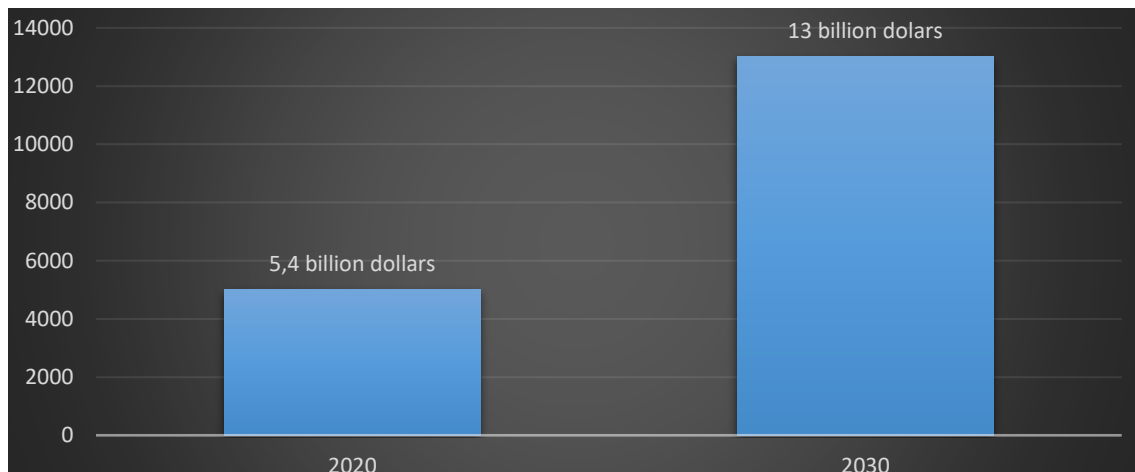
In North America, 85% of WPC is destined for the construction sector, leading to new manufacturing companies opening. There are currently around 80 manufacturing companies compared to 60 in Asia. In Europe, where there are at least 20 factories, WPCs cover only 30% of the construction sector and are most often used in the automotive industry. In Europe, the varieties of natural fibers used in WPCs have also expanded to include sisal, jute, straw, cotton, and kenaf (Garzón, 2024).

According to Garzón, WPC is an exciting material that will soon find its niche in the world market due to its rapid growth. Twenty years ago, in the United States, it represented only 1% of consumption in the decking market, and now it reaches 30%. In Asia, 15 years ago, it was hardly used, and it has experienced gigantic growth with new applications. Despite the abundance of wood in Colombia, WPC will gradually make its way into the portfolio of options for builders as its advantages are recognized.

Currently, many industries worldwide need help in their supply chains. According to the author above, there is a growing shortage of wood globally, which causes the industries that deposit this material to generate different alternatives. One of these alternatives is wood plastic composite. This material combines environmentally friendly plastics with wood to create a durable option for the construction industry.

Since the post-pandemic phase, the size of the global WPC wood plastic composite market has been \$5.4 billion. As seen in the figure below, by 2030, the industry is expected to pass \$13 billion and have a growth rate of over 13%. As explained by Foshan Mexitech Co., Ltd. (2022), the market is driven by North American construction companies that essentially use polyethylene-based wood plastic composites.

Figure 3
Growth trends WPC industry



Note: The graph represents the economic growth over the years and the expectation until 2030 in billions of USD. Adapted from Foshan Mexitech Co., Ltd. (2022).

Indeed, the market is continuously growing due to its environmentally friendly features and high demand from the construction industry. However, high initial costs are dedicated to improving wood plastic composites. This makes it a more viable option for construction companies and is intended to further increase demand. Thus, the market is expected to strengthen further in the coming years.

As explained, construction and decoration are the major end-use industries employing wood-plastic composites. This includes siding, fencing, garden landscaping, extension of living areas, and alternatives to stone-based qualities for residential use.

This use constitutes over 90% of plastic composites in the construction and decoration industry. Among the main reasons driving the demand for this wood composite is its fast-growing use in manufacturing eco-friendly housing and theming.

The building and decorative finishes sector plays a vital role in the aesthetics and functionality of architectural spaces. In particular, WPC products, which are composed of a combination of wood and plastic, have gained popularity in recent years due to their versatility, durability, and similar aesthetic appearance to natural wood, while traditional products, on the other hand, continue to be a preferred choice for many consumers.

Indeed, WPC is a material that combines the desirable qualities of wood with the durability and strength of plastic. For this reason, it has become a preferred choice in various applications, such as construction, furniture, and decoration. Its popularity is due

to its unique properties and the growing concern for the environment, which seeks more sustainable alternatives to conventional wood (Beltrá, 2022).

However, introducing WPC products in the construction and decorative finishing market has generated direct competition with traditional products. This raises the problem of determining which product type has greater consumer demand and acceptance. Importing companies and industry players must carefully evaluate market preferences and consumption trends to decide what type of products to import and promote (Izzi, 2023).

In this context, in recent years, the country, particularly the city of Cuenca, has experienced changes in its construction and decoration demands, taking advantage of its recognized cultural heritage and steady economic growth. Thus, according to the Guayaquil Chamber of Commerce (2022), there has been an increase in demand for innovative and sustainable materials, such as WPC, which are gaining recognition and acceptance in international markets.

Importing WPC and traditional products may face significant competition in the Cuenca market. The problem lies in identifying and evaluating existing and potential competitors and understanding their product offerings, pricing strategies, and distribution channels.

Importing WPC and traditional products in the construction and decorative finishing sector in the city of Cuenca requires solid market intelligence. According to Sabry (2024), market intelligence is a systematic process of collecting, analyzing, and applying relevant information about the market and its stakeholders. Its main objective is to provide knowledge and insights that help companies make informed strategic decisions and remain competitive.

1.03 Market Intelligence

According to Avendaño and Henao (2021), market intelligence is based on data collection and subsequent analysis to identify market trends, patterns, opportunities, and threats. This data can come from various sources, such as market studies, surveys, competitor analysis, demographic data, customer opinions, financial information, and media.

Therefore, despite WPC's advantages in terms of durability, aesthetics, and sustainability, detailed information is lacking on the feasibility of importing and marketing this product in Cuenca. Local market acceptance of WPC, the costs associated with its importation, possible regulatory obstacles, and effective marketing strategies for its introduction are aspects that have not yet been exhaustively analyzed.

The successful introduction of WPC in the Cuenca market faces a crucial challenge due to the inhabitants' and construction companies' need for more familiarity with this material and uncertainty about its acceptance compared to traditional materials. Lack of consumer knowledge generates doubts about adopting WPC in construction and design projects, especially if there is an ingrained preference for conventional materials such as wood (Acosta & Traslaviña, 2022).

This issue is compounded by potential regulatory challenges, as a lack of knowledge may contribute to the creation of regulations that only partially reflect the characteristics and benefits of WPC, affecting its introduction and success in the marketplace. In addition, the need for more information on consumer acceptance makes it challenging to assess the economic feasibility of importing WPC, which impacts logistics planning and supply chain efficiency, potentially increasing associated costs.

The situation also affects the competitive landscape. Low familiarity with WPC could intensify competition with similar products or established alternatives if not adequately addressed through marketing strategies and market education. Thus, addressing the need for more consumer awareness is essential, as it is intertwined with regulatory, logistical, economic, and competitive challenges, which must be comprehensively addressed to ensure the success of WPC in the Cuenca market.

The comparative analysis of market intelligence on the importation of WPC products and traditional products in the construction and decorative finishing sector in Cuenca is vital to understanding the trends and opportunities in this specific market. Choosing between WPC products and traditional products is a crucial decision for importing companies and players in Cuenca's construction and decorative sector.

Conducting a comparative market intelligence study on importing WPC products and traditional products in the construction and decorative finishing sector in Cuenca is of great value. This study would provide valuable information for making informed

decisions and evaluating the viability of importing WPC products compared to traditional products. Additionally, it would identify market opportunities, evaluate local market acceptance of WPC products, identify import obstacles and challenges, and develop strategic plans to maximize the potential of WPC products in the Cuenca market.

To summarize, a comparative market intelligence study on the importation of WPC products in Cuenca would help to make informed decisions, identify opportunities, assess market acceptance, address obstacles and challenges, and strategically plan the importation of WPC products in the construction and decorative finishing sector. This is essential to take advantage of the market potential and successfully introduce WPC products in Cuenca.

1.04 Tapitex M&B Cía. Ltda

Tapitex M&B Cía. Ltda. was founded in the city of Cuenca in 1991. It began as a company specialized in commercializing tapestries manufactured as other national ones.

With time, the company expanded its trade to new product lines focused on hardware (Decortool) and industrial upholstery materials. In this way, the facilities were also adapted to the new needs. In 2005, the company started the development of DecorFloor brand floating floors.

The company has successfully developed several solutions for construction, upholstery, carpentry, and industrial finishes. Therefore, this research aims to analyze the WPC market, identify opportunities and challenges for imports, and outline a clear roadmap that will allow Tapitex M&B to make informed decisions about integrating this product into its operation. The study will address potential demand, regulations, competition, logistics, and marketing strategies, among other things.

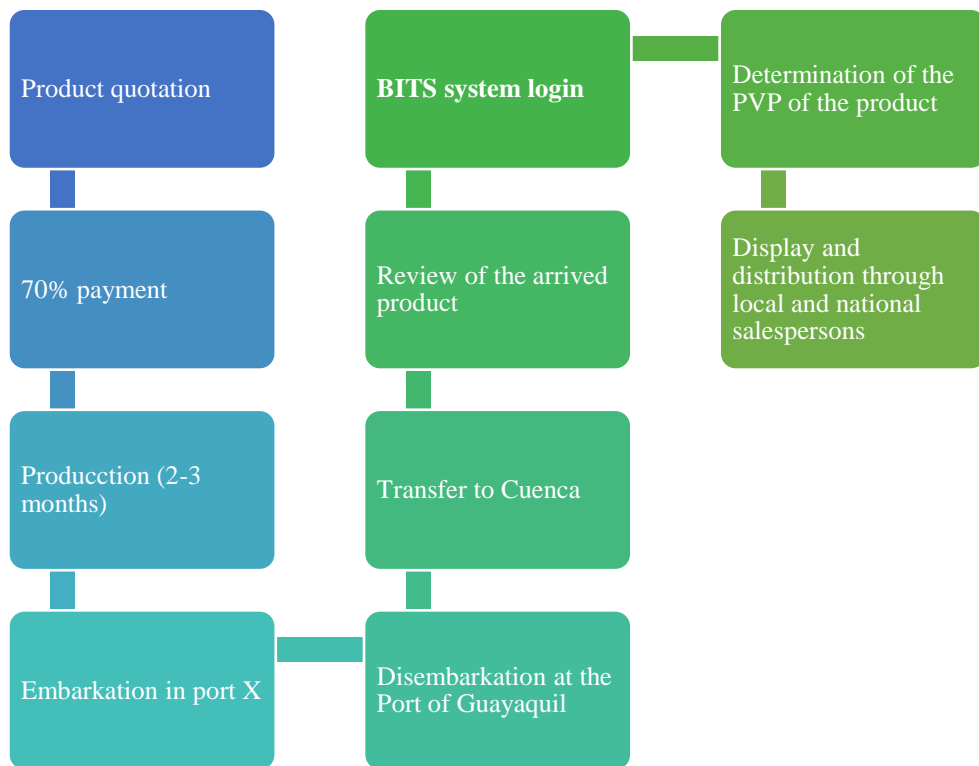
In this way, the primary beneficiaries of this research will include a comparative market intelligence study on the importation of Tapitex M&B products and the construction and decorative finishes sector in the city of Cuenca since it is expected to contribute to the accumulation of knowledge necessary to make informed decisions, identify opportunities, evaluate market acceptance, address obstacles and challenges, and strategically plan the importation of WPC products in this specific market. It is also expected to benefit students, teachers, and others interested in the subject, as detailed

information will be provided.

1.05 Management Model

The management model of Tapitex M&B is to import the products according to the following steps that describe the process of requesting the production, logistics, and distribution of the product, which is visualized in the following figure:

Figure 4
Tapitex M&B management model



Note: Flow chart of the purchase and import processes by the company. Adapted from Tapitex M&B Cia. Ltda. (2024)

The chart explains the following:

- **Product quotation:** This involves determining the price at which the product will be sold in the import market.
- **70% payment:** This stage involves making an initial payment of 70% of the total value of the product before production takes place. This payment can finance the initial costs and guarantee the customer's commitment.
- **The production phase:** is a comprehensive process that spans 2-3 months. It involves not just the manufacturing of the product, but also the procurement

of materials and necessary quality controls. The duration may vary depending on the product's complexity and quantity.

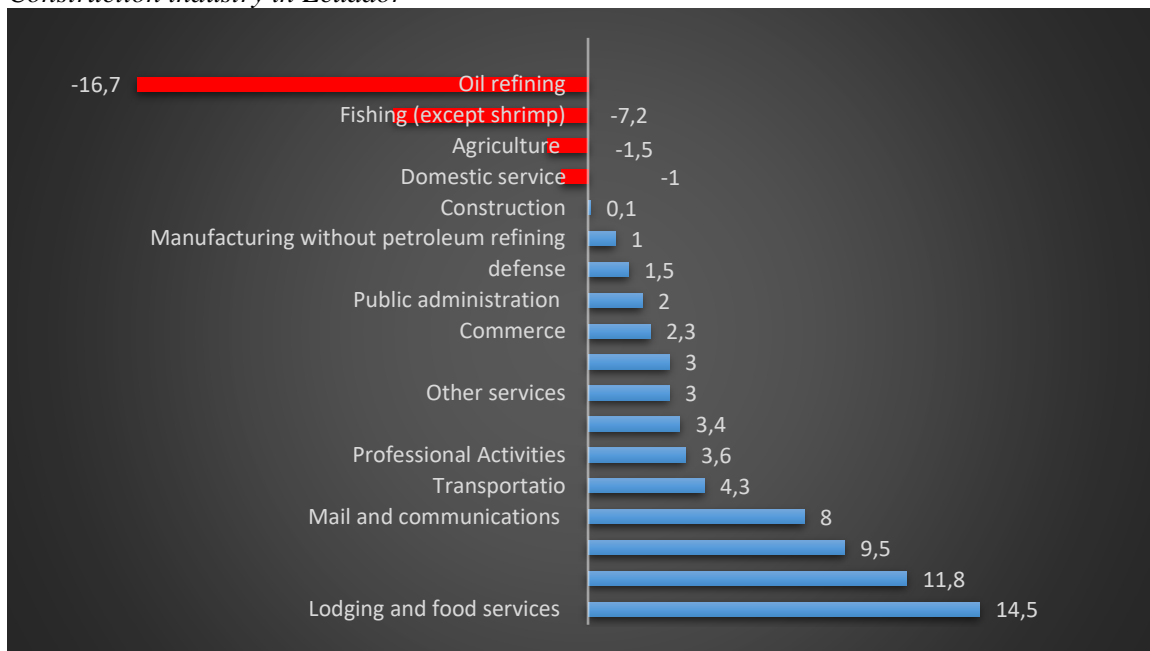
- Shipment at port X: After payment of the remaining 30%, the import process begins from port X, a major exporting country.
- Disembarkation at the Port of Guayaquil: The product enters the country through the Port of Guayaquil, one of the main ports in Ecuador.
- Transfer to Cuenca: The product is transported to the city of Cuenca, which may be the location of the company, the place of distribution, or the place of exhibition.
- Review of the arrived product: Before entering the BITS system, the product is reviewed to ensure it is in optimal condition.
- Entering the BITS system: The BITS system is a business information system used to manage and record product-related data such as inventory information, pricing, and distribution details.
- Determining the product's RRP: This is where the Retail Price (RRP) of the product is established. Various factors, such as production costs, profit margins, market demand, and competition, are considered to determine a profitable and competitive price.
- Display and distribution through vendors locally and nationally: Once the RRP has been determined, the product is displayed and distributed through vendors locally and nationally. This involves placing the product in stores, trade fairs, or other sales channels for customers to purchase.

The above steps describe Tapitex M&B's management model for the production, logistics, and distribution of a product, from initial payment to display and distribution through vendors. Quoting the product involves determining the selling price based on production costs and market demand.

1.06 Construction industry in Ecuador

According to the Central Bank of Ecuador (BCE) (2024), the construction sector experienced a growth of 0.1% in the third quarter of 2022. However, this growth is the lowest compared to 14 other sectors that showed positive figures during that period, as shown in the following figure.

Figure 5
Construction industry in Ecuador



Note: Quarterly National Accounts Bulletin taken from ECB (2024).

Although the construction industry has experienced 0.1% growth for two consecutive quarters as of the second quarter of 2022, more is needed to reach pre-pandemic levels in 2020. For more than three years, this sector has been in negative numbers.

In summary, the Gross Domestic Product (GDP) of construction in Ecuador decreased by 2% in 2022 compared to 2019 (pre-pandemic), going from 8.2% to 6.1%. Despite this, the construction industry remains the fifth most crucial sector of the Ecuadorian economy (Central Bank of Ecuador, 2024).

The National Institute of Statistics and Census (2023) explains that the construction industry in Cuenca, Ecuador, has been an important sector for the city's economic and urban development. Cuenca is one of Ecuador's largest cities and has experienced significant growth in recent years, driving demand for construction projects.

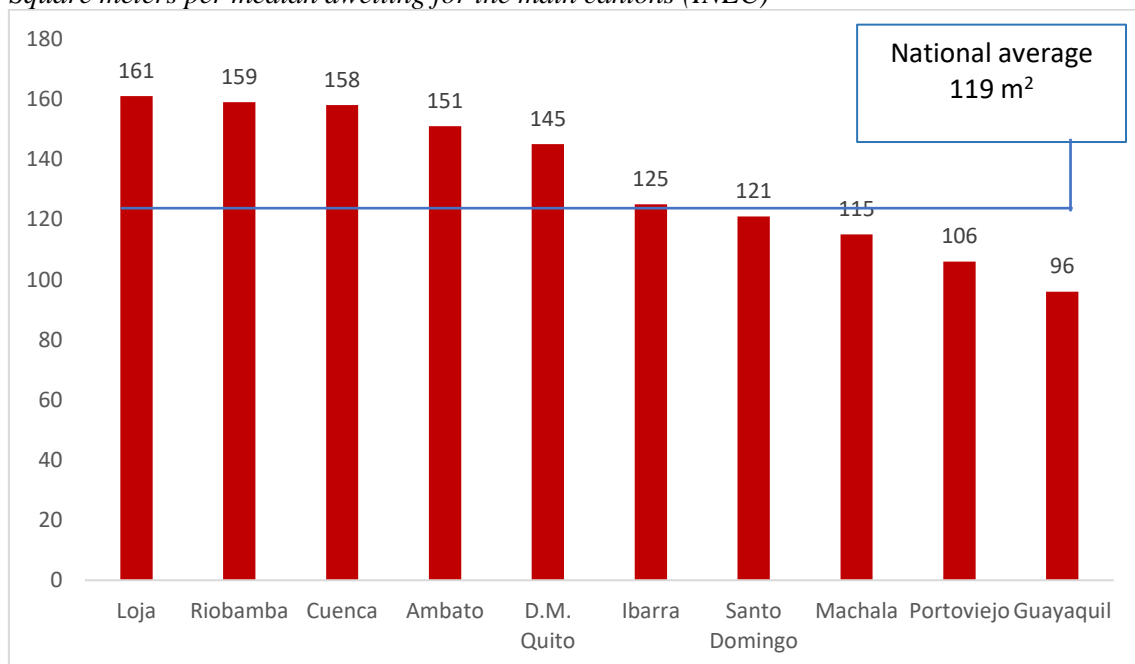
The construction industry in Cuenca, Ecuador, has not only been a key driver of the city's economic activity but also a catalyst for its urban development. The city's well-preserved colonial architecture has sparked interest in the preservation and restoration of historic buildings. Moreover, the industry has been instrumental in the implementation of various urban development projects, including the construction of new residential areas,

shopping centers, and tourist complexes, showcasing its versatility and contribution to multiple sectors.

The housing industry in Cuenca has been an essential sector of the city's economic and urban development. Cuenca is one of the largest cities in Ecuador and has experienced significant growth in recent years, which has driven demand for construction projects.

Housing, commercial buildings, and public infrastructure have been a fundamental part of Cuenca's economic activity. The city's well-preserved colonial architecture has generated interest in preserving and restoring historic buildings. In addition, urban development projects have included the construction of new residential areas, commercial centers, and tourist complexes.

Figure 6
Square meters per median dwelling for the main cantons (INEC)



Note: For the calculation of this indicator, only the area to be built of residential buildings and new constructions adapted from Asociación de Promotores Inmobiliarios de Vivienda del Ecuador (AVIPE) (2024) is included.

The Ecuadorian government has implemented policies and programs to encourage the growth of the country's construction industry, which has benefited Cuenca. These programs include tax incentives, financing facilities, and simplifying bureaucratic procedures for obtaining construction permits.

Sustainable construction and eco-friendly practices have also gained importance in

Cuenca's construction industry. Green building regulations and standards have been implemented to promote the efficient use of natural resources and reduce projects' environmental impact.

1.07 Methodology

This research, which delves into the unexplored territory of International Studies, specifically focuses on the comparative analysis of market intelligence. The novel objective of this study is to build a comparative analysis of market intelligence in the importation of WPC products and traditional products in the construction and decorative finishing sector in the city of Cuenca.

1.08 Desing and type of investigation

In this investigation, data from the qualitative approach are analyzed and interpreted, which is intended to provide further depth to the topic of market intelligence in the importation of WPC products and traditional products.

According to Hernandez et al. (2014), this type of study is a non-experimental research study in which the researcher studies the phenomenon and its variables without intervening in them. Thus, data collection related to market intelligence in the importation of WPC products is carried out without the researcher intentionally manipulating the information; the data is collected as it arises in its natural environment.

Among the methods used in the present research is the theoretical method, through which it is possible to simplify, observe, and expose the information collected, which is indispensable for the analysis and synthesis of the data related to the subject under study (Cruz, 2018).

According to the above, the theoretical method implies systematization that allows coherent ordering of the scientific information used in substantiating the subject. In this sense, the theoretical method makes it possible to analyze the information preliminary and verify the analyzed theories.

Similarly, according to Cruz (2018), the inductive method is applied. This method represents a cognitive process that aims to break down the subject in question into its

parts to analyze individually and subsequently study globally.

1.09 Research Techniques and Instruments

The research techniques used during the present research include the analysis of documentary data, a system that involves the discovery and analysis of referents. This is aimed at developing an in-depth understanding of the scenarios, in this particular case, the importation of WPC products (Cruz, 2018).

The documentary data, the bibliographic sources related to the variables, and the objective of analyzing gamification as a technique in the sector of construction and decorative finishes in the city of Cuenca are analyzed.

In the same way, the information available through a search for WPC suppliers is implemented as a source of research. Likewise, communication with suppliers is carried out to gather the necessary information to build a comparative analysis of market intelligence in importing WPC products and traditional products in the construction and decorative finishes sector in Cuenca.

1.10 Data analysis

After collecting the data, an analysis and diagnosis of the product in the international market and a diagnosis of the Tapitex M&B company are carried out. In this way, the best characteristics of the suppliers are defined, and information is collected worldwide. Finally, a comparative analysis of the previously selected suppliers is carried out.

CHAPTER 2

2. ANALYSIS OF SUPPLIERS

The analysis of suppliers, the product price, the freight, and the insurance value are fundamental elements to consider in international trade. One of the most commonly used commercial terms in this area is the Incoterm CIF (Cost, Insurance, and Freight), which establishes that the seller is responsible for the costs and contracting of maritime transportation to the port of destination designated by the buyer (International Chamber of Commerce, 2024).

It is convenient to explain that FOB (Free On Board) is an Incoterm widely used in international trade quotations and transactions. According to the International Chamber of Commerce (2024), FOB defines the responsibilities and costs associated with delivering goods from the seller to the named point of shipment, usually at a port or terminal.

FOB, the seller, is responsible for loading the goods onto the buyer's designated means of transport at the agreed location. Once the goods are on board, the responsibility and risks of loss or damage are transferred to the buyer (International Chamber of Commerce, 2024). In addition, the buyer assumes the costs and risks of transporting the goods from the point of shipment to the final destination, including insurance and customs costs.

In this respect, the Terminal Handling Charge (THC), according to the guidelines established by the International Chamber of Commerce (2024), is a charge that applies to container shipments and covers the costs associated with the handling and processing of containers at the port of loading. These costs include loading and unloading the containers from the vessel, temporarily storing them at the port, handling documentation, and providing other services related to container handling.

THC is generally charged by the port terminal or the corresponding port authority and may vary depending on the size of the container, the type of cargo, and the policies of each port. It is important to note that THC is charged in addition to the cost of ocean freight and other expenses associated with shipping goods. In this case, exporters and

importers should keep themselves informed about THC's costs and specific conditions at the relevant ports before engaging in international trade transactions.

In this order of ideas, exhaustive vendor analysis is essential to guarantee the quality and reliability of the products purchased. Evaluating their experience, reputation, and capabilities helps select the best fit for the buyer's needs and requirements. These WPC wood-plastic composite suppliers offer innovative and high-quality solutions to the market. Each has its focus and strengths, whether in export expertise, import specialization, advanced technology, or product variety.

These suppliers, without a doubt, are a testament to their unwavering commitment to excellence, product quality, and most importantly, customer satisfaction. Their extensive industry experience and relentless focus on research and development empower them to offer comprehensive, customized solutions for a myriad of building and decorating applications. Whether it's domestically or internationally, these suppliers have cemented their reputation as industry leaders in wood-plastic composite materials, offering durable, aesthetically appealing, and sustainable options that perfectly align with market needs.

In addition to market analysis, the price of the product must be competitive and fair. According to Jiménez (2021), this aspect involves evaluating different offers and comparing prices to obtain the best value for money. Likewise, freight, which includes maritime transport costs from the place of origin to the port of destination, must be calculated appropriately and negotiated to avoid surprises and ensure efficient logistics.

The value of insurance is also an essential element in the CIF Incoterm. The seller must take out insurance to cover the risks of loss or damage to the goods during sea transport (Jiménez, 2021). This insurance provides peace of mind to the buyer and guarantees compensation in case of unforeseen eventualities.

With respect to this point, the case of Novowood is referred to. It makes its quotation with CIF, which, according to the parameters established by the International Chamber of Commerce (2024), adapts to the regulations of the system established for this purpose. In this sense, it becomes an essential point of comparison between the different WPC suppliers.

Analyzing suppliers, product price, freight, and insurance value is vital when implementing the CIF Incoterm. The correct evaluation, negotiation of competitive prices, efficient management of maritime transport, and contracting of adequate insurance are essential elements to ensure a successful and satisfactory commercial transaction for both the seller and the buyer.

Supplier analysis is fundamental to assessing quality and reliability in the WPC (Wood-Plastic Composite) market. In this context, three outstanding factories are presented. Novowood is a company that has been developing WPC, known as NOVOWOOD, since 2004. On the other hand, two Chinese companies, Witop and Huangshan Huasu New Material Science & Technology Co., Ltd., regarding management with the market, these companies' warranties cover vices and defects in materials and the manufacture of the products.

In this regard, it should be noted that the decision not to work with Latin American suppliers is related to the need for more direct production in the region. In some cases, the imported products may be manufactured in other parts of the world, and more local supply is needed to meet the importers' needs.

In addition, the choice of suppliers may be influenced by other factors such as product quality, production costs, availability of raw materials, safety, and quality standards, as well as the reliability and capacity of these companies to meet delivery deadlines and R&D processes.

Suppliers' analysis throughout the study is based on the following comparison criteria: experience, product quality, warranty, and product availability, among other aspects. These are considered to be the relevant points taken into account when contracting WPC suppliers.

2.01 Suppliers characteristics

2.01.01 Novowood

It creates the WPC composite wood NOVOWOOD. A technical product unparalleled in the company's history has been developed, incorporating the values of respect for the environment and the adoption of ecological and sustainable technologies.

Today, this product is in perfect harmony with what is known as a circular economy. Through constant evolution and the pursuit of perfection, the company stands out in a market where only the highest quality of each component results in a superior product.

This supplier is an Italian company involved in producing and exporting materials. In this case, it uses the port of Genoa as a departure point for its exports. The port of Genoa, located on the northwest coast of Italy, is one of the most important ports in the Mediterranean and plays a crucial role in the region's international trade. It is a seaport that offers container loading and unloading services, as well as other facilities and services related to maritime transport.

It is important to note that, during the research process, Novowood was intended to be a completely recyclable product. In fact, at the end of its useful life, it can be shredded entirely and extruded again. Thanks to ongoing studies and research, the company has acquired knowledge that allows it to offer its customers a unique product that provides the appearance of wood but incorporates additives necessary to minimize maintenance requirements. This has led to the development of different product profiles for paving and wall cladding.

They use advanced technology and processes to create high-quality composite materials that are resistant to the elements, wear, UV rays and fading. Our deck boards, wall cladding, exterior profiles, fence slats, and other elements for architectural and interior design applications are not just low maintenance and insect-resistant, they also offer a long service life, ensuring that your investment is a lasting one.

In addition to its focus on product quality, the supplier is also concerned about sustainability. Its composite materials are made from a blend of recycled wood fibers and recycled polymers, which reduces environmental impact and promotes the circular economy. Novowood has gained recognition and has been used in renowned architectural and design projects worldwide. Their commitment to innovation, quality, and sustainability has positioned them as a trusted supplier in the wood-plastic composite materials industry.

2.01.01.01 Company Mission

Novowood stands for the meaning of respect for the environment and attention to eco-sustainable technologies. The construction sector uses approximately 50% of all raw materials and contributes to the emission of one-third of the CO present in Europe. For more than 20 years, the company has been dedicated to developing materials and systems that promote a circular economy with low environmental impact. NOVOWOOD is a unique composite wood (also known as technical wood) created from regenerated raw materials that have been given a second life, thus protecting the planet's natural resources.

2.01.01.02 Composite Wood of Novowood

As explained above, thanks to collaborative research with the Faculty of Materials Engineering of the University of Ferrara, the NOVOWOOD compound has been adjusted, tested and finally launched on the market. This composite has 14 additives in its composition, in addition to the two main macroelements: high-density polyethylene (HDPE) and wood flour.

It is certainly made of the highest quality materials, which allows it to take advantage of the positive characteristics of its various components and to eliminate the imperfections of natural wood. As a result, Novowood is a high-tech product that responds to the demands of a market increasingly focused on efficiency.

Figure 7
Characteristics of Novowood composite wood.



Note: Adapted from Novowood (2024)

The quality of the raw materials and additives used directly impacts the final product's performance and durability. The term WPC is used to describe a product that, at first glance, may appear simple and similar on the market but is composed of different formulations, resulting in products with very different characteristics and prices. Under the definition of WPC, there are numerous mixtures of wood and polymers that, once extruded, appear to be almost identical to each other.

Novowood is a material that maintains the aesthetic qualities of wood but avoids its defects. Its appearance is similar to wood, but thanks to advanced extrusion systems, it can be molded into various shapes and colors. This material combines the elegance and warmth of wood with the advantages of a polymeric material. The product is presented as an ecological and versatile alternative to using natural wood to create outdoor surfaces, wall cladding, skirting boards, and many other applications in solid and honeycomb sections.

2.01.01.03 Market price variability

Therefore, it is understandable why WPC products can have very different prices. If some additives fundamental to the durability of the final product are omitted, the result is a product that, at first glance, looks identical but has a high tendency to oxidize and, therefore, a shorter service life.

Novowood was meticulously developed to meet the demand for an exceptionally durable wood composite. Our research was laser-focused on creating a product that could not only withstand the most extreme conditions, including marine climates and direct solar radiation in hot climates, but also be a beacon of sustainability. These are challenging conditions for any material, let alone one that is also made from recycled materials. Novowood's unique selling point is its sustainability-it can be regenerated up to 20 times without the need for additional materials, making it a truly eco-friendly solution that piques the interest of the environmentally conscious.

Figure 8
Novowood quotes

The image shows a quote sheet for Novowood. At the top, there are logos for Novowood, a company logo, and Iperwood. The main table lists the product 'TABLA SKIN AIR DIM. 219X26X2900 MM COLOR MADERA' with a quantity of 1,600.80 units, a unit price of 116.900, and a 50% discount, resulting in a total price of 74,853.32. A 'TOTAL IVA EXCLUIDA' is also shown at the bottom.

OFERTA:						
DESCRIPCIÓN	UM	CANTIDAD	PRECIO UNITARIO €	DESCUENTO %	TOTAL €	
TABLA SKIN AIR DIM. 219X26X2900 MM COLOR MADERA	MQ	1.600,80	116,900	50+20	74.853,32	
TOTAL DE LA OFERTA						
TOTAL IVA EXCLUIDA			€		74.853,32	

Note: Novowood taken from Novowood (2024)

In this order of ideas, among the parameters to evaluate this supplier are those shown in the following table:

Table 3
Evaluation of Novowood

Evaluation Criteria	Summary of features
Experience	20 years.
Product Quality	It is of premium quality, with 14 additives and wood flour.
Commercial responsibility	If 60% of the merchandise arrives in a state not optimal for sale, the next 25% to 30% purchase will be discounted.

Product availability	The supplier manufactures it in 15 working days and loads it into the container in 3 days.
Customer service	The service is first class; they speak Spanish, and the response was instantaneous.
Warranty	100 years
Taxes	20%

2.01.02 Immaka

Immaka also stands out as a possible supplier of Tapitex M&B and is a national importer that stands out as a distributor in the local market. With a solid track record and experience in the sector, the organization has established itself as a reliable and recognized company that imports products from various categories. It focuses on providing integral solutions to its customers, offering high-quality products and personalized service. The importer is characterized by its commitment to excellence, efficiency in import processes, and customer satisfaction, which makes it a reliable and preferred supplier in the domestic market.

The company mentioned above is a national importer recognized for its experience and trajectory in distributing and commercializing modern construction materials. Its mission is to be a leader in this sector, committed to quality and service nationwide. Its vision is focused on excellence in importing high-quality products, providing added value to its customers, and offering exceptional service to its distributors. With a presence in the Ecuadorian market for more than 20 years, this company has been a critical player in advancing modern construction in the country. Its exclusive brand, Jireh, has contributed to the industry's change from traditional to modern, offering environmentally friendly solutions designed for the future.

Our company's standout feature is our focus on importing the highest quality products, all of which have international certifications. This dedication to quality and our commitment to the environment makes us the top choice for roofing, modern facades, and interior decoration nationwide. As a national importer, we have built a solid reputation in the distribution of modern construction materials. Our unwavering commitment to quality, customer service, and environmental sustainability has established us as a reliable and preferred supplier in the Ecuadorian market.

With a solid track record and experience in the sector, it has positioned itself as a reliable and recognized company that imports various products. Its focus on integral solutions, high quality, and personalized service has allowed it to consolidate as a reliable and recognized company in the import sector.


Indeed, the importer, who has spent over 20 years in the Ecuadorian market with its exclusive brand Jireh, has contributed to modern construction, changing the traditional for the modern, thinking ahead, and being environmentally friendly. They are considered the best option for quality roofs, modern facades, and interior decoration nationwide.

The company's construction line is composed of imported and certified materials with high international quality standards. In addition to its own brand products, Jireh, which complement its portfolio. Immaka joyfully offers a wide range of products and accessories necessary for the construction, remodeling and development of spaces of all types and uses, both for interiors and exteriors. Its construction line focuses on modern and sustainable projects, providing solutions for roofs, facades and interior design. Now, among the parameters to evaluate this supplier are those shown in the following table:

Table 4
Evaluation of Immaka

Evaluation Criteria	Summary of features
Experience	They have been in the market for more than 20 years
Product quality	Immaka's products are of medium-high quality, as their components are generic, just like their wood.
Commercial responsibility	5 a 10 years
Product availability	With an almost immediate availability, you can expect your order to be delivered within 3 to 4 days, ensuring a seamless experience.
Customer service	The attention could have been improved, the answers could have been faster, and they did not just answer my doubts about their services.
Warranty	10 years
Taxes	20%

Figure 9
Immaka quote



DESCRIPCION	CANTIDAD U	PRECIO UNITARIO	DESCUENTO	TOTAL
RANURADOS 3D WPC PARA EXTERIORES				
TEKA 201	750	\$24.96	30%	\$13,104.00
BLACK 202	750	\$24.96	30%	\$13,104.00
GREY 203	750	\$24.96	30%	\$13,104.00
WALNUT 204	750	\$24.96	30%	\$13,104.00
TOTAL	3000			\$52,416.00

Note: Taken from Immaka (2024)

2.01.03 Huangshan Huasu New Material Science & Technology Co., Ltd.

Huangshan Huasu New Material Science & Technology Co., Ltd. is a leading Chinese wood-plastic composite (WPC) company headquartered in Huangshan, China. Since its foundation, the company has specialized in the research, development, manufacturing, and marketing of WPC products.

This company is a wood-plastic composite (WPC) industry leader based in Huangshan, China. Since its foundation, it has specialized in the research, development, manufacturing, and marketing of WPC products. The company offers a wide range of WPC products, including wall cladding, fencing, outdoor decking, roof panels, and support posts. These products are widely used in construction and decoration applications in China and the international market.

This supplier is a leading WPC wood-plastic composite materials industry company based in Huangshan, China. Since its establishment, the company has excelled in researching, developing, manufacturing, and marketing WPC products. The company offers a wide range of WPC products covering various applications in construction and decoration. These products include wall cladding, fencing, outdoor decking, roof panels, support posts, and other related items. These products have become increasingly popular

in China and the international market due to their durability, strength, and advantages in terms of aesthetic appearance.

The company's wood-plastic composite materials are designed to combine the desirable qualities of wood and plastic. These materials are manufactured using advanced technologies that blend wood and plastic fibers, creating a final product that is weather, UV, moisture, and insect-resistant. In addition, WPC products are more resistant to wear and tear and require less maintenance than traditional wood.

The company is committed to quality and innovation in its WPC products. They use high-quality raw materials and follow rigorous production standards to ensure the durability and performance of their products. In addition, the company is committed to sustainability and environmental protection. By using recycled materials and reducing the demand for natural wood, their WPC products contribute to the conservation of natural resources and waste reduction. With its industry expertise and focus on quality and sustainability, Huangshan Huasu New Material Science & Technology Co., Ltd. has gained recognition and established a solid reputation in the wood-plastic composite market. Its WPC products are a popular choice for construction and decoration projects worldwide.

This organization has earned a solid reputation in the industry through its focus on technological innovation and product quality. The company uses advanced technology and state-of-the-art equipment to produce a wide range of WPC products, including boards, facade cladding, structural profiles, fencing, flooring, and other components for construction and architectural applications.

Figure 10

Products Huangshan Huasu New Material Science & Technology Co., Ltd.

HUANGSHAN HUASU NEW MATERIAL SCIENCE&TECHNOLOGY CO.LTD

Address:Chengbei Industrial Zone,Huizhou District,Huangshan City,Anhui Pro.China

Tel:+86-5593582638 Mobile:+86-13955955032

website:www.hshuasuo.com Email:wangliyan888@live.cn


PRICE LIST

To:Diego Manuel Balcazar Granja

From:HoH Ecotech-Cherry

FOB Shanghai

Date:March 22nd.2024

No.	ITEM NO.	PHOTO	SIZE(MM)	QUANTITY OF 40'HQ	USD PRICE/PIECE	TOTAL USD AMOUNT
1	218H26-A		wpc 1st generation flute panel size:218mm*26mm Length:2900mm/piece	3000pcs	\$2.26/meter \$6.554/piece	\$19,662.00
2	Shipping cost from Shanghai,China to Guayaquil					\$2,000.00
TOTAL COST						\$21,662.00

REMARKS:

- 1.Packing:safe-pallets packing
- 2.Payment terms:T/T with 30% deposit,the balance will paid against the B/L
- 3.Delivery time:25days for 1x40'HQ
- 4.Optional colors as below:



Note: Taked from Huangshan Huasu New Material Science & Technology Co., Ltd.

With a firm commitment to environmental sustainability, Huangshan Huasu New Material Science & Technology Co., Ltd. strives to use recycled and eco-friendly materials in its manufacturing process. Its WPC products offer superior features, such as weather resistance, durability, low water absorption, and easy maintenance, making them ideal for use in various indoor and outdoor applications.

The company has established a strong distribution network domestically and internationally, exporting its WPC products to numerous countries worldwide. Its commitment to quality, innovation, and customer service has contributed to its success and recognition in the global wood-plastic composite market.

Indeed, this supplier is a leading Chinese company in the wood-plastic composite materials industry. Its focus on technological innovation, product quality, and environmental sustainability has positioned it as a reliable and respected supplier domestically and internationally. Also, the following are the primary evaluation aspects of the supplier as mentioned above:

Table 5
Evaluation of Huangshan Huasu New Material Science & Technology Co., Ltd.

Evaluation criteria	Summary of features
Experience	It has been a factory for about 15 years.
Product quality	Although the product's quality is not the highest in the market, it is still the best in price. They use generic products precisely to reduce costs.
Commercial responsibility	If the product arrives with a defect, the damaged parts will have to be counted, and a replacement of the same quantity will be included in the next order.
Product availability	Being a manufacturer located in China, it takes about 1 to 2 months to manufacture the container, and the time from when it is shipped takes approximately 32 days.
Customer service	The attention from this factory was very good. They responded quickly, communicated easily, and were direct to the point about what we wanted to get.
Warranty	70 a 90 years
Taxes	20%

2.01.04 Shandong Witop Decor Materials Co., Ltd.

Shandong Witop Decoration Materials Co., Ltd. is a leading expert in innovative decoration materials. With 25 years of export experience, we have established our expertise in various markets. Our headquarters are located in Linyi City, Shandong Province, China.

At Shandong Witop Decoration Materials Co., Ltd., our mission is clear-to satisfy our customers' needs, promote continuous innovation, and create maximum value for

them. We achieve this through our main products, which include SPC flooring, PVC marble sheets, WPC wall panels, WPC ceilings, WPC decking, PVC moldings, WPC wood pipes, and related accessories. With over 40 production lines, we focus on providing high-quality products at competitive prices.

The company is a specialized manufacturer of innovative decoration materials. With 25 years of export experience, it has become an expert in various markets. It is headquartered in Linyi City, Shandong Province, China. The company has excelled in the market due to its focus on innovation, product quality, and customer service.

Their experience manufacturing and exporting decorative materials has enabled them to establish strong business relationships in various markets. The factory comprises ten central teams, including manufacturing, research and development, purchasing, quality control, sales, documentation, logistics, marketing, after-sales service, and design.

Witop Decor is part of the Chanta Group, a professional manufacturer of WPC products for indoor and outdoor use. They export 100 containers per month worldwide. To meet the various market demands, they have international certifications to guarantee their performance. They also have a professional quality control team to ensure that the products meet high standards before shipment.

Table 6
Quotation of Shandong Witop Decor Materials Co., Ltd.

SHANDONG WITOP DECOR MATERIALS CO.,LTD.																	
SALES CONTRACT																	
BUYER: TAPITEX MAR CIA, LTDA					NO.:SN0006												
AV. BERTARDO DE MENDOZA JOSE JOAQUIN DE OLMEDO 2-17					DATE: MAR 15TH 2023												
ADD: CIUDAD GUAYAS ECUADOR					PLACE OF ISSUE: LINA												
REC: H08R022001																	
SELLER: SHANDONG WITOP DECOR MATERIALS CO., LTD.																	
TEL: 866-539-86280 FAX: 866-539-862802																	
ADD: 80-21, LUSHANG CENTRE, LANSHAN DISTRICT, LINZI CITY, SHANDONG, CHINA																	
SN	DESCRIPTION	MODEL	PICTURE	COLOR CODE	SIZE(MM)	PACKAGE (PCS/CARTON)	CARTON	QTY PCS	UNIT PRICE USD/PC	TOTAL AMOUNT USD							
1	INTERIOR WPC WALL PANEL FRESH RAW MATERIALS			W102	210-20-2000	14	100	1400	3.80	5320							
2				W106		14	100	1400	3.80	5320							
3				W110		14	100	1400	3.80	5320							
4				W107		14	50	700	3.80	2660							
5				W105		14	100	1400	3.80	5320							
6				W102		14	50	700	3.80	2660							
7				W102		14	50	700	3.80	2660							
8				PM043-X		14	100	1400	3.80	5320							
9				W102 METAL BLACK		14	100	1400	3.80	5320							
10				W119		14	50	700	3.80	2660							
14			W105							18	30	540	2.70	1458			
15			W106							18	30	540	2.70	1458			
16			W102							18	30	540	2.70	1458			
17			PM043-X							18	30	540	2.70	1458			
18			W102							18	30	540	2.70	1458			
19	INTERIOR WPC WALL PANEL FRESH RAW MATERIALS BLACK BASEBOARD			W102	210-20-2000	14	15	210	2.59	543.9							
20				PM043-X		14	15	210	2.59	543.9							
21				W102		14	15	210	2.59	543.9							
22				W110		14	15	210	2.59	543.9							
										2*40HQ					1100	16360	56,399.60

SAYS USD FIFTY SIX THOUSAND THREE HUNDRED AND NINETY NINE AND CENTS SIX ONLY

Note: Taken from Shandong Witop Decor Materials Co., Ltd.

As a specialized manufacturer of WPC products, WITOP has a dedicated research and development department and an independent laboratory. It maintains a professional attitude and constantly updates and develops new products to provide a better customer experience. Over the years, they have developed four types of WPC coatings: grooved surface, embossed surface, co-extrusion, and two-color co-extrusion. These coatings have been accepted in many countries, and we have received favorable feedback from distributors and users.

They have invested in research and development to offer decorative products that stand out for their design, functionality, and durability. Their products include wall coverings, decorative panels, laminate flooring, suspended ceilings, and other interior decoration elements. Experience manufacturing and exporting decorative materials has enabled Shandong Witop Decor Materials Co., Ltd. to establish strong business

relationships in various markets. They have worked closely with distributors and contractors around the world, providing decoration solutions for residential, commercial, and construction projects.

The company prides itself on its commitment to product quality. They use advanced technologies and high-quality raw materials to ensure their products meet international standards. In addition, they have strict quality control at every stage of production, from material selection to packaging and delivery. The company also excels in customer service. They understand their customers' needs and expectations and strive to provide excellent service before, during, and after the purchase. Their customer service team is trained to provide technical advice, product recommendations, and personalized support.

Finally, Shandong Witop Decor Materials Co., Ltd. is a leading manufacturer of innovative decorating materials. Their focus on innovation, product quality, and customer service has enabled them to establish themselves as reliable partners in the decoration industry. With their expertise in manufacturing and exporting, they have achieved a strong presence in various markets and continue to be a preferred choice for decoration projects worldwide.

Similarly to the previous suppliers, we proceeded to evaluate each of the main criteria for Shandong Witop Decor Materials Co., Ltd.

Table 7
Shandong Witop Decor Materials Co., Ltd.

Evaluation criteria	Summary of features
Experience	They have been exporting products for more than 25 years.
Product quality	The product is of medium-high quality due to the wood they use and the chemicals they add. They also have a great variety of models and colors.
Commercial responsibility	A discount is given on the next purchase in case of any defect in the merchandise.

Product availability	As a manufacturer located in China, it takes about 1 to 2 months to manufacture, and the container from the time it is shipped takes approximately 32 days.
Customer service	Fast communication: With the seller, it is possible to make telematic contact and obtain additional information about their products and their factory, proving optimal communication.
Warranty	70 a 90 years
Taxes	20%

2.02 Purchasing and insurance management with suppliers

In general, the management with suppliers in the case of WPC products is regulated by a guarantee granted by these companies. Its unit price is €116.90, on which a discount percentage is applied. Likewise, freight in FOB terms has a value of \$1950 from the port of Shanghai to Guayaquil, and the value of the insurance premium is \$55. While the value of €1500 from Genoa to Guayaquil and the insurance premium from Italy is \$178.50 and Qingdao with a freight value of \$3330 and the insurance premium of \$100, which is done through the company Chubb insurance. Screen shot in CHUBB insurance web.

2.03 Freight quotations

Figure 11

Freight Quote Shanghai



Cuenca, 26 de marzo de 2024

Señores
TAPITEX M&B CIA. LTDA.
Ciudad.-

Atención: Sr(a) CLAUDIA CAZORLA

De mis consideraciones:

Por medio de la presente, nos es grato poner a su disposición nuestras tarifas para carga FCL-FCL, en términos FOB, con destino a GUAYAQUIL, ECUADOR.

FLETE MARITIMO:

PUERTO	40' HC	Cant.	Total
SHANGHAI	\$ 1,950.00	1	\$ 1,950.00

GASTOS LOCALES EN DESTINO:

	Valor	Cant.	Total	
VISTO BUENO FCL	\$ 100.00	1	\$ 100.00	BL. APLICA IVA
TIC	\$ 200.00	1	\$ 200.00	CONTENEDOR NO APLICA IVA
COSTO POR MANEJO DE PAGO LOCAL IMPORTACIONES	\$ 375.00	1	\$ 375.00	CONTENEDOR APLICA IVA

PUERTO: SHANGHAI

Subtotal flete + TIC: \$2150.00
Subtotal gastos locales en destino(Inc. IVA): \$532.00
TOTAL DE LA OFERTA: \$2682.00 (Inc. IVA)

Note: Taked from Faletza

Figure 12
Freight Quote Génova



FARLETZA
LOGÍSTICA
INTERNACIONAL
DE CARGA
Cotización No: 119796

Cuenca, 27 de marzo de 2024

Señores
TAPITEX M&B CIA. LTDA.
Ciudad.-

Atención: Sra(Sra). CLAUDIA CAZORLA

De mis consideraciones:

Por medio de la presente, nos es grato poner a su disposición nuestras tarifas para carga FCL-FCL, en términos FOB, con destino a GUAYAQUIL, ECUADOR.

FLETE MARITIMO:

PUERTO	40' HC	Cant.	Total
GENOVA	€ 1,500.00	1	€ 1,500.00

GASTOS LOCALES EN DESTINO:

	Valor	Cant.	Total		
VISTO BUENO FCL	\$ 100.00	1	\$ 100.00	BL	APLICA IVA
THC	\$ 200.00	1	\$ 200.00	CONTENEDOR	NO APLICA IVA
COSTO POR MANEJO DE PAGO	\$ 375.00	1	\$ 375.00	CONTENEDOR	APLICA IVA
LOCAL IMPORTACIONES					

PUERTO: GENOVA

Subtotal flete + THC: \$1822.93

Subtotal gastos locales en destino(Inc. IVA): \$532.00

TOTAL DE LA OFERTA: **\$2354.93** (Inc. IVA)

Note: Taked from Faletza

Figure 13
Freight Quote Qingdao



FARLETZA
LOGÍSTICA
INTERNACIONAL
DE CARGA
Cotización No: 120529

Cuenca, 5 de abril de 2024

Señores
TAPITEX M&B CIA. LTDA.
Ciudad.-

Atención: Sra(Sra). CLAUDIA CAZORLA

De mis consideraciones:

Por medio de la presente, nos es grato poner a su disposición nuestras tarifas para carga FCL-FCL, en términos FOB, con destino a GUAYAQUIL, ECUADOR.

FLETE MARITIMO:

PUERTO	40' HC	Cant.	Total
QINGDAO	\$ 3,300.00	1	\$ 3,300.00

GASTOS LOCALES EN DESTINO:

	Valor	Cant.	Total		
VISTO BUENO FCL	\$ 100.00	1	\$ 100.00	BL	APLICA IVA
THC	\$ 200.00	1	\$ 200.00	CONTENEDOR	NO APLICA IVA
COSTO POR MANEJO DE PAGO	\$ 375.00	1	\$ 375.00	CONTENEDOR	APLICA IVA
LOCAL IMPORTACIONES					

PUERTO: QINGDAO

Subtotal flete + THC: \$3500.00

Subtotal gastos locales en destino(Inc. IVA): \$546.25

TOTAL DE LA OFERTA: **\$4046.25** (Inc. IVA)

Note: Taked from Faletza

According to the above data, common factors among the suppliers are expected to be observed, including the capacity for export levels and similar cost values.

The following are the key aspects of supplier management according to the information provided:

Warranty: The supplier companies grant a conventional warranty to the end-user customer of the products. The warranty covers defects and flaws in materials and artistry, such as splintering, cracking, splitting, splitting, fraying, rotting, decay, and damage caused by insects or bacteria. The warranty is ten years from the date of purchase of the products.

Registration of purchase: During the purchase process, the end user customer must register his purchase on the companies' websites in the specific section of the warranty extension. In the registration, they must accept the terms and conditions of the purchase, provide the requested data, and attach a copy of the purchase invoice from the authorized distributor.

Registration deadline: The purchase registration must be completed within 60 days of purchasing the products. Please register within this period to ensure the warranty is valid.

Claim of defects or flaws: If the end user customer finds any vice or defect covered by the warranty, he/she must communicate it within 15 days after detection. This is done by sending an e-mail to the address, following the instructions indicated, and attaching the corresponding claim form with descriptions and photographs of the problem detected.

Evaluation and repair: Upon receipt of the claim, we reserve the right to examine the products or samples of the products to perform the necessary checks. If the products are found to be defective or defective under warranty, the supplier undertakes to repair or replace the products free of charge within a reasonable period.

Warranty exclusions: The warranty does not cover vices, defects, or lack of conformity arising from various circumstances, such as improper use of the products, execution of technical designs and specifications supplied by the end-user customer, unauthorized manipulation or modifications, normal wear and tear, or improper maintenance.

CHAPTER 3

3. SUPPLIER EVALUATION

The suppliers are evaluated using a Likert scale. The Likert scale is a technique commonly used in social research and surveys to measure people's attitudes, opinions, and perceptions towards specific topics (Hernández et al., 2014).

According to the authors above, the Likert scale consists of a series of statements or statements on which participants must express their degree of agreement or disagreement. A numerical or verbal scale usually represents these response options. In this particular case, the evaluation parameters will be assigned according to the following rating scale:

Table 8
Characteristics / evaluation levels

Characteristics/levels of evaluation	of 1 very low, 2 low, 3 average, 4 high, and 5 very high.
Experience	0 to 7 years: very low, 8 to 15 years: low, 16 to 20 years: average, 21 to 30 years: high, and 31 to 35 years: very high.
Product quality	5 premium, 4 high, 3 medium, 2 regular and 1 low
Commercial responsibility	Years and percentage
Product availability	3 to 4 days: very high, 15 days: high, 32 days: average, 2 months: low, and over 2 months: very low
Customer service and/or Constant advice	1 very low, 2 low, 3 average, 4 high, and 5 very high
Ongoing communication	1 very low, 2 low, 3 average, 4 high and 5 very high
Value of unit tariffs	1 very low, 2 low, 3 average, 4 high and 5 very high
Freight	1 very low, 2 low, 3 average, 4 high and 5 very high
Insurance	
FOB unit price	1 very low, 2 low, 3 average, 4 high and 5 very high

Warranty 1 very low, 2 low, 3 average, 4 high and 5 very high

Table 9

Novowood evaluation results

Evaluation Criteria	Priority Rating	Summary of Characteristics	Score					Weighted Total
			1	2	3	4	5	
			Very low	Low	Average	High	Very high	
Experience	3	20 years.			3			9
Product quality	5	It is of premium quality, with 14 additives and wood flour.			3			15
Commercial responsibility	4	If 60% of the merchandise arrives in a state not optimal for sale, the next 25% to 30% purchase will be discounted.			3			12
Product availability	3	The product is available once the order is placed. The supplier manufactures it in 15 working days and loads it into the container in 3 days.				4		12
Customer service	3	The service is first class; they speak Spanish, and the response was instantaneous.				4		12
Warranty	4	100 years			3			12

Unit tariff value	3	Novowood is rated low because it has a 20% tariff.	2	6
Freight	4	This rating is obtained because it offers an average freight rate for marketing.	2	8
Insurance	3	It obtains this rating because the company offers insurance that does not meet all customer expectations.	2	6
FOB unit price	3	It obtains this valuation because it offers a FOB price that meets marketing expectations.	4	12

Novowood's evaluation as a WPC supplier is based on different assessment criteria. In terms of experience, the company received a rating of 9. With 20 years in the industry, its experience is considered solid and reliable. In terms of product quality, Novowood has received a rating of 15. Its WPC is recognized as being of premium quality, with the inclusion of 14 additives and wood flour. This demonstrates its commitment to offering superior products to its customers.

This supplier's commercial responsibility has been evaluated with a score of 12. As part of their commercial policies, they offer discounts on future purchases if 60% of the merchandise arrives in less-than-optimal conditions for sale. This demonstrates their commitment to providing responsible, quality service. Regarding product availability, the company has obtained a score of 12. Once the order is placed, the supplier manufactures the product in 15 working days and loads it into the container in 3 days. This indicates that they are responsive and can meet demand efficiently.

The organization's customer service has been evaluated with a score of 12. Customers have highlighted the quality of the service received, including quick responses and Spanish translation. This demonstrates their commitment to customer satisfaction and service excellence.

They offer an impressive 100-year warranty on their products, reflecting their confidence in their durability and quality.

They have received a rating of 6 with unit tariff value, indicating an average value in this area. For freight, they have received a rating of 8, suggesting that they offer a transportation service with an average rating. In terms of insurance, they have obtained a rating of 6, which implies an average level in this area. Finally, regarding FOB unit price, it has obtained a score of 12, which indicates an average price for its competitors.

Finally, WPC's evaluation as a supplier is positive, with outstanding scores on key criteria such as product quality, experience, and warranty. While there are areas for improvement, such as unit tariff value and insurance, Novowood is considered a reliable and quality supplier in the WPC market.

Table 10
Immaka evaluation results

Evaluation Criteria	Priority Rating	Summary of Characteristics	Score					Weighted Total
			1	2	3	4	5	
			Very low	Low	Average	High	Very high	
Experience	3	20 years old.			3			9
Product quality	5	Medium-high quality, since its components are generic, as well as its wood.				4		20
Commercial responsibility	4	If 60% of the merchandise arrives in a state not optimal for sale, the next purchase will be			3			12

		discounted 25% to 30%.		
Product availability	3	The product's availability is almost immediate, around 3 to 4 days.	5	15
Customer service	3	The service is top quality, they speak Spanish and the response was instantaneous.	4	12
Warranty	4	30 years	2	8
Unit tariff value	3	The attention is first class, they speak Spanish and the response was instantaneous.	3	9
Freight	4	This rating is obtained because the company offers an average freight for marketing.	2	8
Insurance	3	You get this rating because the company offers insurance that does not meet all customer expectations.	2	6
FOB unit price	3	It obtains this evaluation because it offers a FOB price that meets the marketing expectations.	5	15

Based on the scores obtained for each assessment criterion, Immaka's evaluation as a WPC supplier is as follows: it has demonstrated extensive experience in the sector, receiving a score of 9 for this criterion. With 20 years of experience, it is positioned as a reliable and knowledgeable supplier in the WPC market. Regarding product quality, it has obtained an outstanding rating of 15. Its WPC is considered high quality, backed by 14 additives and wood flour. This indicates that the products offered are top-notch.

In terms of commercial responsibility, Immaka has received a rating of 12. Their commitment is reflected in their discount policy on future purchases if the goods arrive in sub-optimal condition. This shows their willingness to take responsibility and ensure customer satisfaction. Product availability has been evaluated with a score of 15. This supplier stands out for its rapid response capacity, manufacturing the product in 15 working days and loading it in the container in 3 days once the order has been placed. This ensures efficient and timely delivery of the ordered products.

Customer service received a score of 12. Clients have expressed satisfaction with the first-rate service received, highlighting the speed and efficiency of responses. In addition, the fact that customer service is offered in Spanish facilitates communication and understanding of the customer's requirements. Although it offers a 100-year warranty, this score indicates that there is room for improvement in this area and greater confidence in the durability and quality of its products.

The company scored 9 and 8, respectively, for the value of unit tariffs and freight. This indicates that the costs associated with tariffs and freight are considered average compared to other suppliers. In terms of insurance, it obtained a score of 6. This suggests room for improvement to provide greater shipment security and product protection.

Finally, regarding unit FOB price, it has received an outstanding rating of 15. This indicates that its prices are competitive and attractive compared to other WPC suppliers.

Finally, the evaluation of Immaka as a WPC supplier is primarily positive, with high scores on critical criteria such as product quality, product availability, and unit FOB price. However, improvements can be sought in areas such as warranty and insurance to provide an even more complete and reliable experience for customers.

Table 11*Results of evaluation of Huangshan Huasu New Material Science & Technology Co., Ltd.*

Evaluation Criteria	Priority Rating	Summary of Characteristics	Score					Weighted Total
			1	2	3	4	5	
			Very low	Low	Average	High	Very high	
Experience	3	15 years.		2				6
Product quality	5	It is not the highest quality on the market, but it is optimal in price.		2				10
Commercial responsibility	4	If the product arrives with a defect, the damaged pieces must be counted, and a replacement of the same quantity will be included in the next order.			3			12
Product availability	3	It takes about 1 to 2 months to manufacture, and the container, from the time it is shipped, takes approximately 32 days.			3			9
Customer service	3	The service is top quality, they speak Spanish, and the response was instantaneous.			3			9
Warranty	4	Ten years		2				8
Unit tariff value	3	The company is highly rated because it offers a good tariff policy to customers.				4		12
Freight	4	It gets this rating because it offers an average freight for marketing.				2		8

Insurance	3	It gets this rating because the average company offers insurance that only meets some customer expectations.	3	9
FOB unit price	3	It obtains this rating because it offers a FOB price that meets average marketing expectations.	3	9

Based on the scores obtained for each assessment criterion, the evaluation of Huangshan Huasu New Material Science & Technology Co., Ltd. as a WPC supplier is as follows: In terms of experience, this supplier has obtained a score of 6. This indicates that they have some experience in the industry, although less extensive than other evaluated suppliers. In terms of product quality, they have received a rating of 10. This suggests that their WPC is considered acceptable quality, although there may be room for improvement in offering higher quality products compared to other suppliers.

The company has received a rating of 12 in terms of commercial responsibility. This indicates that its commercial policies reflect its commitment to responsibility and customer satisfaction. Product availability has been assessed with a score of 9. This suggests that, in general, it has good product availability, although there may be instances where availability is limited.

Customer service has been rated a 9. This indicates that they provide acceptable customer service, although there may be opportunities to improve and provide a more efficient and satisfactory service. This indicates they provide a warranty, although there may be room for improvement and more favorable warranty terms.

This means that their unit tariffs are acceptable compared to other suppliers. In terms of freight, they have scored 8. This indicates that they offer an acceptable freight service, although there may be room for improvement in terms of efficiency and costs.

This suggests that they offer adequate insurance to protect products during transport. Finally, regarding unit FOB price, they have obtained a score of 9. This indicates that their unit FOB prices are considered acceptable compared to other suppliers.

In conclusion, Huangshan Huasu New Material Science & Technology Co., Ltd.'s evaluation as a WPC supplier is generally average, with ratings reflecting acceptable performance on most of the evaluated criteria. However, areas for improvement, such as expertise, product quality, and customer service, can be sought to provide a stronger and more competitive market experience.

Table 12

Results of evaluation of Shandong Witop Decoration Materials Co., Ltd.

Evaluation Criteria	Priority Rating	Summary of Characteristics	Score					Weighted Total
			1	2	3	4	5	
			Very low	Low	Average	High	Very high	
Experience	3	25 years.				4		12
Product quality	5	Medium-high quality			3			15
Commercial responsibility	4	In case of any defect in the goods, a discount is given on the next purchase.			3			12
Product availability	3	It takes about 1 to 2 months to manufacture, and the container, from the time it is shipped, takes approximately 32 days.		2				6
Customer service	3	With fast communication with the seller, making telematic contact and obtaining			3			9

		additional information is possible.		
Warranty	4	70 to 90 years	5	20
Unit tariff value	3	The company obtains an average rating because it offers a tariff that best meets the customer's expectations.	3	9
Freight	4	It obtains this rating because it offers an average freight for marketing.	3	12
Insurance	3	It obtains this rating because the company offers insurance that does not meet all customer expectations.	4	12
FOB unit price	3	It obtains this rating because it offers a FOB price that meets marketing expectations.	4	12

Shandong Witop Decoration Materials Co., Ltd. has been evaluated as a WPC supplier based on various criteria. Their experience, which has earned them a rating of 12, is a significant factor in establishing their credibility and reliability. This solid industry experience is a positive indicator for potential buyers and procurement managers.

Shandong Witop Decoration Materials Co., Ltd. stands out in terms of product quality, earning an exceptional rating of 15. This signifies that their WPC is of premium quality, surpassing that of other suppliers. Their high rating on this criterion underscores the excellence of their products, making them a top choice for potential buyers and stakeholders.

However, regarding product availability, they have received a low rating of 6. This suggests that they may need help maintaining a consistent supply of products, which may affect deliverability and customer satisfaction. Customer service received a rating of 9. Although not the highest rating, it indicates that they offer their customers acceptable and satisfactory service.

This demonstrates a remarkable commitment to customer satisfaction and confidence by offering a comprehensive and beneficial warranty for its products. About the value of unit tariffs, freight, and insurance, they have obtained ratings of 9, 12, and 12, respectively. These scores suggest that their values and services in these areas are average compared to other suppliers. Regarding the FOB unit price, they have obtained a score of 12. This indicates that their prices are considered competitive and fair concerning the quality of their products.

While the evaluation of Shandong Witop Decoration Materials Co., Ltd. as a WPC supplier is primarily positive, with outstanding ratings on critical criteria, there are areas for improvement. By focusing on enhancing product availability, they can potentially provide a more complete and satisfying experience for their customers. This constructive approach instills hope for a better customer experience in the future.

Figure 14
Qingdao tariff liquidation

Mantenimiento importaciones

Transaccion: OIM - ORDEN DE IMPORTACI... 001 OIM 00000786 Factura Proveedor: Moneda: DO 1 Referencia: Bodega: BODEGA IMPORTACI...
 Fecha Registro: miércoles, 15 de mayo de 2024 Tipo Comprobante: Fecha Llegada: 2024-05-15
 Fecha Emisión: miércoles, 15 de mayo de 2024 Id Credito Tributario: Proveedor: 003024 SHANDONG WITOP DECOR MATERIA... Pagado: Aut. Sri: Estado: PRODUCCION
 Encargado: Seguro: 100.00 Recargo: 0.00 ISD: 0.00
 Cuenta Contable: Flete: 3,300.00 Aranceles: 6,319.96 Salvaguardas: 0.00
 Auxiliar/Pedido: FODInfa: 158.00 FOB Adicional: 0.00 Diferenda Cambio: 0.00
 Transporte: Gasto: 1,602.47 Intereses: 0.00 Baja: 0.00

Detalles Series Lotes Gastos FormasPago

to	Descripcion	BO	Canti...	UN	Costo	Valor FOB	Seguro	Flete	Valor CIF	% Arancel	Valor Arancel	Gasto	ISD	%SALV	SALV	%Int	Interes	% Dif	Diferen
▶	REVEST INTER 3 ALTO CAFE WT002 CRT-14 (29...	B1	7421	UN	3.8	28199.8	100	3300	31599.8	20	6319.96	1760.47	0	0	0	0	0	0	0
			7421		3.8	28199.8	100	3300	31599.8	20	6319.96	1760.47	0	0	0	0	0	0	0

Observaciones:

Subtotal: 28,199.80
 Descuento: 0% 0.00
 Transporte: 0.00
 Otros: 0.00
 Subtotal Impuesto: 28,199.80
 Subtotal Exento: 0.00
 Iva: 15% 5,711.66
 Ice: 0.00
TOTAL: 45,391.89

Impreso Bloqueado Anulado Liquidado

Note: Screenshot of BITS system, pre-customs tariff clearance, Qingdao port.

As shown in the figure above, a duty value of 20% is declared from the port of Qingdao; the freight cost is \$3300. The total duty paid was \$6,319.96, and fodInfa 158.

Figure 15
Shanghai tariff liquidation

Mantenimiento importaciones

Transaccion: OIM - ORDEN DE IMPORTACI... 001 OIM 00000786 Factura Proveedor: Moneda DO 1 Referencia:

Fecha Registro: miércoles, 15 de mayo de 2024 Tipo Comprobante: Bodega: BODEGA IMPORTACI...

Fecha Emision: miércoles, 15 de mayo de 2024 Id Credito Tributario: Fecha Llega: 2024-05-15

Proveedor: 003024 SHANDONG WITOP DECOR MATER... Pagado: Aut. Sri: Estado: PRODUCCION

Encargado: Seguro 55.00 Recargo: 0.00 ISD: 0.00

Cuenta Contable: Flete 1,800.00 Aranceles: 4,703.40 Salvaguardias: 0.00

Auxiliar/Pedido: FODInfa: 117.90 FOB Adicional: 0.00 Diferenda Cambio: 0.00

Transporte: Gasto: 1,587.95 Intereses: 0.00 Baja: 0.00

Recalcular

#	Producto	Descripcion	BO	Cantidad	UN	Costo	Valor FOB	Seguro	Flete	Valor CIF	% Arancel	Valor Arancel	Gasto	ISD	%SALV	SALV	%Int	Interes	% Dif
1	229729	REVEST EXTERIOR CAFE OSCURO DC 2910X2.5...	BI	3000	LUN	7,220,666	21661.998	55	1800	23517	20	4703.4	1705.85	0	0	0	0	0	
				3000		7,220,666	21661.998	55	1800	23517	20	4703.4	1705.85	0		0		0	

Observaciones:

Subtotal: 21,662.00
 Descuento: 0% 0.00
 Transporte: 0.00
 Otros: 0.00
 Iva: 15% 4,250.75
 Ice: 0.00

Subtotal Impuesto: 21,662.00
 Subtotal Exento: 0.00

TOTAL 34,177.00

Impreso Bloqueado Anulado Liquidado

Note: Screenshot of BITS system, pre-customs tariff clearance, Shanghai port.

As shown in the figure above, a duty value of 20% is declared from the port of Shanghai; the freight costs \$1800. The total value of duty paid was \$4703.40 and fodInfa 117.90.

Figure 16
Génova tariff liquidation

The screenshot displays the 'Mantenimiento importaciones' window in the BITS system. It contains a form for entering importation details, a table of product information, and a summary section.

Form Fields:

- Transacción: OIM - ORDEN DE IMPORTACI... 001 OIM 00000786
- Fecha Registro: miércoles, 15 de mayo de 2024
- Fecha Emisión: miércoles, 15 de mayo de 2024
- Proveedor: 003024 SHANDONG WITOP DECOR MATER...
- Estado: PRODUCCION
- Aranceles: 15,366.37
- Flete: 1,800.00
- Seguro: 178.50
- FODInfa: 384.16
- Intereses: 0.00
- ISD: 0.00
- Salvaguardias: 0.00
- Diferencia Cambio: 0.00
- Baja: 0.00

Table:

#	Producto	Descripcion	BO	Canti...	UN	Costo	Valor FOB	Seguro	Flete	Valor CIF	% Arancel	Valor Arancel	Gasto	ISD	%SALV	SALV	%Int	Interes	% Dif
1	229787	REVEST INTER 3 ALTO CAFE WT002 CRT-14 (29...	BI	1600	UN	46.78333	74853.328	178.5	1800	76831.83	20	15366.37	1976.08	0	0	0	0	0	0

Summary:

- Subtotal: 74,853.33
- Descuento: 0%
- Transporte: 0.00
- Otros: 0.00
- Iva: 15%
- Iva: 13,887.35
- Ice: 0.00
- TOTAL: 108,061.63**

Note: Screenshot of BITS system, pre-customs tariff clearance, Genova port.

As shown in the figure above, a duty value of 20% is declared from the port of Genoa; the freight cost is \$1800. The total value of duty paid was \$15,366.37 and fodInfa 384.16.

It's crucial to consider all factors, not just the tariff liquidation costs, when making a decision. While option 2 may seem the most economical based on the above pictures, it's important to factor in the higher cost of freight in option 1.

Additionally, it is essential to consider other factors, such as geographical location, transit times, reliability of transportation, and additional services each port offers. These factors can influence the choice of the best option in terms of efficiency and cost-effectiveness in the specific context of your situation.

Tapitex M&B's company policy does not consider the RRP (Retail Price) as a determining factor in PWC marketing decisions due to company policies. Therefore, it's imperative to evaluate other factors to make informed decisions. The product quality, delivery time, customer service, additional costs, reputation, and supplier experience

stand out among these. By thoroughly evaluating these additional factors, a more informed decision can be made on the best option for marketing the PWC, aligning with Tapitex M&B's business policy and the company's specific business objectives.

Table 13
General comparative table

Evaluation criteria	Novowood	Immaka	Huangshan New Science Technology Co., Ltd.	Huasu Material & Co.,	Shandong Decoration Co., Ltd.	Witop Materials
Experience	9	9	6		12	
Product quality	15	15	10		15	
Commercial responsibility	12	12	12		12	
Product availability	12	15	9		6	
Customer service	12	12	9		9	
Warranty	12	8	8		20	
Unit tariff value	6	9	12		9	
Freight	8	8	8		12	
Insurance	6	6	9		12	
FOB unit price	12	15	9		12	
Total	104	109	92		119	

Overall, Novowood, Immaka, Huangshan Huasu New Material Science & Technology Co., Ltd., and Shandong Witop Decoration Materials Co., Ltd. all scored high marks on various criteria, such as product quality and business responsibility. However, each supplier has strengths and weaknesses in different areas, such as experience, product availability, and warranty. The choice of the most suitable supplier will depend on each marketing process's specific priorities and needs.

Supplier selection plans:

Plan A:

- Evaluate product quality: compare suppliers' product quality ratings. Novowood, Immaka, and Shandong Witop Decoration Materials Co., Ltd. all scored 15, indicating high quality. On this criterion, all three suppliers are solid choices.

- Consider product availability: Evaluate each supplier's product availability rating. Novowood and Immaka scored 12 and 15, respectively, indicating good availability. In this regard, both suppliers are reliable options.

- Review the warranty offered: Compare the warranty ratings of the suppliers. Shandong Witop Decoration Materials Co., Ltd. received a rating of 20, indicating an exceptionally favorable warranty. This can be a deciding factor in selecting this supplier, as it offers more excellent protection and confidence in the products.

Plan B:

Analyze experience: Compare the experience ratings of suppliers. Shandong Witop Decoration Materials Co., Ltd. received the highest rating, with a score of 12, indicating extensive industry experience. This experience may indicate its ability to provide quality products and solid service.

Evaluate customer service: Compare suppliers' customer service ratings. Novowood, Immaka, and Shandong Witop Decoration Materials Co., Ltd. all received ratings of 12, indicating acceptable service. On this criterion, all three suppliers are comparable choices.

- Consider unit FOB price: Compare the suppliers' unit FOB price ratings. Immaka and Shandong Witop Decoration Materials Co., Ltd. scored 15, suggesting they offer competitive prices. This aspect may be relevant when selecting one of these suppliers, as they offer a good balance between quality and price.

Plan C:

Evaluate commercial responsibility: Compare suppliers' commercial responsibility ratings. All suppliers, including Novowood, Immaka, Huangshan Huasu New Material Science & Technology Co., Ltd., and Shandong Witop Decoration Materials Co., Ltd., scored 12 on this criterion. This indicates they are all considered responsible and reliable in their business practices.

Review the value of unit tariffs, freight, and insurance: Compare the suppliers' scores on these criteria. In this case, Huangshan Huasu New Material Science &

Technology Co., Ltd. scored 12 on unit tariff value, and Shandong Witop Decoration Materials Co., Ltd. scored 12 on freight and insurance. These ratings indicate that both suppliers offer favorable terms in terms of additional costs associated with shipping and transportation.

Consider flexibility and adaptability: Evaluate suppliers' ability to adapt to specific project needs. In this regard, it is advisable to communicate directly with each supplier to discuss particular requirements and assess their flexibility and customization capabilities.

Selection and rationale:

Based on plans A, B, and C, the supplier selection decisions are tailored to specific priorities and needs. This ensures that the chosen suppliers align with our strategic goals.

- If product quality is the top priority, Novowood and Immaka are solid choices due to their high ratings on this criterion.

- If experience and warranty are valued, Shandong Witop Decoration Materials Co., Ltd. stands out, as it received the highest rating in experience and an exceptional rating in warranty.

- If a balance between price and quality is sought, Immaka and Shandong Witop Decoration Materials Co., Ltd. are options to consider, as they earned solid ratings in product quality, customer service, and FOB unit price.

- If commercial responsibility and logistical conditions are vital factors, Huangshan Huasu New Material Science & Technology Co., Ltd. may be an attractive option due to its favorable unit tariff value, freight, and insurance ratings.

Ultimately, the choice should be based on the weighting of the evaluation criteria according to the business's specific needs, as well as on direct communication with suppliers to obtain additional information and clarify any doubts.

CONCLUSIONS

The comparative analysis of market intelligence on the importation of WPC products and traditional products in the construction and decorative finishing sector in the city of Cuenca will provide valuable information for strategic business decision-making. It will allow identifying the advantages and disadvantages of the products and suppliers, as well as the opportunities and challenges in the market.

To stay current on trends and changes in the construction and decorative finishing sector, it is advisable to conduct additional and continuous studies in market intelligence. This includes researching new technologies, materials, and suppliers and monitoring customer demands and preferences.

The analysis and diagnosis of the product in the international market and Tapitex M&B will provide an in-depth understanding of the competitive environment and the company's strengths and weaknesses. This will allow for identifying opportunities to improve product import and marketing strategy.

Defining the best supplier characteristics and gathering global information will enable the selection and establishment of strong relationships with the most suitable suppliers. This will help ensure the quality of imported products and optimize the procurement process.

Supplier benchmarking will provide key information to help make informed decisions about which suppliers best meet quality, price, and product availability requirements. This will help establish solid business relationships and ensure customer satisfaction.

In this sense, according to the above, the best suppliers considered are Immaka and Shandong Witop Decoration Materials Co., Ltd., which are options to consider since they obtained solid ratings in product quality, customer service, and FOB unit price.

The analysis and diagnosis of the product in the international market and Tapitex M&B will provide an in-depth understanding of the competitive environment and the company's strengths and weaknesses. This will allow for identifying opportunities to improve product import and marketing strategy.

Defining the best supplier characteristics and gathering global information will enable the selection and establishment of strong relationships with the most suitable suppliers. This will help ensure the quality of imported products and optimize the procurement process.

Supplier benchmarking will provide key information to help make informed decisions about which suppliers best meet quality, price, and product availability requirements. This will help establish solid business relationships and ensure customer satisfaction.

In this sense, according to the above, the best suppliers considered are Immaka and Shandong Witop Decoration Materials Co., Ltd., which are options to consider since they obtained solid ratings in product quality, customer service, and FOB unit price.

Based on the analysis and diagnosis of the product in the international market and the opinion of Tapitex M&B, a deeper understanding of the competitive environment and the company's strengths and weaknesses can be obtained. This is essential to identifying opportunities for improvement in the import and product marketing strategy.

Once the best supplier characteristics have been defined and global information has been gathered, you can select and establish strong relationships with the most suitable suppliers. This careful selection will help ensure the quality of imported products and optimize the procurement process.

Comparative analysis of suppliers will provide critical information to decide which suppliers best meet quality, price, and product availability requirements. In this regard, Immaka and Shandong Witop Decoration Materials Co., Ltd. present themselves as options to consider because of their strong ratings in product quality, customer service, and FOB unit price.

By considering these factors, establishing strong business relationships with reliable suppliers, and meeting customer needs, Tapitex M&B can improve its product import and marketing strategy.

RECOMMENDATIONS

Exhaustive market research is recommended to evaluate consumers' needs and preferences at both the international and local levels. In addition, an internal evaluation of Tapitex M&B is suggested to identify areas for improvement and optimization in terms of its ability to compete in the construction and decorative finishes market.

Extensive research on potential suppliers, including their reputation, product quality, supply capacity, ethical practices, and pricing, is recommended. Maintaining open communication with selected suppliers and establishing clear, mutually beneficial agreements is also important.

Establishing ongoing supplier research and analysis is essential, as the market and conditions may change over time. Maintaining open communication with selected suppliers is also recommended to establish a collaborative relationship and keep abreast of new developments and advances in the construction and decorative finishes industry.

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