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**Final bachelor thesis**

**Entry strategy of Russian company “STOD” on Chinese market**

Bachelor Thesis

of the 4th year student of bachelor program,

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# INTRODUCTION

Various businesses are looking forward to establishing business relationships with overseas markets because they present new prospects. Many developing countries provide an untapped customer base that is which is willing to purchase items that developed nations possess for years. Furthermore, the growth of international channels such as the Internet has made it easier than ever for firms to communicate with customers, sellers and suppliers in other countries. Bringing a firm to a global level demands acquaintance with the conventions and many other aspects of the markets into which it is growing.

With consideration of a decreased number of foreign partners of “STOD” due to restrictions of export and import in Russia.**[[1]](#footnote-1)** It is impossible to compensate for the loss of markets for Russian wood producers by 100%. In the current situation, it is important to reorient supplies to other markets. Under the prevailing political and socio-economic circumstances, STOD chose China as the target market in order to increase its international stature and revenue-generating potential through entry into the overseas wood manufacturing business. The relevance of this work can be justified by company’s intention to improve its foreign standing and profitability growth potential by entering another foreign wood market.

The research goal of the term paper is to develop practical recommendations for LLC STOD’s entry for China’s wood market

The object of the research is the LLC “STOD”. The subject is the company's entry-strategy into the Chinese wood market.

**Under the goal, the following objectives were identified:**

1. To characterize STOD’s company background and product catalog and to state the managerial problem;
2. To identify the tools used to conduct the target market analysis and entry strategy development;
3. To examine the China’s market and the influence of external factors on company’s output potential;
4. To select the suitable entry mode for “STOD” for Chinese wood market
5. To design corresponding recommendations on creation of Chinese market entry-strategy and evaluate corresponding risks.
6. To assess the financial profitability of the project

Following paper’s main body is composed of three chapters. The first chapter reflects the general description of LLC “STOD”. Second chapter contains the analyzes and evaluation of chosen foreign market. Last chapter is devoted to recommendations for the procurement of the products and evaluation of the attractiveness of the project.

For the purpose of present consulting project composition, both primary and secondary data was used. Secondary data was retrieved from qualitative sources (international market reports, market analysis methodologies, scientific articles on mechanisms of action of the chemicals, news articles) and quantitative ones (statistical data bases). Primary qualitative data was obtained though conduct of in person unstructured interviews with member of the company’s top-management body (CEO).

# Part 1: GENERAL CHARACTERISTICS OF THE COMPANY

## STOD company history

LLC STOD produces high strength laminated veneer lumber — Ultralam™ LVL.[[2]](#footnote-2) The company provides a reliable cost effective and easy to use material utilized to build green energy efficient prefabricated houses, agricultural and sporting facilities, as well as to refurbish old buildings and construct garrets. Modern Lumber Technology Ltd. protects and maintains forest resources of Russia.

The production of Ultralam™ LVL began in 2009 at “Taleon Terra” Plant located in the town of Torzhok, Tver Region, Russia.

It’s an innovative and unique project aimed to modernize Russia’s wood working industry. “Taleon Terra” Plant is the largest LVL manufacturing facility in Europe with the annual capacity of 150.000 m3. Ultralam™ LVL products are manufactured using the most state-of-the-art technologies, i.e. continuous pressing technique with microwave pre-heating enhancing the resin penetration into the wood structure and thus forming a new homogenous high-strength material.

Ultralam™ LVL production is waste free, the waste is used in the premium class fuel pellets. Annual capacity of the pellet line is 60.000 tons. In July 2016, MLT Ltd. commissioned a new OSB Production Facility with the annual capacity of 500.000 m3, and a Prefabricated Houses Production Line with the annual capacity of 40.000 m2 of living area.

The central office of the STOD company is located in the city of St. Petersburg. The average number of employees is 1,294. According to OKVED , the main activities of the company are: “Manufacture of plywood, wood veneered panels and similar laminated materials, wood slabs made of wood and other lignified materials”.[[3]](#footnote-3)

Among the all “STOD” facilities following production divisions do exist:

**Taleon Terra** is a factory for the production of Ultralam LVL. Taleon Terra's production capacity is 150 thousand m3 with the prospect of increasing to 250 thousand m3 per year. The plant has launched the world's only 60-meter Dieffenbacher press for continuous LVL production. This means that the length of the beams is not limited and depends only on the needs of the customers and the possibilities of transportation.

The supplier of the main equipment is — Dieffenbacher[[4]](#footnote-4), Germany — the only international supplier of presses for continuous gluing of several layers of veneer in the production of Ultralam LVL. The products are certified in many countries of the world.

**«Taleon Arbor»** OSB Production Plant

In July, 2016, a new cutting edge production plant for manufacturing of environmentally friendly OSB-3 and OSB-4 type oriented strand boards was commissioned in Torzhok, Tver Region. The capacity of new «Taleon Arbor» production plant is 500,000 m3 per year.

The plant incorporates innovative high-class equipment by the German manufacturer, Dieffenbacher GmbH.

Factory for the production of house kits and additional processing of LVL timber: The production line of the plant allows to produce up to 40,000 square meters of living space and produce complex large-span structures with a span of up to 40 meters. Cold pressing makes it possible to produce LVL beams with a cross section of 600X2000 and a length of up to 18 meters. There is also an additional line of painting and treatment with antiseptics and flame retardants.

Wood-fuel pellets production line: Talion Terra is one of Russia's largest producers of premium wood—fuel pellets (white). The capacity of the pellet production line is 60 thousand tons per year. Shipment can be carried out in bulk, in big bags and packed for sale in small bags (15-20 kg).

Forest Logging Division: MLT Ltd. is a holder of forest concession, located in Tver Region, with the area of annual allowable cut of 1.4 million m3.

**Following services are being offered by the company:**

*LVL Structures of Any Degree of Complexity*:

* + house frames
  + rafter systems
  + roof systems
  + floor structures
  + frame structures
  + trusses
  + glued beams
  + various customized parts
  + in-plant check assembly of structural elements
  + on-site installation of LVL structures
  + installation supervision of LVL structures

*Additional Processing of LVL structures:*

* + protective treatment for transportation
  + sanding
  + preservative and fire-retardant treatment
  + fire and bio-resistant coatings
  + painting

*Structural design:*

* + architectural Design
  + 3D Modeling
  + structural design, selection of LVL cross-sections
  + development of project documentation including drawings and details of timber structures
  + development of assembly drawings
  + finalization of customer’s structural drawings

*Supply of auxiliary materials:*

* + fasteners
  + thermal insulation
  + embedded details, foundation anchors (including non standard, customized details).
  + films

*Development of Logistic Solutions for Product Deliveries all Over Russia:*

* + standard products (by Euro trailers up to 36.5 cubic meters, 13,500 mm long)
  + outsized elements, structures

## Product catalog description

***LVL (laminated veneer lumber)***

Since ancient times, wood has been one of the most popular and widely used building materials. However, despite all the advantages of wood, it also has a number of significant disadvantages -susceptibility to rot, flammability, size instability when environmental conditions change, weakening of strength due to knots and defects of wood, insufficient density, limitation in linear dimensions, warping under the influence of a humid environment, cracking, drying, etc. All these shortcomings limited the scope of application of lumber in construction. But today, thanks to the latest technologies, the tree is experiencing a truly rebirth. New high-tech methods of wood processing have radically changed the properties of this material and made it possible to create products based on it that multiply all the advantages of wood and practically negate all its disadvantages. These materials have fundamentally new characteristics that make it possible to use wood products where previously it was only possible to dream about it. It is to such high-tech developments that LVL (LVL) timber[[5]](#footnote-5), a product of the woodworking industry, which is a beam, boards and beams, belongs.

LVL (LVL) timber (from the English Laminated Veneer Lumber) is a high–strength composite structural material based on an array of natural wood, reinforced and technologically improved. As a result of a complex technological process, a homogeneous material with a unique set of technical characteristics is obtained. The technical characteristics of LVL timber significantly exceed the parameters of solid timber, glued wood and high-class lumber. The main raw material for the production of LVL-Timber is veneer of wood of various breeds (different manufacturers use different tree species or a mix of them). The term LVL (English Laminated Veneer Lumber) was introduced in the 1960s by Wayerhauser (USA), where the product itself was developed and the first LVL production line was installed. To date, LVL timber is rightfully considered the best wood material in terms of manufacturability, reliability and mechanical characteristics.

The outstanding properties of LVL timber put this material on a par with the most promising and technologically advanced structural materials used in construction today.

LVL timber has strength characteristics unique in its properties, for example, the modulus of elasticity (stiffness) of LVL timber is 24% higher than that of massive spruce, bending strength and fracture strength are more than twice as high. These physical indicators provide a high load-bearing capacity of the LVL beam with smaller dimensions in cross-section, which in turn significantly reduces the total volume of necessary lumber. Such high rates are associated with a number of specific features of the production of LVL timber, which ensure the absence of defects in the structure of the material caused by natural defects of wood

Due to its layered structure and LVL production technology, the timber is a completely homogeneous material with unchanged mechanical characteristics along its entire length and has constant physical properties that do not depend on seasonal factors, i.e., in fact, material with a homogeneous symmetrical structure that does not change its properties throughout the entire service life. Unlike conventional lumber, it is able to maintain accurate linear dimensions regardless of seasonal factors, environmental changes and climatic conditions

LVL does not deform and does not warp from dampness, does not crack and does not rot, has minimal indicators of natural shrinkage, practically does not absorb moisture, and therefore the beam's own weight remains unchanged in a humid environment. The stability of the linear dimensions of the LVL timber guarantees high accuracy of the mating parts, so that the timber structures are durable and do not lose their attractiveness over time, which cannot be said about products made of ordinary wood, which are prone to swelling and warping. LVL timber, unlike metal and reinforced concrete, has increased resistance to aggressive environments, such as water vapor, ammonia, salt vapor, etc., and therefore it is indispensable in the construction of water parks, swimming pools, agricultural and industrial structures.

LVL timber has a higher fire resistance compared to conventional timber, which is achieved by high layering and lower porosity. The adhesive phenol-formaldehyde resin used in the production of LVL is neutral to oxidation and does not contribute to ignition. The density and absence of cracks prevents the penetration of fire and temperature deep into the material. At a temperature of 300 ° C on the surface of the LVL beam, the beam retains its properties for 30-60 minutes. At the specified temperature, the beam is slowly charred at a rate of 0.6 mm/min. on the planes and 1 mm/min. on the ends.

The use of LVL timber makes it possible to significantly improve and accelerate the construction technology. The use of LVL timber allows to get away from welding work and use equipment of lower load capacity on the construction site. The cost of LVL timber slightly exceeds the average prices for other lumber, but products made using LVL timber do not lose their geometry even after 10 years, which certainly justifies the manufacturer's costs. Compared with such traditional building materials as metal and reinforced concrete, LVL has an optimal ratio of strength and weight indicators. This factor is especially important for low-rise construction, because with a sufficient margin of safety, LVL structures do not require a reinforced foundation and are convenient for installation: they can move along the ground and climb to the upper floors without the use of special equipment. As a result, the construction of buildings using LVL requires significantly less financial and time costs than the construction of brick and concrete.

The structural and mounting properties of LVL provided this material with the widest distribution in the countries of North America and Western Europe. The worldwide proven technology of frame house construction using this material allows to build energy-efficient houses of any architectural shape and any size in the shortest possible time. And, regardless of whether the house will be a modest country cottage or a representative mansion of a large area, they will be united by one thing: reliability, quality and comfort provided by a specially created material for them — a "super tree" LVL.

  
  
Fig 1. Standard LVL panel

***Oriented strand board (OSB)***

OSB is a multilayer sheet formed by pressing rectangular flat chips under high pressure and temperature conditions, using a water-resistant resin bonding.

The tongue-and-groove plate got its name due to the fact that one edge of the plate has a protrusion (tongue-and-groove) that enters the groove of the neighboring plate. This connection allows to achieve high speed and ease of assembly and significantly reduces the cost of installation. The use of OSB-3 with a "spike-groove" edge increases the performance of heat and sound insulation several times, since there is a limited possibility of noise and cold air entering the room through the joints between the plates. Tongue-and-groove OSB-3 are used mainly for flooring.

Ultralam™ OSB[[6]](#footnote-6) products are oriented strand boards of OSB-3 and OSB-4 types distinguished by their high strength and moisture resistance.

OSB-3 — load-bearing plates in conditions of high humidity.

OSB-4 — plates bearing a significant mechanical load in conditions of high humidity.

  
Fig 2. Standard OSB panel

***Prefabricated Houses***

The construction of frame houses is a modern technology that allows to build comfortable, cozy, environmentally friendly housing at an affordable price in a short time. Frame houses offer a wide field for creativity: the same house built for different people can look different. This is made possible by numerous finishing options.

The technology of construction of frame houses of the Talion-Terra Plant is unique. The frame of the house is based on strong load–bearing structures made of high–quality laminated veneer lumber - LVL timber. LVL timber is also used for the walls of internal partitions.

A modular house means durability, energy efficiency and high speed of installation. Each house undergoes a test assembly at the factory, is packed in a 40-foot standard container and sent to anywhere in the world, where it is assembled turnkey during the day.

The basic module is mounted on a turnkey basis on a ready-made foundation in three eight-hour working days, i.e. in 24 hours in absolute terms, and the warm closed circuit is mounted in 6-8 hours, the rest of the time is necessary for finishing the internal and external finishing of the installation of equipment and laying communications. Installation is possible under any weather conditions allowing the operation of the crane.



Fig 3. Ultralam frame house[[7]](#footnote-7)

Those are the main wood manufacturing products that company STOD is producing.

## STOD current business model

Due to the possibility of foreign market entry influencing logistical, marketing, and other types of activities, which are generally included in the traditional business model of the company, conducting a preliminary business model analysis is required for the creation and formulation of entry strategy. Alexander Mishin, the company's CEO, picked the overseas market for the expansion. The expansion will take place in the People's Republic of China. First and foremost, the organization may confront challenges in terms of marketing and operations. Second, the company's business model may limit its ability to expand into other markets. For the reasons stated above, it is critical to examine the company's business model and concentrate on prospective transformation zones.

The most commonly used instrument proposed by Alexander Osterwalder[[8]](#footnote-8) and Yves Pigneur to examine the business model is called Business Model Canvas. The business model canvas is a tool for describing, visualizing, evaluating, and updating business models. It explains how an organization generates, distributes, and captures value. The model consists of 9 components: key partners, key activities, key resources, value proposition, customer relationships, channels, customer segments, cost structure, and revenue streams.

The second type of analytical tool is Lean Canvas Business Model, which was presented by A. Maurya[[9]](#footnote-9), as an adaptation of Alexander Osterwalder’s [Business Model Canvas](https://businessmodelanalyst.com/business-model-canvas). The Lean Canvas is a business modeling tool that may be used to break down a startup idea into its most critical and dangerous assumptions. The model presents: problems, solutions, key metrics, and unfair advantage, while not carrying the key partners, key activities, key resources, and customer relationships blocks.

Considering the two business models stated above, the original form of the Canvas business model was chosen. The regular Canvas model contains more information about products, key partners and activities, and customer relationships than the Lean version of the model. Furthermore, the Lean Canvas is heavily influenced by the lean startup process and serves as a tactical blueprint to help entrepreneurs navigate their path from concept to launch.

Osterwalder’s Business Model Canvas was also selected because new essential partners may emerge when entering a new market. As a result, this model will provide a more comprehensive view of the company, which will be useful in compiling the following sections. Simply said, a business model is a description of how a corporation earns or intends to make money. As a result, the Business Model Canvas will provide more information for putting together the entry mode. Finishing on this point, the Business Model Canvas is the most popular strategic management template.

1. Business Model Canvas of company STOD

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Key Partners: | Key activities: | Value Propositions: | | Customer relationships: | Customer segments: |
| * Engineering and supplier of basic technological equipment   Dieffenbacher   * Engineering and supply of equipment for managing the stock exchange of raw materials and wood preparation   Holtek   * Equipment Supplier Schwabedissen * Leonhard Weiss Construction company * Official distributor Merrani * Official distributor Palp-Nord | * Manufacture of products * Research in unique production of timber products * Creation and launch of product * Quality control | B2B:   * Customization for customer * Product accessibility * Affordable price * Product usability   B2C:   * Customization for customer * Product usability * Affordable price | | B2B & B2C:   * Information support on the website. * Personal service in sales office | B2B:   * Construction shops * Construction companies   B2C:   * Consumers of Ultra Houses * Online marketplaces |
| Key resources: | Channels: |
| * Human resources * Material resources * Informational resources * Financial resources | * Official website * Social Media * Events/Forums * Online marketplaces * Trading divisions * Word of mouth recommendations |
| Cost structure: | | | Revenue streams: | | |
| * Product manufacturing and development costs * Transportation costs * Employees’ salaries and bonuses * Depreciation of equipment * Office rent * Taxes | | | * Regular income from partnership contracts * Income from one-time transactions | | |

*Composed by author on* *the basis of unstructured interview with CEO of LLC “STOD”*

**Customer segmentation:**

This block is devoted to identification target audience segments. Because the constructed strategy and business model will be useless if the target audience is inaccurately recognized, segmentation will be given special attention in this work.

1. Ultralam customers segmentation

|  |  |  |
| --- | --- | --- |
| Commercial transaction | Customer segment | Key characteristics |
| Busines-to-business | Construction shops | Reselling products |
| Construction companies | Using products for their own needs |
| Business-to-consumer | Online marketplaces | Selling products through their own platform |
| Customers of Ultra Houses | Seeking to purchase a house to live in |

*Composed by author on the basis of unstructured interview with company CEO Mishin A.I.*

First of all, the B2B sector has to be talked about, which is the main reference point and source of income for the company. The B2B sector was chosen as the main one due to the fact that STOD is a large manufacturer of chipboard materials, which is not profitable to sell its products (OSB, LVL) directly to a buyer who, for example, wants to sheathe his country house with OSB-3 panels for additional insulation.

First, the cooperation with construction stores will be highlighted. Due to the fact that the products of Ultralam are focused on the construction of residential, municipal and administrative as well as other public facilities. The main types of products (OSB, LVL) are presented in construction stores. Leroy Merlin is the main buyer of STOD products, as well as one of the largest construction stores in Russia with a huge network consisting of 112 stores in 56 cities of Russia. Leroy Merlin stores have 18 positions of Ultralam chipboard materials, 16 of which are OSB panels of different dimensions and 2 are LVL bars.[[10]](#footnote-10) Also, the company's products are actively sold through OSBmarket (a major seller of OSB in Russia), as well as through such stores as Optstroymarket and Pulse of Prices

Construction companies are also an important consumer segment. They purchase LVL Ultralam for the construction of frame houses, swimming pools, shopping complexes and swimming pools.

Analogical situation is observed in the foreign countries, to which STOD exports its products.



Fig 4. The countries to which the supply of wood-chip materials made by STOD. Data source: ultralam.com[[11]](#footnote-11)

As can be seen from Figure 4, the woodworking company STOD is represented in many countries around the world. Ultralam products are exported to Europe, USA, Australia, the Middle East, Japan, Taiwan and South Africa. From which it can be concluded that in addition to the domestic market, the company is focused on exporting to other countries. Due to the sanctions, deliveries to Europe cannot be carried out, which, accordingly, will negatively affect the company's revenues.

Speaking of the B2C sector, STOD company is engaged in the production of frame-panel houses, which differ in: simplicity of construction, short construction time, and also have a low cost. These houses are manufactured at the Ultralam™ Talion Terra factory (Torzhok) and are already sold in annual form directly to the consumer.

The next segment of consumers is online marketplaces. Ultralam products are presented on very popular online marketplaces in Russia, such as: Yandex Market and Ozone. On these websites, the company's products are presented in wide volumes. The STOD company uses similar marketplaces to sell goods to the customer without spending money on such things as advertising and delivery. Ultralam products are delivered to the warehouses of Yandex Market, which in turn sells wood-chip materials, for which they take a percentage of sales

**Value proposition:**

The Business Strategy Canvas' value proposition is a unique combination of products and services that add value to the customer by solving a problem or adding value to the consumer.

Continuous pressing technology with microwave preheating is used to manufacture Ultralam LVL, which allows for better penetration of the resin into the wood structure and the formation of a new, homogeneous, high-strength material. Ultralam LVL is manufactured using the most up-to-date LVL production technology available: continuous pressing technology with microwave preheating. Another advantage of this technology is that it allows for the production of lumber of virtually any length. It is feasible to generate Ultralam LVL timber with distinct features since it is made from both coniferous and deciduous wood (birch) during the manufacturing process of Ultralam LVL. This allows wood material to be customized for any customer’s specific needs.

Another aspect of the value proposition that will be considered is the availability of the product for purchase. The product is available for purchase not only through the sales offices indicated on the company's official website, but also in a large number of Russian hardware stores, with further distribution to online markets such as Yandex Market and Ozon.

What for product affordability, due to its production facilities and modern wood processing technologies, the company is able to set a competitive price that will be considered affordable for buyers.

Speaking about the strong name of the company, it can be derived that the products of Ultralam are widely known in the market of woodworking materials, this is evidenced by the company's participation in many forums and exhibitions.[[12]](#footnote-12)

Moreover, speaking about Environmental protection, the use of LVL production technology is one of the most environmentally friendly methods of wood processing, as it allows for the conservation of forest resources. Assuming that around 40% of the log is utilized in the production of a conventional beam, approximately 90% of the log is used in the production of an LVL beam. For the remaining ten percent, the company "Modern Wood Processing Technologies" uses it to make fuel pellets, which it sells to other businesses (pellets). The use of this fuel is regarded environmentally good because when it is burned, the carbon dioxide released into the atmosphere is absorbed by developing trees, and as a result, the fuel's emissions are considered zero. It is necessary to employ black waste (bark) in order to heat the boiler room of the plant. The manufacture of Ultralam produces no waste.

As for the development of domestic technologies, STOD is the developer of its own unique wood processing technologies.

Speaking of the B2C sector, the company offers products other than B2B, namely turnkey houses. This is an exceptional product for the Russian Federation due to the characteristic feature of the product, that is, the unprofitability of long-distance transportation. The factors of the value proposition are partly the same as for the B2B consumer segment- Customization for customer, Product usability and Affordable price.

**Key activities:**

Despite the fact that every action in the business is significant, not every activity adds value. The key activities portion of the business plan focuses on the actions that must be completed in order to fulfill the value proposition and achieve the overall goal of the company.

In general, key activities are those processes, actions, and activities that customers associate with your product or service. They should be difficult to mimic and difficult for competitors to replicate, if possible.

Important considerations when evaluating a firm using the Key Activities building block include taking a holistic perspective of the business and making connections to other building blocks such as Key Partners. It may be preferable to use Key Partners to carry out certain of the activities rather than your own company at various points in time.

Firstly, the production process will be covered. Ultralam production is based on cutting-edge technologies, such as continuous pressing with microwave preheating, which increases bonding quality and results in a new, uniform, high-strength material with improved bonding properties.

Additionally, one of the most important core tasks of the organization is the development of novel technologies for the manufacture of drevestno-chip goods. It is decided on empirical elements such as the size and quantity of sawdust used in the manufacturing process, the type and amount of glue used, and many other nuances that influence the quality attributes of the product. It is also very vital to conduct regular quality checks; as a result, during the production of each batch, quality control of individual drevestny materials is carried out by employees who have undergone specialized training.

**Channels:**

There are numerous channels throughout which company interacts with its customers and communicates its proposals to them, including: Official website, Social Media, Events/Forums, Online marketplaces and Trading divisions.

The official website of the company has primarily an informational function. On the official page of the Ultralam company, detailed product descriptions are presented: LVL, OSB, Fuel pellets and Home building, which is supported by detailed technical characteristics. There are also a lot of photo and video materials[[13]](#footnote-13) on the site that give a potential buyer an idea of how and with what equipment the goods are produced. In general, the official website of the company has an informative function and gives an idea about the product. The site does not carry the function of selling products from itself, since prices cannot be found on it, but the site contains contact information of sales offices through which Ultralam wood plates can be purchased. The effectiveness of the site, according to the CEO, is quite high, since potential B2B buyers often turn to the sales office through it.

Speaking about social media, it can be concluded that the company is not very active in social networks. The company has Vkontakte and Facebook pages (an extremist organization, banned in Russia). The pages were aimed at informing and attracting customers, but both do not have enough subscribers and have not been maintained since 2016 and 2018, respectively. Based on this information, it is possible to draw an unambiguous conclusion that the channel is not effective.

STOD Company is an active participant in various construction exhibitions, forums and other events. Among which there are both domestic exhibitions (Lesdrevmash, Building a House, MosBuild) as well as in foreign languages (BATIMAT, CIEHI). As a rule, at such events, the STOD company is represented by its own stand where representatives of the company present their products to potential partners and buyers.

As for online marketplaces, Ultralam products are presented on the websites of such well-known marketplaces as Yandex Market and Ozon, as well as products are actively distributed through online stores selling street materials: Leroy merlin, OSB Market, Stroy Market, Pulscen. These sales channels are very effective and generate a lot of income.

Speaking about trading divisions, the company has such trading divisions as: Talion Trading — a trading division in the territory of the Russian Federation, located in St. Petersburg, as well as foreign divisions, such as: Timberhof GmbH (Germany) — a trading house in Dusseldorf, supplier of Ultralam products (LVL, OSB and pellets) in Europe and the USA, Talion Terra Israel is a trading house in Netanya, supplier of Ultralam products (LVL, OSB and pellets) in Israel. These divisions are efficient and generate the main influx of B2B customers in Russia and abroad

Considering the word of mouth it obviously can not be properly assessed, but STOD is widespread known company in timber manufacturing industry and word of mouth can not be eliminated from the equation.

**Customer relationships:**

The goal of all communications should be to improve customer relationships not just during the first phases of the marketing funnel, but also after the customer has purchased a product from the company. Asking how each communication tool can help to enhance customer retention is just as important as asking how each communication tool can help to improve client acquisition. In order to boost profitability, it is necessary to build relationships and increase customer loyalty. Customer relationship management (CRM) is concerned with the manner in which you interact with customers in order to provide a positive customer experience. This entails developing long-term solutions that are oriented at achieving client satisfaction. The goal of customer relations is to establish a mutually advantageous relationship with the client that lasts beyond the first purchase.

Relationships with customers are formed partly through informing through the official website of the company. It provides information about the company itself so that the client can get acquainted with its history, then it is possible to get acquainted with detailed information about the company's products with detailed characteristics and advantages. Moreover there is a gallery with video and photo materials for a more detailed visual acquaintance with the products as well as contact information.

The company that intends to start cooperation with the TABLE company is sent to the sales office, where each client will be provided with professional service, which, with personal and online assistance, will allow the most profitable for both parties to come to the conclusion of a partner agreement or contract.

**Revenue streams:**

Since the income of the STOD company is entirely due to one way of creating revenue streams, such as the sale of goods and tangible objects. In this regard, it is critical for the company to maintain product quality, variety, and capture client interest.

Speaking about the groups responsible for creating income streams, two main groups can be distinguished, such as ordinary buyers who purchase the company's products, in STOD’s case these are potential buyers of frame houses for personal use. The second group includes regular customers with regular payments, such as distributors and buyers of the product for their own needs, for example construction companies.

Although no information on product pricing can be revealed, it is vital to note that all of the above-mentioned groups generate various amounts of revenue, and pricing for these groups differs as well.

**Key resources:**

Key resources are divided into several groups, the first of which is human resources. Most companies' most valued critical resources are their employees. Most businesses consider their employees to be their most significant vital resources. Not only do employees assist in the operation of the business, but they also connect with consumers, assist in the development of the firm through innovation, and possess the skills and knowledge that distinguishes the company from its competitors. Every enterprise requires human resources, and resources are highly valued at STOD. The company's key human resources are:

* Factory workers
* Operators of heavy equipment
* R&D department
* Truck drivers who deliver products
* Customer service agents
* Managers who oversee production
* Human resources employees

Next group of key resources are the material resources. Material resources is an asset without which any production or manufacturing would not be possible. In the case of STOD company key material resources are:

* Production buildings (Taleon Terra, Talion Arbor, Factory for the production of house kits and additional processing of LVL timber)
* Equipment (modern, unique and high-tech equipment of the German company Dieffenbacher is used at the factories producing Ultralam products)
* Production equipment (a lot of heavy construction equipment is used in the production of wood-chip materials Ultralam)
* Wood materials
* Components (production equipment has the property of depreciation)

Following, it is necessary to highlight information resources, such as ownership rights and partner databases.

The last but not least key resource is the financial one. Money is, without a doubt, the most critical resource required. Money can also be referred to as capital. When first starting out, you will need to purchase items, even if they are simple, that will assist in getting the firm off the ground.

* Investments
* Credits
* Free cash flow

**Key partners:**

A business partnership is formed when two or more companies (commercial entities) get together to form an alliance that can be either exclusive or nonexclusive. The difference between loose and exclusive connections is that loose relationships allow both sides to partner with more businesses, but exclusivity restricts either company to that one relationship.

The majority of partnership connections are formed for the simple reason that most firms desire to diversify their risk and growth potential by partnering with a variety of other businesses.

Speaking of STOD Key partners the most important and crucial one is a German company Dieffenbacher[[14]](#footnote-14). With the construction of modern comprehensive plants for the manufacturing of particleboard, MDF, OSB and LVL boards in order to acquire a competitive advantage in the industry, Dieffenbacher aims to gain a significant competitive advantage in the market. They supply services that can accomplish more and modernisation solutions that will be used in the future. German company provides machines for producing Ultralam OSB and LVL which are so unique that allows to produce panels of different dimensions and technical parameters.

Another crucial partner tends to be Taiwanese Holtek[[15]](#footnote-15). Holtec Semiconductor is a top professional IC design firm in Taiwan, with its primary business activities concentrated in the design and marketing of microcontrollers and peripheral components. Company provides semiconductors for presise, effective and “healthy” work of STOD wood manufacturing machines.

Speaking about Equipment supplier Schwabedissen, for high demands and customer-specific needs in the fields of dividing, profiling, CNC processing, stacking, and other special machines, S Schwabedissen is an owner-managed special machine manufacturer. Schwabedissen manufactures machines for batch sizes ranging from one to hundreds of pieces per minute, as well as for series production in high throughput.

The primary products of Schwabedissen[[16]](#footnote-16) are dividing saws (portal saws and undercut saws for industrial use in production lines), a double end tenoner for double-sided processing of the longitudinal and transverse edges of panel-shaped materials, and a double end tenoner for double-sided processing of the longitudinal and transverse edges of panel-shaped materials, machining centers for doors, composite materials, and molded parts in the portal design industry.

Among the materials processed by these machine types are wood-based materials, furniture components, concrete formwork elements (including solid wood panels), wooden doors and windows (including drawers and moldings), wooden floors (including laminated wood), composite materials (including gypsum bonded boards and fibre cement), and insulating materials. STOD is an active buyer of Schwabedissen’s saws for wood cutting equipment.

What for Leonhard Weiss Construction company[[17]](#footnote-17), which is using Ultralam products for Civil construction products, Industrial plants/logistics centers, office and administrative buildings, retail and commercial buildings, educational/sports centers, day nurseries, residential developments, social facilities, special buildings. Construction of roads and networks, railroad construction, civil engineering and turnkey building projects, stonework repair and preservation of monuments, and flooring technology are among the business areas covered by the group's comprehensive European network. Products such as cable ducts and services relating to contemporary utilities and telecommunications networks fill out the company's product and service offerings. Currently, the Leonhard Weiss Group is regarded as one of the most successful firms in Europe, with around 20% of its total revenue generated in countries surrounding its home market of Germany.

Speaking of biggest Russian retailers which are Merrani[[18]](#footnote-18) and Palp-Nord[[19]](#footnote-19) who are official which are general suppliers of a wide range of high-quality, eco-friendly and certified construction and finishing materials created on the basis of new technologies of advanced domestic and world manufacturers in the territory of the Russian Federation and neighboring countries.

**Cost structure:**

The Company's Business Model Canvas Cost structure of a firm outlines the costs that a business incurs as a result of its operations. Employees, infrastructure, costs connected with all activities, as well as sourcing through strategic partnerships, are all examples of what is involved.

The cost structure of STOD is made up of expenditures such as: Product manufacturing and development costs, Transportation costs, Employees’ salaries and bonuses, Depreciation of equipment, Office rent and Taxes

The preparation of raw materials, which includes the felling of trees, the processing of wood with special chemicals, the bonding of wood into OSB and LVL plates packing, and the transformation of these materials into the final product are all included in the product's manufacturing expenses.

These expenses are linked with the transportation of wood from the log house site in the Tver region to the processing plant, as well as with the subsequent delivery of the finished product to distributors in accordance with the terms and conditions of each contract signed by the company.

Speaking about Employees' salaries, they are paid in accordance with the terms of standardized trade agreements. Performance bonuses are calculated on the basis of each employee's contribution to the company's overall yearly revenue generation as well as his or her percent of that contribution. Bonuses are paid out twice a year: once a month and at the end of the year.

In addition, depreciation of equipment is a critical component of the Cast structural model. Ultralam production plants rely on high-tech foreign equipment that is prone to breakdowns and wear and tear over time. Repair or replacement of broken parts, as well as the total refurbishment of equipment, are included in this category. pretty striking and happens on a regular basis.

The rent for the office is paid on a monthly basis. When renting offices in commercial buildings, this payment is not adjusted for variations in energy, water, and heat consumption. This is common practice when renting offices in commercial buildings.

LLC STOD is required to pay a number of taxes, including a thirty percent social security contribution for its employees, thirteen percent income tax, thirteen percent VAT, and six percent STS.

## 1.4. Managerial problem statement

According to the CEO's vision, STOD is a company that is constantly expanding and is open to new markets. In terms of the potential of the Chinese wood market and the opportunity to gain the necessary experience and skill while conducting operations in Asia, China was selected as a country of interest.

Moreover, China is a profitable potential destination due to the fact that the country is rapidly developing, thanks to attracting foreign investment, intellectual resources and large-scale construction of industrial complexes.[[20]](#footnote-20)

The acute shortage in sawmill production is explained by:

* the ban on deforestation inside the Peoples Republic of China;
* the rapid rise of Chinese industry;
* improving the overall standard of living and infrastructure development.
* the tree is actively used for the exterior and interior decoration of country houses

Wood is mainly purchased for furniture production, but other industries also need wood. Only for the annual production of 15 billion of Chinese chopsticks a huge amount of raw materials goes out. Rapid growth led to two interrelated circumstances:

* Active production requires a lot of raw materials – due to the shortage of the raw material base, so China began to buy it in foreign markets.
* The standard of living and employment of the population has increased – there is an opportunity for a huge sales market.

All this affects the growth of wood consumer ability, both for individual residents of the PRC and the whole country as a whole.

As a result, the foreign market must be examined in the next chapter.

# Part 2. CHINESE MARKET ANALYSIS

The research of the foreign market for potential entry is the focus of this part of the work. The analysis of the new market's external and internal variables will enable a better understanding of the market itself, which will allow to make a strategy for entering it.

Following the specifications provided by Mishin A.I., the CEO of LLC STOD, China was selected as the market for entry-strategy development in accordance with the specifications provided by the CEO. The analysis will be conducted solely in China, with no consideration given to any other international markets, in accordance with the specified parameters for the target country selection.

## 2.1. National level analysis.

When examining elements that influence a company's operations within a certain country, it is necessary to do a national level analysis. The PEST framework, which was apparently established by Aguilar F.J. in 1964, has become the most widely used paradigm for conducting macro-environmental analyses worldwide. Political, economic, social, and technological aspects were all evaluated at the time of the original study. PESTEL and PESTLE are models that were developed in response to the fact that the model was imperfect, and models such as SLEPT, STEPE, STEEPLED, STEEPLE, DESTEP, SPELIT, and PMESII-PT were developed in response to these models, with PESTLE becoming the most commonly used model in academic works and the SPELIT Power Matrix becoming the model that is most frequently used in American business since the beginning of the twenty-first century. These newly proposed models emphasized the importance of including elements such as legal and regulatory, environmental, ecological, ethical, demographic, intercultural, informational, and infrastructural considerations in decision-making processes and models.

During the consideration of what tool among mutual listed above to select, decision has been made to use PESTEL or PESTLE analysis as the most widespread and comprehensive tool. Performing a PESTEL analysis (which is an enhanced version of the PEST analysis) is a strategic planning tool that is used to audit an organization's environment and the external forces that can have an impact on the organization's operations.

In order to assist business leaders in understanding what factors may have an impact on the firm and what opportunities and hazards those influences may produce, a PESTEL study is performed. This information assists leaders in making better decisions and planning more successfully for the future. In other words, a PESTEL analysis provides valuable information into business environment, allowing company to make strategic decisions based on data rather than educated assumptions[[21]](#footnote-21).

1. PESTEL analysis for Chinese wood manufacturing industry

|  |  |
| --- | --- |
|  | **List of Factors** |
| Political factors (P) | Forest policies  Corruption |
| Economic factors (E) | Economic growth  Market size  Purchasing power parity  Inflation rate |
| Social factors (S) | Population growth  Housing trends  Urbanization  Purchasing behavior |
| Technological factors (T) | Internet Usage  Rate of technological progress  Technology transfer |
| Environmental factors (E) | Climate change  Pollution |
| Legal factors (L) | Legal acts considering Chinese wood manufacturing industry |

*Composed by author on the bases of the news article, academic literature, and market reports*

Insertion of particular environmental characteristics can be done in the table that makes up the environment profile. There is an examination of each of the following criteria:

On a scale from one to three, the importance for the sector is “3”, which indicates a high level of importance; “2” which indicates a moderate level of importance; and “1” which indicates a low level of importance. The following describes the degree of effect that the “STOD” company has on a scale from one to three. A score of three indicates a important influence, a score of two suggests a moderate importance, a score of one shows a minimal importance, and a score of zero indicates that there is no influence. The following is a spectrum representation of the vector of impact: +1 – positive; -1 – negative.

The overall degree of importance will be computed by the multiplication of the provided scores of importance of the given elements for the industry, effect on organization, and the vector of impact, in accordance with the given influence assessment. The answer to this multiplication will produce the following results for the overall level of significance:

* Highly positive significant factor is between +6 and +9
* Medium positive significant factor is between +3 and +4
* Low positive significant factor is between +1 and +2
* Low negative significant factor is between -1 and -2
* Medium negative significant factor is between -3 and -4
* Highly negative significant factor is between -6 and -9

1. Environmental profile

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Macroenvironmental Factors** | **Importance for the sector** | **Influence on the organization** | **Vector of impact** | **Degree of significance** |
| **Political factors** | Forest policies | 3 | 3 | -+1 | -+9 |
| Corruption | 3 | 3 | -1 | -9 |
| **Economic factors** | Economic growth | 3 | 3 | +1 | +9 |
| Market size | 3 | 3 | +1 | +9 |
| Purchasing power parity | 3 | 3 | +1 | +9 |
| Inflation rate | 3 | 3 | +1 | +9 |
| **Social factors** | Population growth | 3 | 3 | +1 | +9 |
| Housing trends | 3 | 3 | +1 | +9 |
| Urbanization | 3 | 3 | +1 | +9 |
| Purchasing behavior | 3 | 3 | +1 | +9 |
| **Technological factors** | Internet Usage | 3 | 3 | +1 | +9 |
| Rate of technological progress | 3 | 3 | +1 | +9 |
| Technology transfer | 3 | 3 | -+1 | -+9 |
| **Environmental factors** | Climate change | 3 | 1 | -1 | -3 |
| Pollution | 3 | 2 | -1 | -6 |
| **Legal factors** | Legislation in wood manufacturing industry | 3 | 3 | -+1 | -+9 |

### 2.1.1. Political factors

***Forest policies***

China is a country with a highly centralized political system (a one-party system) and a decentralized economic structure that is becoming increasingly decentralized (socialist market economy)[[22]](#footnote-22). Despite significant reforms to China's economic model, the country's political system has remained largely unchanged - the Communist Party of China (CPC) continues to rule supreme, dominates the entire political apparatus, makes all major policy decisions, and exercises complete control over the government at all levels of hierarchy. Various state-level bureaus and agencies play a critical and evolving role in administering and enforcing the country's growing body of commercial and industrial law, as well as its regulations on import and export policies as well as financial matters as well as intellectual property and environmental protection, among other things. Overall, there are two major tendencies in economic decision-making: first, there are more people making more decisions; and second, there are fewer people making more decisions. At the level of the central government, the main trend is a gradual withdrawal of the state from direct control of business in favor of free business activity. There is a growing willingness on the part of the central government to devolve executive powers down the administrative chain, granting ever-greater powers to local governments. The result of this approach is that foreign enterprises will have more market opportunities and will have a lighter bureaucratic burden.

For the time being, however, international investors must navigate an enormous number of officials and agencies, as well as representatives from various levels of the administrative structure, in order to complete their transactions (Chinese Information Centre Co-Operative Ltd.).

Chinese authorities have implemented active forest policies to encourage the development of the country's wood sector for more than two decades. Past policies have placed a strong emphasis on the conservation of indigenous natural forest resources, as well as the development and usage of plantation resources as raw materials for China's wood processing industries. The logging restriction enforced under the NFPP and the annual Harvest Quota System (HQS), which is determined by the SFA every five years, have both been implemented to protect natural forests and ensure sustainable timber harvesting.

China's yearly Harvest Quota (HQ) in the 11th Five-Year Plan (2006-2010)[[23]](#footnote-23) has been increased by 25 million m3 compared to the 10th Five-Year Plan (2001-2005), bringing it to 248 million m3.

It is anticipated that future headquarters will assign a greater proportion of their volume to plantings as a result of the growing availability of forest plantation resources for timber output. Another development is the recent loosening of the requirements for headquarters. It will boost the interest of forest owners in forestry as well as their ability to react to market conditions, resulting in a rise in the amount of timber produced from domestic forest plantations. Aside from wood production, China has put in place measures to promote the development of wood processing companies. Aiming to promote the development of large-scale paper enterprises that have their own supplies of forest resources as well as advanced technological and manufacturing equipment, the government launched the Forest-Paper Integrated Program in 2004 with the goal of harmonizing sector development policies between the forestry and paper manufacturing sectors. China has changed its international trade criteria from the permission scheme to the registration scheme in order to facilitate the trade of forest products, and the government has also implemented a number of favorable tax policies in order to assist the trade of forest products. The processing trade preference program, which was established to encourage the importation of raw materials and the exportation of value-added products, provides duty-free and VAT-free treatment for imported commodities that are processed and re-exported as value-added products in the United States. The government has kept its promises by reducing import tariffs on 249 forest products, gradually eliminating non-tariff measures, and opening its wood market to the rest of the world since joining the WTO in 1999; in 2003, the average tariff for timber, paper, and paper products was only 7 percent; and in 2005, the furniture import tariff was reduced to zero. With the rising demand for wood resources from local producers, the government has decided to discontinue its VAT refund program for exports of wood raw materials as well as primary processed wood products such as logs and wood chips. The VAT discount is still available to exporters of wooden furniture and plywood, though.

Besides encouraging and supporting all forms of investment, such as wholly-owned investments, joint ventures (JVs), stock holdings, contracting, or leasing in the fields of afforestation, seedling production, timber processing, integrated paper production, and forest machinery manufacturing in China, Chinese forest enterprises have also begun to invest in other countries and establish joint ventures (twin ventures) (twin ventures) in other countries to further develop the forest industry and promote forest product trade.

Aside from that, the government offers preferential policies in the areas of equipment import and tax reductions, such as exempting corporations from tariffs on imported equipment for production and from business income taxes in the first two years, and a further reduction by half of business income taxes over the following three years. Given the rise in Chinese demand for wood and the expansion of international commerce in forest products, the country's forest products industry is expected to continue to support reforms, open up the forest sector, and boost international trade.

Speaking of importance for the sector of forest policies can be assessed as **high**, influence on organization is **high** as well. Vector of impact is controversial, because for the industry is negative effect, but for STOD it is positive, because they have their own forest plants back in Russia.

***Corruption***

Nevertheless, corruption is a pervasive issue throughout China[[24]](#footnote-24), making poor governance a prevalent concern. The main allegation of corruption leveled against senior officials in China is that they took bribes, which indicates that bureaucrats constitute the root of corruption. Under China's one-party system, there are no independent channels and media outlets, which is the primary factor that contributes to the growth of corruption and the abuse of power by local officials.

The previous economic reform of the state sector in China consisted of privatization. The current reform, on the other hand, consists of changing the performance of the remaining large state-owned institutions, which are controlled and operated by bureaucrats who could profit from their economic power through corruption. Specifically, the reform focuses on improving the efficiency of these institutions. A fundamental step that may be taken to address the issue of corruption in China is to decrease the size of the public sector. At the same time, the aspect of the privatization process that is tainted with corruption requires close scrutiny. Illegal logging in the forestry industry has been linked to both unethical practices and criminal groups. It is a significant factor in the perpetuation of corrupt practices at the highest levels of government as well as all across the bureaucracy. The majority of the logs that are brought into China are illegally obtained, as there is no payment to the government, no payment of royalties to the countries that sell the logs, and no environmental supervision over the harvesting activities. Because the illegal trade in timber is a primary driver of forest degradation and deforestation in countries that supply timber, Chinese enterprises that manufacture wood products have an immediate and pressing obligation to combat illegal logging and corruption. In response to widespread concern, China has indicated its intention to combat illegal logging by joining a number of regional and global agreements. These agreements contain a criteria and indicator set for the conservation of forests and the sustainable use of forest resources. The Chinese government is also a signatory to the United Nations Conference on Trade and Development's International Tropical Timber Agreement. This agreement, which was negotiated under the auspices of the United Nations Conference on Trade and Development, encourages the commercialization of timber and the enhancement of forest management practices.

Speaking of importance for the sector of privatization and corruption can be assessed as **high**, influence on organization is **high** as well. Vector of impact is **negative**, because corruption negatively effect on tense rivalry.

### 2.1.2. Economic factors

***Economic growth***

The annual growth rate of the Chinese economy in the first quarter of 2022 was 4.8 percent, which was significantly higher than the market consensus of 4.4 percent and was significantly quicker than the annual growth rate of 4.0 percent in the preceding period. However, because of widespread COVID-19 lockdowns, a prolonged downturn in the property sector, and uncertainty caused by the crisis in Ukraine, the risk of a dramatic slowdown in the coming months has increased. Separate statistics on March's activity indicated that retail sales were down 3.5 percent year-over-year, which was the first time that they had decreased since July 2020 and was worse than the market expected. According to industry analysts, the figures for April will most certainly show further deterioration, which will be exacerbated by the stringent limitations imposed in the financial center of Shanghai. In addition, the labor market is already exhibiting indications of stress, with China's nationwide survey-based jobless rate at 5.8 percent, which is the highest it has been since May 2020 and is up from 5.5 percent in February. This is the highest it has been since May 2020. As headwinds accumulate, Beijing has set a target for the economy to develop somewhere around 5.5 percent in 2022. This would be a slowdown from the 8.1 percent expansion that was recorded in 2018, which was the fastest rate in nearly a decade, and from the 2.2 percent growth that was recorded in 2020[[25]](#footnote-25).

Speaking of importance for the sector, the economic growth can be assessed as **high**, influence on organization is **high** as well. Vector of impact is **positive**, because population growth stimulates trade.

***Market size***

Over the course of the last five years, China's Wood Furniture Manufacturing industry has experienced expansion. Over the next five years, up to 2021, it is anticipated that the revenue of the industry will increase at an annualized rate of 2.7 percent, reaching a total of $111.6 billion. As a result of the 5.8 percent drop in residential house sales that occurred in 2020[[26]](#footnote-26), industry revenue expansion was severely stunted. In 2021, it is anticipated that there will be a 4.2 percent rise in the revenue generated from sales. Over the course of the past five years, policies that are restrictive to the real estate market have marginally hindered the industry's revenue growth. Nevertheless, fast expansion in the domestic demand for furniture of varying price points has been the primary driver of industry growth over the time in question.

As for importance for the sector, the market size can be assessed as **high**, influence on organization is **high** as well. Vector of impact is **positive**, because huge market size gives more opportunity for business operating in it.

***Purchasing power parity***

When adjusted for purchasing power parity, China's GDP per capita was reported to have finished the year 2020 with a value of 16410.80 dollars in the United States (PPP). When adjusted for purchasing power parity, China's gross domestic product per capita is equivalent to 92 percent of the average for all countries in the globe[[27]](#footnote-27).

As for importance for the sector, the Purchasing power paritycan be assessed as **high**, influence on organization is **high** as well. Vector of impact is **positive**, because PPP helps business to find their customers who are willing and able to purchase their product.

***Inflation rate***

The annual inflation rate in China increased to 2.1 percent in April 2022, up from 1.5 percent in March[[28]](#footnote-28). This figure is higher than the 1.8 percent that was expected by the market. In the midst of the logistical obstacles brought on by the tight COVID-19 procedures, this was the highest reading since November of last year. The cost of food experienced its first increase in the past five months, and the current rate of inflation (1.9 percent) is the most it has been since October of 2020. In the meantime, the cost of non-food items went up by 2.2 percent (compared to 2.2 percent in March), with the largest contributors being housing (1.2 percent compared to 1.3 percent), transportation and communication (6.5 percent compared to 5.8 percent), education and culture (2.0 percent compared to 2.6 percent), clothing (0.5 percent compared to 0.6 percent), household goods and services (1.2 percent compared to 2.2 percent), and healthcare (1.2 percent compared to 2.2 percent) (0.7 percent vs 0.7 percent ). For this year, China has targeted a CPI of approximately 3 percent, which will be the same aim as in 2021[[29]](#footnote-29). After a reading of zero in March, consumer prices rose by 0.4 percent on a monthly basis in April, beating the consensus estimate of a gain of 0.2 percent and coming after a reading of zero the previous month.

Despite the fact that the inflation rate was harmed during the pandemic, China's inflation rate has been rather steady over the course of a lengthy period of time, which is good news for businesses looking to operate in such a country.

As for importance for the sector, the market size can be assessed as **high**, influence on organization is **high** as well. Vector of impact is **positive**, because huge market size gives more opportunity for business operating in it.

### 2.1.3. Social factors

***Population growth***

Families in China's rural areas are also reducing, which is slowing the country's overall population growth. This is due to China's population control strategy, known as the one-child policy, which is implemented more tightly in urban areas. At this time, China has a total fertility rate of 1.7, whereas the required total fertility rate for a population that is stable is 2.1[[30]](#footnote-30). The sharp drop in fertility rates in China, combined with the country's low rate of population growth, may have a positive impact on the environment. However, the fact that fertility rates have dropped at a time when economic growth is increasing means that this downward trend will eventually have an effect on the consumption of wood products.

Considering the importance for the sector, population growth can be assessed as **high**, influence on organization is **high** as well. Vector of impact is **positive**, because growth of population stimulates trade by increasing the amount of potential consumers.

***Housing trends***

The use of wood in the construction of Chinese homes is becoming increasingly popular for a number of reasons, which has led to this trend[[31]](#footnote-31). The Yellow River and Yangtze River valleys, which are considered to be the cradles of Chinese civilization, include a large number of trees, which may be one of the primary reasons why the Chinese like to construct their buildings out of wood. Even after quarrying and brickmaking were established, wood continued to be the most popular building material. This is because of the Five Elements Theory, which is used in feng shui (geomancy). This theory has dictated many areas of life ever since the Spring and Autumn Period. Due to the fact that most of the trees that were utilized have a relatively short growing period, demand did not exceed supply as China's population increased. Wood remained the material of choice for construction due to its accessibility, ease of processing, and abundant supply. Due to wood's superior workability compared to other building materials, traditional Chinese architecture was able to be constructed significantly more quickly than structures built by other civilizations using stone and mortar. The formation of decorations is additionally simplified.

Considering the importance for the sector, housing trends can be assessed as **high**, influence on organization is **high** as well. Vector of impact is **positive**, because trends in housing enhances production of buildings which use wood for their construction.

***Urbanization***

The rate of urbanization is another significant component that has a role in determining the demand for products made of wood. The Chinese government's economic reforms pushed a traditionally agricultural economy in the direction of mechanization and industrialization, which exacerbated existing regional disparities. Because of this, there has been a significant migration from rural areas to urban ones.

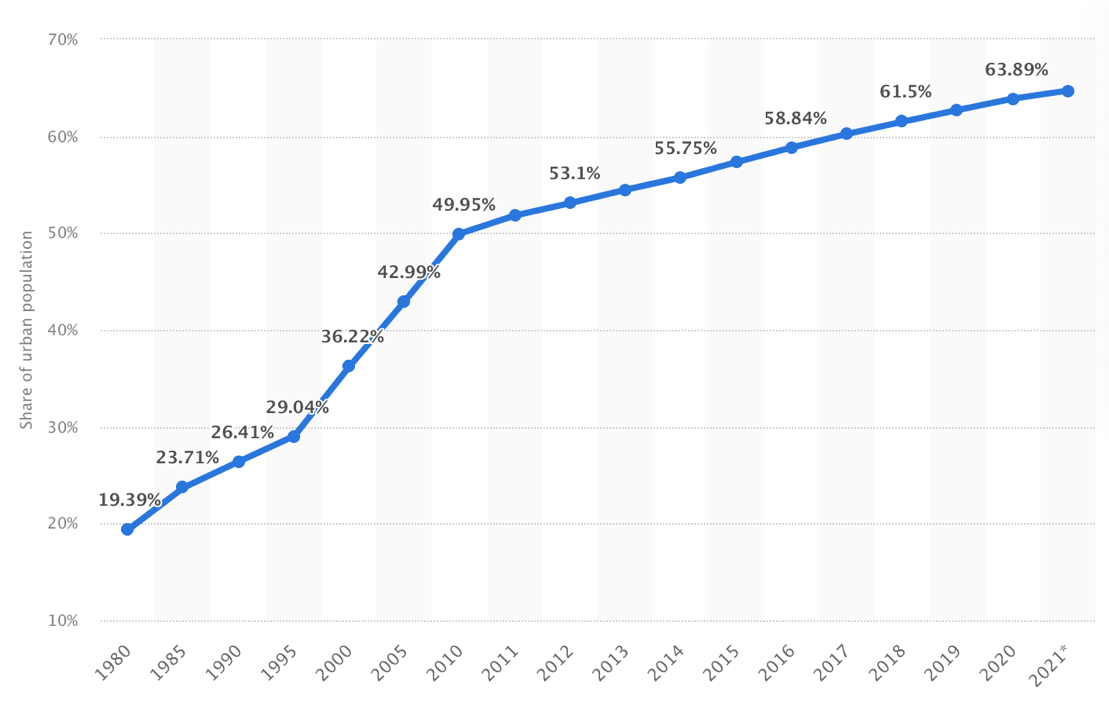
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Fig 5. Urbanization trends in China[[32]](#footnote-32)

As it can be observed from Fig. 5 the percentage of the population living in cities increased from 26 percent in 1990 to 43 percent in 2005, and this trend is expected to reach 60 percent to 65 percent of the total population in 2020[[33]](#footnote-33). Urbanization has been advancing at a rapid rate alongside the expansion of the economy. The actions of the government that ease restrictions on migration would stimulate the growth of metropolitan areas. The process of urbanization will continue to have an impact on new residential development in urban areas, which will keep the demand for wood goods in urban regions at a high level. On the other hand, the demand for wood products in rural regions will increase despite the overall decline in population expected in such areas. The public sector's investments in the construction of infrastructure will be redirected to the places that have been left behind. In recent years, the government has begun to encourage the development of infrastructure and markets at sub-country levels. What are now rural areas will see a faster rate of urbanization as a result of growing sub-country areas providing additional options for construction development and so enhancing the rate of urbanization.

Considering the importance for the sector, urbanization can be assessed as **high**, influence on organization is **high** as well. Vector of impact is **positive**, because urbanization stimulates construction with wooden products in use.

***Purchasing behavior***

The surge in disposable income combined with the pervasiveness of technology in China has led to a significant shift in the purchasing patterns of Chinese consumers during the past decade. Because of this shift, one key area that is expanding as a result is the provision of online shopping services, which are luring an increasing number of customers away from traditional storefronts. The continued proliferation of digital payment options among Chinese customers has liberated them from their reliance on cash and credit cards. For the vast majority of urban customers in China, the idea that they can complete an entire shopping trip using nothing but their mobile phones or even smart wearables is no longer unique. The price is still one of the most important motivations for consumers residing in rural areas, but developing middle-class consumers in metropolitan areas are willing to spend more money on products of higher quality and greater sustainability. Wood consumption is another example of an active consumer behavior that has been observed. China is the largest importer of both softwood and hardwood logs in the world, and Russia has been an important log supplier for them for many decades. In 2022, if Russia follows through with their plan to execute their planned restriction on exports of softwood logs and valuable hardwood logs, in addition to placing export levies on green lumber, this relationship may undergo significant change. All of these modifications to the policies are being made in an effort to stimulate more domestic production of forest products with a better value[[34]](#footnote-34).

Considering the importance for the sector, purchase behavior can be assessed as **high**, influence on organization is **high** as well. Vector of impact is **positive**, because customers are more willing to buy products.

### 2.1.4. Technological factors

***Internet Usage***

The use of the internet has evolved to the point that it is now an essential component of the lives of all people. Internet use is widespread around the globe, and as a result, business transactions take occur online in virtually every country. The buying and selling that takes place in marketplaces has advanced significantly. There is no exemption for the timber business. Products made of chipboard are being extensively traded on Chinese markets, as was mentioned before in this paragraph. As a result of what has been discussed, the following conclusion may be reached: an active presence on the internet has a significant impact on the amount of merchandise that is sold. In addition, every office that acts as a trade representative has official websites that customers can use to conduct business with that office.

Considering the importance for the sector, Internet Usage can be assessed as **high**, influence on organization is **high** as well. Vector of impact is **positive**, because nowadays active internet users are actively purchasing online as well.

***Rate of technological progress***

According to the findings of the researchers, the majority of technological advancements take place at a glacial pace; more than eighty percent of technological advancements occur at a rate of less than 25 percent every year. It is important to note that the number of patents in a particular technological field was not a reliable sign of a higher pace of advancement[[35]](#footnote-35). Despite this, technological advancements are constantly being made in every region of the world.

In reference to China, the research group of the Department of Social, Science and Technology, and Cultural Statistics of the National Bureau of Statistics on China's innovation index determined that China's innovation index reached 242.6 in 2020, representing an increase of 6.4 percent in comparison to the previous year. This information was derived from the calculation of the innovation index of China[[36]](#footnote-36).

Considering the importance for the sector, technological progress rate can be assessed as **high**, influence on organization is **high** as well. Vector of impact is **positive**, because nowadays technological progress in highly associated with development of trade.

***Technology transfer***

China has employed a wide array of pressure tactics, including the use of coercion on occasion, in order to acquire the technological know-how of other nations' businesses. Concerns have grown in proportion to China's efforts to establish itself as a front-runner in a variety of market sectors.

One of the most controversial problems at the heart of the ongoing trade dispute between the United States and China is the practice of forced technology transfer. Permanent technology transfer erodes the competitiveness of their businesses and removes the incentive for those businesses to invent new products or processes.

This issue is also crucial in regard to woodworking companies that have their own glue formulations and chemicals as well as patents for their own glue formulations.

Speaking of importance for the sector, technology transfer can be assessed as **high**, influence on organization is **high** as well. Vector of impact is controversial, because when Chinese companies are stealing technologies it is good for sector in china, but it is negatively influencing the organization.

### 2.1.5. Environmental factors

***Climate change***

In addition to causing a significant reduction in the number of CO2 sinks, deforestation is responsible for a wide variety of other shifts in the way ecosystems and the climate interact with one another. Trees serve as a source of aerosols that cool the atmosphere and reflect the heat and light of the Sun back into space[[37]](#footnote-37). They also control the passage of winds, which helps avoid excessive evaporation of water. Additionally, trees prevent excessive evaporation of water.

The plant kingdom obtains its water supply from the water that is found in the soil. This water travels up the stems and roots of the plant until it reaches the leaves, where it is lost to the atmosphere through the stomata. Because of the friction that occurs between the rushing air and the multiple layers of plant life that make up a forest, forests have the ability to act as barriers that slow down the movement of the wind. At the same time, the wind that blows through the forest transports warm, wet air to other regions of the world. As a result of deforestation, forests lose their capacity to operate as a wind barrier, which leads to increased wind speeds in the surrounding area and impedes the flow of both heat and moisture.[[38]](#footnote-38)

Because of this, deforestation can significantly alter both the weather and the life of ecosystems that are located in close proximity to it. This is something that must be taken into consideration when forecasting the effects of global warming and evaluating the state of the environment in various parts of the world.

Speaking of importance for the selector, climate change can be assessed as **high**, influence on organization is **low**. Vector of impact is **negative**, because climate change is negatively affecting both the industry and separate companies of wood manufacturing industry.

***Pollution***

Industrial companies contribute to the growth of the economies of many nations, but at the expense of the natural environment. The operation of these plants results in the emission of harmful gases and byproducts into the atmosphere, including carbon dioxide and sulfur dioxide, ash, and other hazardous substances. These components, first and foremost, contribute to the pollution of the atmosphere, as well as the soil and the water, and they have an impact on the flora and wildlife. Woodworking businesses, despite the fact that they are not as harmful to the environment as metallurgical, petrochemical, machine-building, or chemical businesses, yet cannot be considered environmentally beneficial in any way[[39]](#footnote-39).

Speaking of importance for the selector, pollution can be assessed as **high**, influence on organization is **moderate**. Vector of impact is **negative**, because polution is negatively affecting both the industry and separate companies of wood manufacturing industry.

### 2.1.6. Legal factors

***Legislation in wood manufacturing industry***

Since 1998, the government has implemented a number of stringent domestic forest preservation policies, one of which is a complete ban on commercial logging in its natural forests, which went into effect in 2016[[40]](#footnote-40). China's timber imports, which are primarily comprised of logs and sawnwood, have dramatically expanded over the course of the past two decades due to the country's internal conservation efforts and the rising need for timber. In spite of efforts made in recent years to combat illegal logging and the commerce that is linked with it, China's imports of timber from certain tropical forested countries are at a high risk of being obtained illegally. A new version of China's Forest Law came into effect in 2019, which included a prohibition on "buying, processing, or transporting timber that is known to come from unlawful sources." Due to the fact that additional court interpretations and policy measures are still being developed, the specifics of how the new article on legality will be applied remain unknown at this time.

Speaking of importance for the sector, legislation in wood industry can be assessed as **high**, influence on organization is **high** as well. Vector of impact is controversial, because rules and restrictions are preventing business from active and rapid growth, but at the same time stabilizing market and ensuring a fair trade.

In light of the technique described earlier, one is able to draw the following inferences in connection to the PESTEL analysis that was carried out: The political elements that were taken into consideration as part of the analysis that was carried out contain a high level of detrimental importance. All aspects of the Chinese economy pertaining to the wood manufacturing business are unquestionably significant in a favorable way. Additionally, social aspects carry a significant amount of positive weight. There is one technological aspect that is controversial, but the majority of the technological factors that impact the sector have a high positive importance. The effects of ecological variables are devastating to the economy. Legal considerations that STOD believes should be given weight as controversial.

It is possible to deduce, based on the distribution of the importance of the factors and their influence on the participants in the industry, that the wood manufacturing industry in China as a whole is appealing. Despite this, businesses operating in the country need to exercise extreme caution in the areas of interaction with government entities, compliance with laws, and environmental protection.

## 2.2. PORTER’S 5 Forces

The model of Porter's Five Forces employs five different structural units in order to characterize the factors that contribute to industry’ attractiveness. This method is utilized in the process of doing a strategic analysis of a firm in order to identify avenues leading to increased profitability and competitiveness, as well as to ensure that these advantages are maintained over the course of time. Businesses may be better able to identify where they can compete in a market that is always shifting if they conduct an analysis of Porter's competitive forces. According to M. Porter[[41]](#footnote-41), each of these components constitutes its own miniature habitat, which is comprised of a variety of different factors.

The ability to approach the evaluation of environmental risks in a methodical manner is one of the benefits that come with using Porter's five forces model. Nevertheless, the model suggests the existence of a number of shortcomings. In the first place, it takes into account the market forces that have already been established, but it does not investigate the dynamics of those forces. Secondly, many industry professionals believe that five market forces are not sufficient for conducting reliable and qualitative research on the industry.

The following is a list of the five contending forces identified under Porter’s 5 forces analysis framework based on the scale proposed by Porter. The microenvironmental factors are measured as high, medium, low. If the listed subfactors by Michael Porter occur in the characterization of forces, then the influence of force is estimated as high. The more subfactors there are, the higher the influence of force, and vice versa.

**Threat of new entry**

The term "threat of new entrants" comes from Porter's Five Forces model and refers to the danger that new rivals in a sector represent to already established ones. Therefore, an industry that is profitable will attract additional rivals who are striving to achieve profitability for themselves. If it is simple for these new companies to enter the market – if there are few barriers to entry – then this poses a danger to the companies that are already competing in that industry. There will be less profit available for everyone if there is an increase in the amount of competition or if production capacity is raised without a corresponding increase in consumer demand. One of the five forces identified by Michael E. Porter as having an effect on the competitive structure of an industry is the potential for new entrants to the market. As a result, people's perspectives on competitiveness in an industry have been fundamentally altered as a result of Porter's characterization of the threat posed by new entrants. The possibility of new competitors entering the market is impacted as a result of Porter's work, which in turn has an effect on the competitive environment in which existing businesses operate and their capacity to attain profitability. For instance, if there is a high danger of entrance into a business, it indicates that new competitors are likely to be drawn to the profitability of the industry and that they can easily enter the industry. When new rivals enter a market, they may either pose a danger to existing competitors or reduce the market share and profitability of those firms. This may also result in changes to the product quality or price levels that are currently in place.

***Presence of Economies of Scale***

The Chinese population is still the most widespread in the world, and it is continuing to increase along with it. As a result, there is a growing need for products made of wood. The Chinese populace regularly consumes goods made of wood, including OSB and LVL. In this respect, the market becomes appealing to possible new sellers; nevertheless, regrettably, the nature of the business itself requires potential sellers to make use of economies of scale. Because large-scale production produces a significant quantity of items, it is able to actively compete in the market for wholesale prices thanks to the advantages provided by economies of scale. In addition, economies of scale contribute to the reduction and management of expenses that are incurred during the manufacturing process. Contractors who drive trucks are comparable to those who work in the logging industry. They could have hundreds of thousands of dollars tied up in their vehicles, which means that even when they are not being utilized, the trucks could cost them thousands of dollars each month in maintenance and storage fees. If there is a guarantee of consistent work, then higher rates will be offered as a consequence. Large-scale forest owners also have a better ability to arrange trucks, which is vital since crowded skids can cause the harvesting process to come to a halt. The cost of transporting logs from the forest to China in 2012 was roughly half the cost of shipping those logs. This percentage is highly variable, although at the time of this writing, shipping only accounts for around a quarter of the total cost. This is primarily due to a recent drop in the price of bunker fuel, which has been cut in half. On the other hand, the cost of the ships that are delivering the logs vessels is subject to large variation over relatively brief time periods. For instance, as can be seen in the bar graph that follows, the cost of shipping in 2012 ranged from approximately $7,000 to $14,000 per day.[[42]](#footnote-42)

***Low Product differentiation***

Regarding the distinctions between the products, I'd like to point out that although the market for wood panels in China is flooded with vendors selling OSB and LVL, the products' inherent technical qualities are, for the most part, the same. This is despite the fact that the products come from different manufacturers. Chipboard panels typically come in a variety of dimensions and thicknesses, but all manufacturing criteria must be consistent in order to guarantee the products' high level of quality. The region in where the tree grows, which will later be processed into a panel, and the composition of the glue that is used in manufacture both contribute to the creation of OSB slabs that have little variations from one another. At the same time, the price per piece is approximately the same for everyone and is currently set at $ 10[[43]](#footnote-43) while the price per cubic meter is currently set at $ 700.

***High Capital requirements***

In the industry of woodworking, there is a wide variety of retail establishments, ranging from quaint little stores to massive multinational corporations. However, in order to break into the market for the production of chipboard panels, massive investments are required. Not every business will be able to break into the market, and even fewer of those that do will be able to do so with a manufacturing system that is advanced enough to successfully compete while also keeping prices at an acceptable level. This is something that can only be done by very large corporations. For instance, in order to ensure the smooth operation of a woodworking business, following resources will be required: apparatus, energy, space, and warehouses for the storage of raw materials and finished goods.

The equipment delivery package includes:

* Woodchipper (machine for grinding raw materials), from 3 thousand $ to 400 thousand $.
* Granulator. The cost is from 1 thousand $ to 370 thousand $. The price for the model of the OGM granulator is about 150 thousand $.
* Dryer. The price range ranges from 3 thousand $ to 0$ to 410 thousand $.Packaging machine. Price – from 1,5 thousand $ to 350 thousand $.
* an industrial line that produces 1 ton/hour of wood pellets costs about $132,000;
* with a capacity of 2 tons/ hour, it will cost $ 196,000;
* the price of the 4.5 ton/hour line is about $408,000[[44]](#footnote-44).

The price of the finished line, which provides a capacity of 300 kg of product per hour, is about 1 million rubles. In the same case, if there is a room (own suburban territory) and raw materials (wood waste at a minimum price or free of charge for pickup), then the investment, taking into account organizational aspects, will amount to a little more than 1 million rubles.

If the company intends to purchase an existing woodworking enterprise, then the prices for from $8 million to $34 billion rubles are guaranteed for him[[45]](#footnote-45).

***Access to distribution channels***

Access to various distribution channels for products has always been one of the most important aspects that determine the success of a business in terms of making sales. In China, there is a fairly advanced network of distribution channels. Because there are so many different markets, the Chinese are quite active in both exporting and importing items from other nations. The Chinese export a great deal of their own commodities. When it comes to glued beams, you may find these products for sale on e-commerce platforms like Alibaba, Aliexpress, and Made in China[[46]](#footnote-46). In addition to this, the products may be found at a variety of well-known retail locations, including Taobao, Tmall, JD, Longwood, and others. In addition, wooden panels are a popular item in building supply shops, where they are frequently acquired by real estate developers.

Due to the fact that presence of the economies of scale in the industry is observed as well as low product differentiation and high initial capital requirement, whilst access to distribution channels is relatively easy to obtain, threat of new entry can be assessed as **low**.

**Supplier Power**

In the framework of Porter's five forces, "supplier power" refers to the amount of pressure that suppliers can put on firms by increasing prices, deteriorating quality, or reducing the availability of their products. When doing an analysis of supplier power, the industry study should be undertaken from the point of view of the enterprises operating within the industry, which are referred to as the buyers in this context.

The core tenet of this theory is that the degree of bargaining power possessed by a given industry's suppliers has a direct bearing on the nature of the competitive environment in which a given buyer operates and on that buyer's capacity to turn a profit. Strong suppliers have the potential to exert pressure on buyers by increasing prices, diminishing product quality, and reducing the availability of products. The purchaser will be responsible for all of these various expenses. In addition, a powerful supplier can increase competition within an industry, which in turn can reduce the opportunity for the buyer to make a profit. On the other hand, the presence of a weak supplier—one that is completely dependent on the buyer in terms of both quality and price—reduces the level of competition within a sector and raises the possibility for profit for the buyer.

***Low product differentiation (wood)***

When comparing the items offered by various vendors, it is important to note that, in general, the tree will have roughly the same qualities. The manufacture of OSB boards involves the utilization of both softwoods (primarily spruce, pine, and fir) and hardwoods (beech, birch, and poplar). In addition, sawdust that corresponds to specific parameters is included. In this regard, the variation in output is negligible and only slightly varies depending on the region in which various tree species are able to thrive.

***Threat of integration forward to the industries business***

There is always the risk that suppliers will develop an interest in the companies that they serve, and with the assistance of vertical integration, they will attempt to get a foothold in the market that they were previously serving. This is something that can happen in practically any industry. When a provider has the production facilities sufficient to organize a full production cycle, he will start thinking about conquering the market, which is something that he had not previously anticipated doing. The market for woodworking in China is not an exception to this rule. Zindia,[[47]](#footnote-47) a New Zealand-based company that is a vertically integrated forestry company, serves as a compelling illustration of this concept. A global sourcing footprint that will enable large-scale exports of logs, lumber, and engineered wood products into the markets of India, China, Korea, and the Middle East. Zindia was founded by Mr. Jacob Mannothra, who was a pioneer in the shipping of pine logs from New Zealand to India. This export began more than 20 years ago. Over the course of the past twenty years and more, our company has developed into a vertically integrated natural resources organization with a primary emphasis on the timberlands (forestry) industry. That is a bride example of a company that firstly entered the Chinese market of wood panels as a supplier, but than thanks to Economies of Scale qualified into producer of wood pellets for Chinese market.

***High importance of the industry to the supplier group***

Woodworking enterprises are the primary buyers of raw products, which includes wood, making them an essential market for suppliers of wood all over the world. This is due to the fact that in today's world, untreated wood is used very infrequently both in production and in domestic settings, making woodworking enterprises the primary buyers of raw wood products. In this sense, wood suppliers place a premium on the business of large corporations that make substantial purchases of wood from them. In addition, as a general rule, major producers of bonded beams purchase substantial volumes of wood.

With the consideration of product differentiation being low, high importance of the industry to supplier group, and treat of integration into industry’s business being present, supplier power can be assessed as **medium**.

**Buyer Power**

The concept of buyer bargaining power, as described by Porter's Five Forces, relates to the amount of pressure that customers may put on firms to convince them to deliver superior product quality, improved customer service, and lower costs. Conducting an industry study from the point of view of the seller is the best way to understand the bargaining power of customers. The framework of Porter's five forces for analyzing industries asserts that buyer power is one of the elements that contributes to the formation of the competitive structure of an industry. The buyer's bargaining power according to Porter's Five Forces is determined by several factors. Buyer power is considered to be high when there are a relatively small number of buyers compared to the overall number of sellers in the market. On the other hand, when switching costs, or the amount of money it takes to switch from one seller's product to another seller's product, are low, the bargaining power of buyers is increased. The bargaining power of customers is increased when purchasers have an easy time backward integrating, often known as beginning production of the seller's product themselves.

***Presence of large volume buyers***

The wholesale market is extremely developed in the woodworking industry. This is due to the fact that large construction companies and smaller construction shops frequently engage in the practice of purchasing items on a wholesale scale. In addition, the only customers whose prices are guaranteed to be competitive at marketplaces are those who are willing to buy wood in wholesale quantities. For instance, on the well-known Alibaba marketplace, merchants acquire goods from glued beams in the amount of approximately $1.5 million[[48]](#footnote-48). This, in turn, demonstrates that the product is actively popular with the consumer in the Chinese market. Because of the product's ability to be purchased in huge quantities at a price that is competitive, the market features a significant number of customers interested in placing orders for substantial quantities.

***Low product differentiation***

The primary online retail platforms that are utilized for the purchase of wood manufacture products can be used to conduct an analysis of product differentiation in the wood industry products. In accordance with the OSB listing, more than 2200 goods were displayed on the platform Alibaba, and more than 1500 items were displayed on the JD.com website, each with a description of the product that was virtually identical. More than 220 different product listings are returned by conducting the same search on the website "Made in China." The prices of the products do not change, and neither does the manufacturing technology that is used. Because of the many options that are presented to the consumer, there is very little room for product distinction.

***Dependance on quality***

Since the late 1980s, China has been playing an increasingly significant role in the global forestry industry, both as a producer and a consumer market for wood products. Demand for high-quality value-added wood products has been steadily climbing in recent years as a result of China's robust economic growth. As a direct consequence of this development, China has emerged as one of the world's most significant consumers of wood. In the year 2001, the consumption of industrial roundwood (logs), sawn wood, wood-based panels, pulp, paper, and paper boards ranked third, fifth, second, fourth, and second, respectively, in the world.

The rapid expansion of the economy has led to an uptick in the building of residential properties, five-star hotels, and commercial office space. Increased living standards and the emergence of a wealthy class of consumers, particularly in large cities such as Beijing, Shanghai, and Guangzhou, have resulted in an increased demand for high-quality wood for the decoration and furnishing of homes and offices. This demand has led to an increase in the price of high-quality wood. The Building Decoration Association of China forecasts that the market for interior decoration in China will expand at a rate of 20 percent each year over the course of the next several years to come.[[49]](#footnote-49)

When it comes to making purchases, one poll conducted in 2016 found that fifty one percent of consumers in China would attempt to establish a balance between the quality of the product and the price of the product. The COVID-19 epidemic has prompted customers of all different sorts of items to prioritize quality in response to the current scenario on the market. This is true regardless of the product's price point. As a direct result of the pandemic, customers in China have become more wary, as a result, they choose to spend less money but purchase things of a higher quality. According to a poll conducted after the outbreak, over half of Chinese respondents want to live more frugally and look for value for money when selecting products, while 36% are more inclined to spend more money on products of higher quality. Under the same train of thinking, trends such as "excellent quality, value for money" rather than alternatives with lower prices became more appealing to customers of well-established companies. This was due to the fact that consumers valued quality over cost more.[[50]](#footnote-50)

***Price sensitivity***

The relatively huge number of people in China, most of whom are susceptible to being swayed by changes in cost, has resulted in the country having a sizable market. Chinese consumers are price-sensitive, but when they are convinced of a product's high quality or the value of a brand, they are willing to spend a significant amount of money on it. This sets them apart from the majority of western consumers, who are less likely to spend a significant amount of money on a product[[51]](#footnote-51). A survey conducted in China found that forty-five percent of respondents thought that greater costs indicate higher quality. However, they are incredibly realistic, which means that although quality is still an essential factor, value is the factor that they prioritize the most.

Under the given conditions on the market characterized by presence of large volume buyers, low product differentiation, dependance of customers on the quality of the final product6 correlated with the price sensitivity, itis possible to conclude that buyer power may be assessed as **high**.

**Threat of Substitution**

The possibility of a product or service being replaced by another has a significant impact on the competitive environment in an industry, as well as the ability of companies operating in that industry to turn a profit. Because customers have the option to purchase the alternative, the availability of a substitution threat can have a negative impact on an industry's capacity to turn a profit. Making an industry more competitive and lowering the potential for profit for the companies who operate in that industry can be accomplished by making similar items that are readily available. On the other hand, the absence of products that are considered to be near substitutes lowers an industry's level of competition and raises the possibility for profit for the companies that operate within that industry.

***High number of substitute products***

Speaking about substitute products, it is necessary to note that wood is a fairly flexible material that, thanks to modern technologies, can be used in all regions, even in cold ones. The climate of China is differentiated, so there are regions where the houses must be "warm", some must, on the contrary, let the cold through due to the overwhelming heat of the weather. With that being said, the substitute materials that are used in China must fulfil the given requirements.

In order to fulfil the construction of the houses box, such main substitute products in comparison with LVL can be called as brick, concrete, and reinforced concrete structures. As for outdoor and indoor decoration materials, under the categories of which OSB falls, such materials as clapboard, plaster, and finishing stone and ceramics are widely used.

***Price-performance trade-off***

As it was mentioned above, the substituting construction materials are numerous in their variety, which leaves space for price-performance trade-off fluctuation among the options. Value of brick varies from 0.50 to 3.00 USD per block[[52]](#footnote-52), whilst brick houses serve their purpose properly for at least 100 years and up to 150 [[53]](#footnote-53). Concrete costs in the range from 0.15 to 0.40 USD per 25kg package in case of purchase being made in wholesale quantity[[54]](#footnote-54), with housing made of such material possessing the quality lifespan of 120 years. Reinforced concrete structures will cost from 7.00 to 10.00 USD per panel sandwich of 75mm, whilst construction remaining structurally sound for up to 150 years[[55]](#footnote-55). Under the given market conditions, it is possible to conclude that LVL housing, in contrast, is more costly than its substituting alternatives. An important factor in the durability of any wooden house is the level of resistance of the building material to rot and pests. LVL-timber has a low risk factor for the appearance of various bacteria, insects, and rot under any atmospheric conditions. Nevertheless, LVL housing provides lower durability than its alternatives [[56]](#footnote-56).

Decoration materials that represent general share of substitute products in comparison with OSB also possess varying price-performance trade-off. Cost of clapboard or in other words lap siding stands at the point 2 - 3 USD per 1500 square meters[[57]](#footnote-57). The clapboard lining has the best sound and thermal insulation properties, as well as the option for easily install, providing opportunity to hide wall irregularities, as well as electrical wiring and communications. But it should be noted that when sheathing indoors, the area decreases, and the price is much higher than artificial materials. In addition, the lining is prone to combustion, although using special impregnations, this disadvantage can be avoided [[58]](#footnote-58). Purchase of plaster will result in expenses of around 4 UDS per 12kg package MOQ 800 packages. Decorative plaster is easy to work with, aesthetically can be modified according to the taste of final consumer, preserves the building for many years, and is budget friendly option. In order to preserve the attractiveness of the facade of a house lined with plaster, proper care is required for it so that the service life of the exterior plaster is maximized. Any building structures are constantly exposed to the negative actions of nature, spoiling the cladding of the house. Other causes of damage to the facade arise when the technology of preparation of solutions and plastering is violated. This leads to such consequences as cracks in the plaster at the seams, its shedding, defective joints of masonry, as well as loosening of bricks at the windows[[59]](#footnote-59).

As for finishing stone and ceramics, these will cost around 80 USD per MOQ 100S.m [[60]](#footnote-60). Cost of the material is rather high, though fully compensated by it being practical and durable kind of finish. It delays sounds and protects the walls from precipitation, winds, and temperature. Durability of the material is explained through it consisting of several grades of clay with additives of quartz sand.

With that being said, it is possible to conclude that some of the substitute options migh provide greater price-performance trade-off under consideration of the specific needs of the final consumer.

***Substitute industry high profit generation***

Available in the free reach information on the market size is limited to the extent that does not allow for the proper estimation of the market size during the recent years. Latest available data that can be retrieved stems from the year 2001 [[61]](#footnote-61) and does not provide accurate representation of the current market conditions.

With relation to the great multiplicity of substitute products and their high price-performance trade-off, it is possible to conclude that threat of substitution in the given industry can be assessed as **high**.

**Competitive Rivalry**

The degree to which businesses operating in the same market place exert competitive pressure on one another and work to constrain the profit margins of their rivals is referred to as the "intensity of competition among competitors in an industry." If the competition is strong, then the businesses in the market are actively attempting to take profit and market share from one another. As a direct consequence of this, the possibility for profit for all of the companies operating within the industry is diminished. According to Porter's five forces paradigm, the level of competition between companies is one of the primary forces that shapes the competitive structure of an industry.

***Large number of rivals***

Currently there are many companies that operate in the China Modern Wood Structure Construction Technology Industry on the Chinese market, including both local and foreign ones. In the process of searching for the companies that release the OSB products in the CMWSCT industry, it was possible to conclude that 56 local companies operate there. All of those release similar products, nevertheless market share of those companies varies. As it was retrieved from the web sources[[62]](#footnote-62) Beijing New Building Materials (Group) Co. is the largest company in terms of market share. The Beijing New Building Materials (Group) Co., Ltd. is the major retailer of OSB in China. The company mostly obtains their OSB from the United States of America, Canada, Germany, and Romania. This represented 23 percent of the total exports from this country. Moreover there are several other competitors. There are such Chinese manufacturers as Shandong Perfect Building Material Co., Ltd., WenAn County XiHuan Wood Products Factory, Hunan ADTO Building Materials Group Co., Ltd., Shandong National Forest Products Co., Ltd., Hangzhou Qiannianzhou Imp. & Exp. Co., Ltd., Weifang Suntop Imp. and Exp. Co., Ltd, Wood nest Supply Chain Technology Co., Ltd., Shandong Mulzza Imp.& Export Trading Co., Ltd. These are representatives of Manufacturers and Trading Companies. Their pricing on OSB pellets is from 5$ to 35$ depending on OSB length and technical characteristics[[63]](#footnote-63) and would be further described in the table below.

1. Comparison of competitors on Chinese wood manufacturing industry

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Company name | Number of chip wood products | **City/Province** | Business type | Main products | Lowest price on OSB | Highest price on OSB |
| Shandong Perfect Building Material Co., Ltd. | 10 | Zibo, Shandong | Manufacturer/Factory , Trading Company | Plywood , MDF , Chipboard Particle Board Plywood, OSB | 8$ | 9,5$ |
| WenAn County XiHuan Wood Products Factory | 26 | Langfang, Hebei | Manufacturer/Factory | Plywood , Melamine MDF , Laminated Wood Board , Melamine Board  , OSB , Film Faced Plywood | 5$ | 18$ |
| Hunan ADTO Building Materials Group Co., Ltd. | 23 | Changsha, Hunan | Manufacturer/Factory | Plywood, OSB, Sanity Ware , Ceramic Tiles | 6$ | 21,5$ |
| Shandong National Forest Products Co., Ltd. | 8 | Qingdao, Shandong | Manufacturer/Factory | Edge Glued Panels , Plain and Melamine -Faced MDF , Veneer-Faced MDF , OSB | 6$ | 35$ |
| Hangzhou Qiannianzhou Imp. & Exp. Co., Ltd. | 29 | Hangzhou, Zhejiang | Trading Company | PVC Door Melamine Door CPL Door Barn Door , OSB , MDF Chipboard Particle Board Plywood | 5$ | 12,5$ |
| Weifang Suntop Imp. and Exp. Co., Ltd | 18 | Weifang, Shandong | Trading Company | Wood Finger Jointed Laminated Board , Doorskin , OSB , Particle Board , MDF | 6,7$ | 12,3$ |
| Wood nest Supply Chain Technology Co., Ltd. | 8 | Shanghai, Shanghai | Trading Company | Plywood , MDF , Particle Board , OSB , Film Faced Plywood | 4,8$ | 32$ |
| Shandong Mulzza Imp.& Export Trading Co., Ltd | 19 | Weifang, Shandong | Trading Company | Melamine MDF , Particle Board , Plywood , OSB, PVC Cabinet Door , Furniture | 7$ | 20$ |

*Composed by author on the basis of information retrieved from website Made-in-China.com*

***Low product differentiation***

The industry as a whole is suffering from a severe poor product differentiation, which may be seen constantly on all of the Chinese online retail platforms. There are plenty goods that are comparable to one another in terms of the technological aspects, as well as the similar alternatives provided for warranty, thickness, and length.

***Low switching costs***

The easily navigable website "Made-in-China" provides a selection of 222 products when the key phrase " glued wood panels OSB" is used. The cost of OSB panels starts at 9.85 USD per piece or 700 USD per cubic meter and not varying much among competitors with quality of commodities being highly similar, which indicates that there are negligible switching costs among rival goods due to the availability and equivalent value of the many options. What is more, existing items have similar technical characteristics.

It is sufficient to obtain the conclusion that the degree of rivalry in the China Modern Wood Structure Construction Technology Industry is **high** after conducting an analysis of various factors, including the quantity of competing companies, the degree to which their products are differentiated from one another, and the costs associated with switching.

1. Porter’s 5 forces analysis

|  |  |  |
| --- | --- | --- |
| PORTER’S 5 FORCES ANALYSIS | Main factors of influence within the force | Level of impact on the industry |
| Threat of New Entry | Prescence of economies of scale | Low |
| Low product differentiation |
| High capital requirements |
| Access to distribution channels |
| Supplier Power | Low supplier product differentiation | Medium |
| Threat of integration forward to industry’s business |
| High importance of the industry to the supplier group |
| Buyer Power | Low product differentiation | High |
| Dependance on quality |
| Presence of large volume buyers |
| Price sensitivity |
| Threat of Substitution | High number of substitute products | High |
| Price-performance trade-off |
| Substituting industry profit generation |
| Competitive Rivalry | Great number of competitors | High |
| Low product differentiation |
| Low switching costs |

*Composed by author on the basis* *of news articles, academic literature, and market reports*

According to what can be deduced from the table that was just presented, the market for wood manufacturing is a highly competitive industry. The threat of new entry is low, while the supplier power is medium, and the power of buyers, along with the threat of substitution and the competitive rivalry, are all high. As a consequence of this, penetrating the industry can be difficult for organizations, which results in the requirement for the development of a plan of entering the foreign market which would be done in following chapter.

# Part 3. Recommendations for the procurement of the products and evaluation of the attractiveness of the project

The third chapter of the project discusses the process of choosing a strategy for entering a foreign market, developing a plan for entering China's wood manufacturing industry, adaptation of a current business model for entering Chinese market , and subsequently evaluating the effectiveness of the project.

## 3.1. Entry strategy choice

Before entering a new market, a company should consider the types of market entry and their features. Therefore, thereby evaluate the possibilities of using these types of entry into the foreign market for the STOD company. Exporting, Licensing, Franchising, Joint Venture, Foreign Direct Investments, and Fully owned subsidiaries are one of the ways ways to expand internationally. When entering a foreign market, there are two primary entry modes: equity and nonequity. Companies that use equity forms, such as wholly-owned subsidiaries and joint ventures, are considered to own a portion of the market organizations in which they participate. Exporting in conjunction with contractual arrangements like as licensing or franchising are examples of nonequity techniques, which, on the other hand, do not require ownership of the business. It's possible that picking one entry method over another could have enormous strategic repercussions for a company's performance and ability to continue existing. Further, the following types of the company's entry into the market and their features, advantages and disadvantages were considered in the table below.

***Exporting***

Since exporting is frequently the easiest way to enter a new market, the majority of companies start their expansion into international arenas with the implementation of this tactic. Exporting is the process of selling goods and services received from a country's native country in countries outside of that country. This method of entry provides the benefit of avoiding the costs of beginning operations in a new country, which is a significant advantage. However, businesses need to have a strategy for marketing and selling their wares in the new country. This is typically accomplished by entering into a contractual agreement with a company based in the new country or a distributor. When the corporation exports a product, it must consider the appropriate labeling, packaging, and price for the market in which it will be sold. When it comes to marketing and promotion, the company will need to educate prospective clients about the products and services it offers. This can be accomplished through the use of advertisements, trade exhibits, or a local sales force. When exporting something, it is not uncommon for certain aspects of the product or service to need to be translated into the language of the country to which they will be shipped. This requirement may have arisen as a result of local regulation or the desire of the company to sell the product or provide the service in a manner that is fit for the local market. Companies often choose to export to countries that are geographically close to their operations since doing so results in lower transportation costs and geographic neighbors who are frequently more comparable.

***Licensing***

A person or company that possesses invisible property can acquire the right to use that property for a predetermined period of time and according to specific conditions by obtaining a license for that property (such as copyright or mark). The amount of money received comes in the form of royalties. If a company is interested in rapidly entering an international market with fewer financial and regulatory issues, one option available to them is to negotiate licensing relationships with companies from other countries. In accordance with the terms of the International License Agreement, a foreign company (the licensee) may, in exchange for payment of royalties, sell the products of a producer (the licensee) or make use of the producer's intellectual property (including patents, trademarks, and copyrights). The use of franchises can be both a risk-reducing strategy and an effective method of funding international expansion. However, the license agreement may impose restrictions on future activities or reveal confidential information to a possible competitor.

***Franchising***

An international franchise agreement gives a corporation (the franchisor) the right to grant a foreign company free use of the franchisor's brand and the right to buy or sell the franchisor's goods or services (franchisee). The franchisee is responsible for all operations, but they agree to do so within the framework of the business model established by the franchisor. The franchisor, on the other hand, is often responsible for providing new items with publicity, training, and support. Examples of such businesses include fast food restaurants and hotels. To put it another way, franchising takes place when the owner of a company that sells a product or provides a service (the franchiser) grants the right to sell and distribute the franchiser's products and/or services to independent individuals (the franchisees) for a set period of time and under certain conditions. It is a low-cost and low-risk method of entering new markets that enables to take benefit of the cultural knowledge possessed by local managers. After the first, one-time transfer of property that you do as a franchiser, you are obligated to continue providing assistance to the franchisee.

***Joint Venture***

A commercial transaction known as a joint venture (JV) is an agreement between two or more parties to combine their available assets with those of the other party or parties for the purpose of completing a certain objective. This assignment may take the form of a brand-new project or some other type of commercial endeavor.

When working in a joint venture, each person is accountable for their share of the earnings, losses, and costs associated with the venture. Nevertheless, the enterprise stands alone as a distinct entity, independent from the partners' various other business interests. Even though they are a partnership in the common sense of the word, joint ventures can be formed between organizations with completely different legal structures. Joint ventures (JVs) can be formed by a variety of company structures, including corporations, partnerships, limited liability companies (LLCs), and other commercial entities. Joint ventures can be established for the aim of production, research, or even a purpose that is ongoing, despite the fact that these are the most common reasons for their formation. Major corporations and smaller businesses can work together in a joint venture to undertake a single or multiple large or minor projects and deals.

***FDI***

Foreign direct investment is typically the most expensive commitment that a corporation is able to make to a market overseas, and it is frequently motivated by the size and desirability of the target market. Greenfield start-ups and foreign direct investment (FDI) both require the direct ownership of facilities in the target nation, which in turn necessitates the transfer of resources including cash, technology, and labor. When you have direct ownership of a business, you have a great deal of influence over the operations of that business, as well as a deeper understanding of both your customers and your competition. However, it does need a large investment of both time and money, in addition to a high level of dedication on the part of the individual. The foreign subsidiary is a common kind of foreign direct investment (FDI). It refers to an independent company that is owned by a foreign enterprise (called the parent). This strategy for expanding into new countries not only gives the parent company unrestricted access to those markets, but it also exempts it from any restrictions or regulations that would make it difficult for foreign businesses to carry out their daily business. Although top executives from the parent company routinely oversee operations, the majority of the subsidiary's managers and workers are nationals of the host nation. This is despite the fact that the parent company maintains strict control over the activities of the subsidiary. It should come as no surprise that the vast majority of extremely large firms have foreign subsidiaries.

***Wholly Owned Subsidiary***

The establishment of a brand-new subsidiary that is wholly owned by the parent company is referred to as a greenfield venture and is typically a challenging and potentially expensive process; however, it affords the company the greatest degree of control and the best potential for above-average returns. The costs and hazards associated with establishing a new corporate operation in a new nation are high. This is especially true when considering the prices involved. It is possible that the corporation will need to obtain current market knowledge and expertise by either recruiting locals of the host country (perhaps from businesses that compete with them) or paying for expensive consultants. Establishing or acquiring a wholly owned subsidiary needs the highest level of commitment on the part of the international business. This is due to the fact that the international business is required to assume all risk, including financial, monetary, economic, and political risk.

1. Foreign Markets Entry strategy comparison

|  |  |  |  |
| --- | --- | --- | --- |
| Foreign market entry strategy | Description | Advantages | Disadvantages |
| Exporting | Realization of goods of domestic production | Low risk  Low level of capital investment  No need for long market adaptation | Profit loss  Lack of control over retailing |
| Licensing | Permission given to foreign companies to manufacture a proprietor's goods in a certain market for a set length of time | Use of company’s productive capacities  Chances of failure are lower  Market testing is not required | Payments to foreign company  High-risky  Lack of control  Foreign company becomes potential competitor |
| Franchising | Capability to become linked with another company's trademark, distribute its products, and, in most cases, run its business model in exchange for fees and royalties. | Chances of failure are lower  Use of company’s productive capacities  Market testing is not required Assistance in operations from franchisor  Access to franchisor’s suppliers | Payments to franchisor company  High-risky  Limited control  Need to share earnings with the franchisor  Risk of franchisor quitting |
| Joint Venture | Collective ownership, shared profits and liabilities, and shared administration are common characteristics of corporate formations formed by multiple entities. | Share of the resources  Risk sharing  Access to new markets distribution networks | High-risky  Control sharing  Possibility of mismatch of goals and objectives between partners |
| Foreign Direct Investment | Majority ownership in a company in a foreign country with direct control is Foreign Direct investment. | Expanding of financial resources  Increased employment opportunities  Use of cheaper labor or raw materials  Existing reputation in the partner country  Increase in exports  Remaining control over capital investments | High-risky  Domestic investment hindrance  Higher costs  Risk of expropriation  Possible negative exchange rates |
| Wholly Owned Subsidiary | Corporation owns all of the common stock of an another corporation. | Vertical integration of supply chains  Favorable tax treatment abroad  Diversification and risk-control  Reduction of parent firm's exposure | High-risk  High investments  Consumption of economic means of parent company  Political and social vulnerability |

*Composed by author on the basis of academic literature*

Firstly, it is important to mention that the company has preferences about entering another market with the help of exports due to the fact that the company has extensive experience in entering international markets with the help of exports.

After conducting an analysis of the Chinese market entry strategies, it was determined that exporting was the most appropriate method for STOD company to enter the wood manufacturing industry in China. This conclusion was reached after conducting an analysis of the aforementioned market entry strategies. The following justification provides support for the way in which decisions are made.

Due to harsh relationships with the European partners, company is not using their production capabilities fully. Producing products for an enormous Chinese market would help to solve this problem. Part of production capabilities which was previously oriented on exporting to Europe could work on provision of wood pellets for the Chinese market.

This solution offers the least amount of risk to the company in question. In spite of the fact that control over product realization is restricted and wholesale prices, in comparison to retail pricing, are lower, the items are manufactured under the initial trademark and are therefore shielded from sociopolitical turbulence. Wholesale prices are lower than retail prices.

Moreover exporting to china might increase company’s value in general in terms of having partnership with the representatives of Chinese market.

In addition to this, the little amount of initial investment that is necessary presents a compelling argument in favor of selecting this particular alternative. It's possible that the amount of the contribution will only cover the marketing expenses necessary to attract the attention of specific retailer groups, as well as the expenditures involved with negotiating and carrying out the terms of the distributor agreement.

Considering the logistics, it could not become a harsh issue for STOD , because company already has experience of exporting goods to Asian regions such as Taiwan and Japan.

Moreover, it is not necessary for the corporation to oversee the complete chain of product sales; rather, the corporation's obligations need to be limited to the actions of international middlemen.

On the basis of the aforementioned findings, one may conclude that the selected method of entry is fully supported by supporting arguments, as they have been shown above. Even if direct and indirect forms of trade should be distinguished from one another, direct trade should be recognized as the superior method. This strategy sets up a mechanism for exporting goods by way of export mediators situated in the immediate area, making it the most reliable option for breaking into a new market. When a company engages in direct export, it is able to keep full control over the production processes that occur within its own facilities. As a result, it is able to avoid the complications that are associated with offshore production as well as the political unrest that can occur in international markets. In the event that it is required, it can quickly and at a relatively low cost withdraw from the market. Lastly, it may collect precise data from the commerce of the chosen market, which will enable it to make future judgements about whether or not it is necessary to invest in the infrastructure of a foreign market.

## 3.2. E-commerce platform choice

In order to export its products to the Chinese market, which would be by the decision of company it’s main chip wood product Oriented Standard Board (OSB), STOD company will use e-commerce platforms . Exporting through the internet comes with its fair share of difficulties and dangers, just like any other business opportunity. On the other hand, it may also create a more level playing field for smaller enterprises, facilitate the development of a scalable business model for specialized companies, and serve as an efficient strategy for maintaining a competitive edge over foreign rivals. Even the smallest producer has the potential to reach millions of clients by implementing an online export strategy. Such a strategy of exporting would be used, because it may provide easier market access than traditional export routes and provides for maximum consumer reach with little third-party interference.

In terms of the e-commerce platforms that will be considered, those are Alibaba, Made In China, Taobao, Tmall Global, JD Worldwide, and Export Hub. These platforms are the largest in terms of number of users and are bright representers of chip wood products sellers in e-commerce sector in China.

***Alibaba***

Online vendors from all around the world use Alibaba as a source for purchasing things in large quantities. The number of people utilizing the site in China has now surpassed one billion, there are around 305 million people using the site from outside the China[[64]](#footnote-64).

The fees charged by the business are determined on which of the four subscription plans offered is selected by the customer. Alibaba has a range of plans, from free accounts to paid ones to expensive ones with additional features. Authentication for your company is included in each of the three top-tier plans, which are together known as Gold Supplier Membership Packages. However, they differ in terms of the amount of publicity that things can acquire, the quantity of products that a company is able to offer, the availability of a customized homepage, and the level of customer service that the company receives.[[65]](#footnote-65)

***Made-in-China***

Made-in-China.com, as a comprehensive service platform for international trade, is dedicated to maximizing business opportunities for Chinese suppliers and overseas buyers, as well as offering services at a single point of contact in order to facilitate the growth of international trade between the two groups.

To start selling on this platform, you need to register a company in China and then become a direct Chinese supplier for the Made-in-China marketplace.

***Taobao***

In contrast to its parent company, the business-to-consumer sector is the primary focus of Alibaba's Taobao platform, which is controlled by Alibaba. The annual fee and the service charge are both required of the enterprises who want to sell on Taobao[[66]](#footnote-66).

In order for a company to sell on Taobao, it either needs to be registered in China or else it needs to release its production through a third party that is registered in China. The use of a post box business or a virtual office is not permitted under these conditions, either.

***Tmall Global***

Alibaba is the company that is operating Tmall Global as well. Middle-tier and high-tier items are the primary emphasis of this platform's development. One may find all of the luxury brands here, in addition to an ambience that is more upscale for internet shopping, complete with flagship stores for private label products.

This platform caters specifically to foreign business owners that are interested in selling their products on Chinese internet marketplaces. As a consequence of this, it paves the way for businesses to conduct commerce in China without the prerequisite of registering a company there.

However, the platform has a stringent certification process, and firms may need to anticipate a delay of anywhere from four months to eight months before they are accepted. However, if their applications are approved, sellers will be required to pay three separate fees: a refundable deposit, an annual service charge, and a percentage of each transaction.

***JD Worldwide***

More than 380 million people are currently logged in to use the site that is known as JD Worldwide[[67]](#footnote-67). This platform is quite popular among international businesses because it does not require businesses to set up a corporate entity or a checking account in order to use it. Merchants have the choice of selling their wares using either the reseller model or the marketplace technique that they are most familiar with. The Reseller Option will Explicitly Acquire the Goods of the Company and Redistribute Those Goods to the Customers. The standard concept of a marketplace calls for the payment of an annual fee in addition to a commission for each transaction.

***Export Hub***

Export Hubis relative to the previous ones, a fairly small marketplace that has a base of 17 million users.

Export hub is largely concerned with international trade, which includes sales made across international borders over the internet. When compared to other Chinese platforms, selling on this particular marketplace has significantly lower entry requirements, in addition to featuring a much larger selection of products and a more streamlined transaction processing system. However, the possible client reach is significantly lesser compared to that of the other markets indicated, which makes this option questionable for partnership.

1. Online marketplaces comparison

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name** | Target focus | Ammount of users | Annual fees (USD) | Additional costs |
| Alibaba | B2B | 1+ bln | 1) Basic Package  1399 USD  2) Standard Package  2999 USD  3) Premium Package  5999 USD | 1) Commission for trade assurance of 3%  2) Service fee 1-2% if order is over 5000 USD |
| Made-In-China | B2B | 279+ mln | 199,9 USD | 1) Commission for transaction 5-10% |
| Taobao | B2C | 483+ mln | 5000 USD | 1) Service fee of 6-10%  2) Commission for transaction 0,5 – 5 USD |
| Tmall Global | B2C | 578+ mln | 5000 – 10000 USD | 1) Commission for transaction 2-5% |
| JD Worldwide | B2C  B2B | 387+ mln | 1000 USD | 1) Commission for transaction 2-10% |
| Export Hub | B2B | 17+ mln | 600 USD | 1) Commission for transaction 5% |

*Composed by author*

Once the table has been put together, it is possible to draw conclusions about which platform would be the most appropriate for the distribution of chip wood products manufactured by STOD.

Speaking about the Made-in-China marketplace, it can be safely stated that the marketplace has a pretty strong base for selling OSB plates to China. On this site, you can try to occupy your own niche along with large suppliers, but since the company must be Chinese, this makes it difficult for the company and it is necessary to register a business in China, which entails a lot of related and unnecessary costs.

Despite the fact that Taobao appear to be ideal platforms for releasing products on in terms of the amount of customers, available toolsets, and contractual terms. However, due to the fact that the STD company is used to operating in the B2B sector, while the Taobao service is focused on the B2C sector, cho at this stage is not the optimal way to integrate a woodworking company into the Chinese market.

However, the payments that are necessary to be entered in order to acquire access to the platform are burdensome for a firm that has not yet established its brand on the market. Tmall Global provides access to a large number of potential clients that purchase specifically for goods in the medium and luxury category. Taking all of this into consideration, it is clear that Tmall Global is not an appropriate platform for STOD's business. Moreover, Tmall operates on B2C sector as well as Taobao.

The e-commerce platform provided by JD Worldwide is an attractive choice among the options that have been proposed. It features a large number of users, along with the lowest possible fees, and there are no requirements set on the necessity of registering a business in China. Unfortunately, this platform is not fully suitable for the sale of chipboard products because of its orientation. Consumers of this marketplace prefer ready-made furniture solutions from OSB rather than pure products.

Platform for online retail sales Export Hub is an alternative that can save you money compared to the other options listed above. Despite this, it is essential to keep in mind that there are not many people participating in this industry. As the company STOD has not yet established its place on the market, there is a pressing need to communicate with the biggest number of prospective consumers as is practically possible. In order to fulfill this need, Export Hub is unable to provide the necessary reach. It is a good example of a platform that can be considered after capturing a market share.

In conclusion, it is possible to draw the conclusion that the e-commerce platform offered by Alibaba is the most appropriate choice out of the options that have been proposed. To begin, this platform has the greatest number of possible users or consumers. Other benefits include the requirement of low initial expenses, a healthy volume of traffic to your website, the possibility of unlimited income, and the ease with which one can enter the market. Despite the fact that the expenses for maintaining your own product on the platform are quite large in comparison with other marketplaces, this more than pays off with the giant popularity of the website and unlimited potential.

## 3.3. Business model adaptation for Chinese market

The business model of STOD will need to be modified in order to accommodate the creation of an entry strategy on the Chinese market for the manufacturing of wood products. The already existing building blocks will have to be adapted in order to accommodate the entrance strategy mode that has been selected, which is export, as well as the peculiarities of the Chinese wood manufacturing market that are discussed in Chapter 2.

1. STOD’s business model for Chinese market of wood pellets

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Key Partners**   * Engineering company Dieffenbacher * Semiconductor provider Holtek * Equipment Supplier Schwabedissen * Alibaba | **Key Activities**   * Manufacture of products * Research in unique production of timber products * Creation and launch of product * Quality control | **Value Propositions**  ***B2B***   * Customization for customer * Product accessibility * Affordable price * Product usability | | **Customer Relationships**  ***B2B***   * Personal support * Information support on the company’s page | **Customer segments**  B2B:   * Construction shops * Construction companies * Wholesale buyers |
| **Key Resources**   * Material resources * Intelectual resources * Financial resources * Human resources | **Channels**   * Alibaba |
| **Cost structure**   * Product manufacturing and development costs * Transportation costs * Employees’ salaries and bonuses * Depreciation of equipment * Office rent * Taxes * Service fees on Alibaba | | | **Revenue streams**   * Purchase of product by distributors * Purchase of product by wholesale buyers | | |

*Composed by author*

In light of the Business Model Canvas for the Chinese market that has been shown above, the next section will provide a more in-depth explanation of the shifts that are taking place inside each of the given blocks.

**Customer segments**

In comparison to the ones shown in Table No1, customer groups will go through certain shifts in the near future. The business-to-business industry in China will be the primary area of attention going forward. In terms of trading on the B2B marketplace, the company will not focus on the B2C sector of China at this stage. Businesses that will be potential buyers of STOD products will potentially focus on this sector, such as: Construction shops, Construction companies and other Wholesale buyers which would further somehow resell the production or use in their own needs.

**Value proposition**

There would not be any serious changes in value proposition accept there is no longer B2C sector, with Customization for customer, Product accessibility, Affordable price and Product usability remaining for B2B sector.

**Channels**

The utilization of the platform Alibaba, through which both communication with customers and the sale of items will be carried out is very important. On the platform, advertisements for OSB products sold by STOD will be made using the built-in possibilities provided by the e-commerce marketplace. A paid subscription, which will be purchased on the marketplace website and which will be further detailed, will be utilized in the process of promoting the product. This subscription will be paid for. There are many different tools that may be utilized to educate potential customers about the things that the firm offers. Examples include products that are highlighted, which can help a product achieve a higher ranking in search results, as well as more exposure and Advertising based on keywords ensures that your products will be displayed in search results relevant to the specific audience you are attempting to reach.

**Customer relationship**

Speaking about relations with customers, it is worth mentioning that the company will establish personal support, which will be carried out through the electronic commerce website, where a potential buyer can ask questions about the product or report a marriage. The issues of making a purchase can also be discussed through the company's corporate mail. Moreover, buyers can get acquainted in detail with both the products and the company as a whole through the official website of the STOD, access to which will also be possible through the marketplace website.

**Revenue streams**

In terms of revenue streams, the woodworking company intends to turn a profit with the assistance of the e-commerce platform known as Ali Baba. On this platform, the company's OSB products will be purchased by various distributors who plan to resell OSB directly to buyers, as well as other wholesale buyers, such as construction companies, which will create their final product using chipboard panels STOD, as well as construction stores and buyers who purchase products for their own needs.

**Key resources**

In terms of the most important resources that STOD will require in order to be able to successfully perform the activities on this Chinese e-commerce platform, these will include financial, material, and intellectual resources, in addition to staff who have received adequate training. These are going to stay the same as the ones that are detailed in greater detail in the original business model.

**Key activities**

Speaking about key activities, while entering Chinese wood manufacturing industry, they would not change at all.

**Key partners**

The STOD company will maintain its existing relationships with its most important partners, including the e-commerce platform Alibaba.com. All of the contacts with Chinese customers, as well as the transmission of payments and promotion of products, will take place on this single platform.

**Cost structure**

Cost structure will be discussed in greater depth in the subsequent section titled "Evaluation of the Project's Effectiveness." In spite of this, it is important to keep in mind that the Alibaba.com e-commerce platform will be handling all of the costs associated with marketing and promotion as well as service fees.

## 3.4. Evaluation of project’s effectiveness

In order to evaluate the effectiveness of the project, first of all it is necessary to understand what quantity and what types of OSB products will be supplied to the Chinese market. To determine the quantity of products supplied, it is worth taking a look at potential competitors on the Alibaba trading platform. Traditionally, 6, 9, 12, 18 mm thick plates are considered the most popular on the OSB panel market[[68]](#footnote-68).

On the marketplace, potential purchases are divided according to the terms of order fulfillment by the seller, for a fixed time of order fulfillment and on a contractual basis. Since most sellers have a contractual basis for the execution of the order is considered from 5000 pieces of pellets, it is this number of units of products for each OSB segment that will be selected as optimal. While the minimal wholesale quantity was also taken from analysis of competitor’s offers and would be equal to 200 pieces.

It is essential to point out that every one of the costs is being kept completely confidential by means of a non-disclosure agreement. The non-disclosure agreement (NDA)[[69]](#footnote-69) data will not be used for the evaluation of the efficiency of the project in this work; instead, the market pricing and cost averages will be used. This decision was made in light of the fact that the matter has been taken into consideration. This approach suggests that the final outcome of the project's effectiveness evaluation might differ to some degree from the real circumstances in which STOD would undertake the Chinese wood manufacturing market entry. These genuine circumstances cannot be disregarded while formulating the conclusion.

In consideration to the fact mentioned above such initial price of the products would be:

* In the category of 6 mm panels, initial price of the products would be: 4$
* In the category of 9 mm panels, initial price of the products would be: 4$
* In the category of 12 mm panels, initial price of the products would be: 6$
* In the category of 18 mm panels, initial price of the product would be: 6$

Total price: 5000\*4$+5000\*4$+5000\*6$+5000\*6$=100.000$

In connection with the distribution of popularity above , the competitive offers of different sellers were considered on the Alibaba website and the following conclusions were made about their pricing policy[[70]](#footnote-70):

* In the category of 6 mm panels, the average cost of OSB ranges from $6.5 to $11.
* In the category of 9 mm panels, the average cost of OSB is from $6.6 to $9.5.
* In the category of 12 mm panels, the average cost of OSB is from $10 to $16.
* In the category of 19 mm panels, the average cost of OSB is from $9.9 to $17.

Speaking about the preliminary pricing on the Ali Baba marketplace by STOD, the initial price will be deduced by calculating the arithmetic mean of the prices offered by competitors with rounding down:

* In the category of 6 mm panels, the average cost of OSB will be from (6,5 $ + 10$)/2 =8$.
* In the category of 9 mm panels, the average cost of OSB will be from
* ($6.6 to $9.5)/2 = 8$.
* In the category of 12 mm panels, the average cost of OSB will be from
* ($10 to $ 16)/2 = 13$.
* In the category of 19 mm panels, the average cost of OSB will be from
* ($9.9 to $17)/2 = 13$.

Total price: 5000\*8$+5000\*8$+5000\*13$+5000\*13$=210.000$

### 3.4.1. Operations costs

In order to start trading on the Ali Baba platform, a paid subscription need to choosen and purchased. These tariffs are valid for entrepreneurs from Russia. Until you pay the annual tariff, they won't start talking to you as a business. Alibaba just insists that salesman first pay a fee to their club. In order to select a subscription, company needs to assess the necessity for their business platform features:

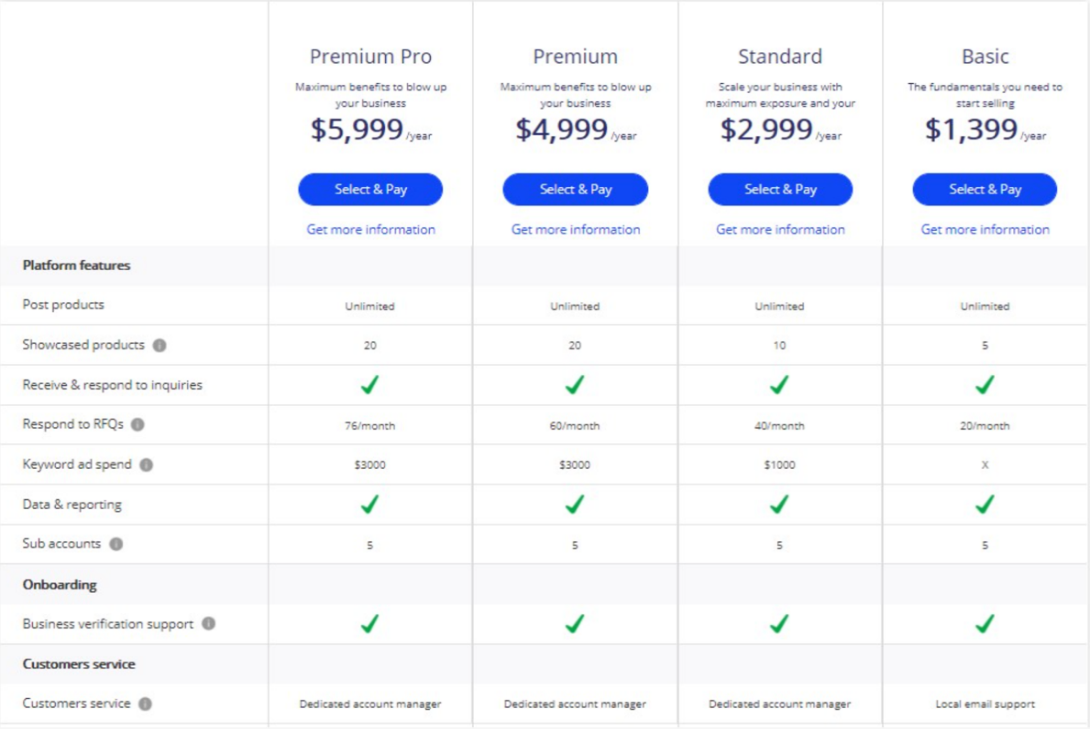


Fig 6. Types of Alibaba subscription[[71]](#footnote-71)

The most suitable type of subscription for the STOD company is the premium one, since it has all the necessary functions to promote the product and sell it on the Alibaba website, and also differ from the standard subscription in terms of better product promotion service provided by e-commerce.

To calculate the marketplace commission and service fees, let's assume that the entire volume of goods will be purchased by small, medium and large wholesale buyers of 200, 1000 and 3800 pieces per transaction, respectively, for each category of goods. In this case of the commission for securing the transaction will be:

* In the category of 6 mm panels, the commission for trade assurance would be: (200\*8+1000\*8+3800\*8)\*0,03=1.200$
* In the category of 9 mm panels, the commission for trade assurance would be: (200\*8+1000\*8+3800\*8)\*0,03=1.200$
* In the category of 12 mm panels, the commission for trade assurance would be: (200\*13+1000\*13+3800\*13)\*0,03=1.950$
* In the category of 18 mm panels, the commission for trade assurance would be: (200\*13+1000\*13+3800\*13)\*0,03=1.950$

Total costs: 1200$+1200$+1950$+1950$=6.300$

In this case of the commission for securing the transaction will be:

* In the category of 6 mm panels, service fee would be: (200\*8+1000\*8+3800\*8)\*0,02=800$
* In the category of 9 mm panels, service fee would be: (200\*8+1000\*8+3800\*8)\*0,02=800$
* In the category of 12 mm panels, service fee would be: (200\*13+1000\*13+3800\*13)\*0,02=1.300$
* In the category of 18 mm panels, service fee would be: (200\*13+1000\*13+3800\*13)\*0,02=1.300$

Total costs: 800$+800$+1200$+1200$=4.000$

To calculate transport costs, it is necessary to initially determine the method of transporting goods from Russia to China. Transportation by rail is perhaps the most popular method of delivery. Most often it is used as a link in multimodal transportation, when the cargo is sent by sea to one of the Russian ports, and then it follows by rail to its destination. Nevertheless, there are independent ways of railway delivery from China.

Firstly, it is needed to calculate how many cubic meters all the cargo will occupy:

* In the category of 6 mm panels, square would be: 5.000/187,8=27,9
* In the category of 9 mm panels, square would be: 5.000/281,2=17,78
* In the category of 12 mm panels, square would be: 5.000/133,9=37,33
* In the category of 18 mm panels, square would be: 5.000/96,7=51,73

Total square: 27,96+17,78+37,33+51,73=134,8

Data on volume and the area was provided by company. While considering railway transportation there are 2 primary types of containers: 20 foot and 40 feet. The volume of a 20–foot container is 32.2 cubic meters the volume of a 40–foot container is 67,7 cubic meters. It can be concluded that there are needed 2 40–foot container of 135.4 -134,8= 0,6 of not used space which can obviously called a rational use of logistic properties.

1. The volume and the area of OSB plywood sheets

|  |  |  |  |
| --- | --- | --- | --- |
| **Thickness of plates** | **Size** | **Pieces in** | **Number of m2 in 1 sheet** |
| OSB plate 6 mm | 1.250 x 2.500 mm | 187,8 | 3,13 |
| OSB plate 9 mm | 625 x 2.500 mm | 281,2 | 2,98 |
| OSB plate 12 mm | 1.250 x 2.500 mm | 133,9 | 3,13 |
| OSB plate 18 mm | 1.250 x 2.500  mm | 93,7 | 3,13 |

Considering the pricing, it must be noted that the product would be delivered to Alibaba’s largest and smartest warehouse in Huiyang, which was launched by Cainiao, the logistics arm of Alibaba. OSB would be delivered to China from Shushari, St. Petersburg by train for an estimated price of 1.040.000 rubles which is nearly equivalent to 16.500$. Pricing on delivery was based on Russian transportation company delivery calculator[[72]](#footnote-72).

Speaking about certification costs they consist of Ce Certificate on the wholesale of OSB on Chinese market which costs about 400$. Such certificates as: Certificate of Origin which is a document that certifies that a product was made in a specific country, OKVED codes which are licensing to do business as manufacturer and Free Sale certificate are already been acquired by the company before, meaning there is no need to receive them now.

Speaking about the warehouse, it will be free of charge for first 60 days and then it must be paid around 0,3$ per cubic meter per day which means it needs to be paid 134,8\*0,3$\*30 days\*10 months =12.132$

As for taxes, those would start with VAT which is equal to 13%[[73]](#footnote-73) and in case of STOD would be 27.300$. There is no consumption tax for given product type. Customs duties 13% tax for regular products is applied to OSB pellets and equal to 27.300$ as well.

1. Operations costs

|  |  |
| --- | --- |
| **Type of costs** | **Annual costs** |
| Standard package subscription | 4.999$ |
| Commission for trade assurance | 6.300$ |
| Service fee | 4.000$ |
| Transportation costs | 16.500$ |
| Certification costs | 400$ |
| Warehouse costs | 12.132$ |
| Taxation | 54.600$ |
| Manufacturing costs | 100.000$ |
| **Total costs:** | **198 931$** |

### 3.4.2 Profitability estimation

Firstly it is necessary to calculate **Profit** witch is:

5000\*8$+5000\*8$+5000\*8$+5000\*8$=210.000$

Secondly it is necessary to calculate **Net Profit** which is Total revenue-Total Expenses:

210.000$-198.931$= 11.069$

Thirdly calculations of the **Cash Flow** will be performed which is: 210.000$+198.931$= 408.931$

Fourthly calculations of the **Margin** will be performed which is (Net Sales -Costs of Goods Sold)/ Net Sales\*100%: (210.000$-100.000$)/210.000$\*100%= 52,4%

1. Product pricing on e-commerce marketplace

|  |  |  |  |
| --- | --- | --- | --- |
| **Product type** | **Quantity of products** | **Price on e-commerce marketplace** | **Net profit per product** |
| OSB plate 6 mm | 200-5000 | 8$ | 2108$ |
| OSB plate 9 mm | 200-5000 | 8$ | 2108$ |
| OSB plate 12 mm | 200-5000 | 13$ | 3426$ |
| OSB plate 18 mm | 200-5000 | 13$ | 3426$ |

### 3.4.3. Risks assessment

To fully assess the effectiveness of the project, it is also necessary to assess the risks that certainly take place when implementing the company's entry into the foreign market, which will be done in the table below.

1. Possible risks

| **Possible risks** | **Degree of probability** | | | | |
| --- | --- | --- | --- | --- | --- |
| **Extremely High** | **High** | **Medium** | **Low** | **Very Low** |
| **External global risks** | | | | | |
| Sanctions against Russian companies |  |  |  |  |  |
| Fall in Chinese economy |  |  |  |  |  |
| Fall in Russian economy |  |  |  |  |  |
| **China’s market risks** | | | | | |
| Shift in customer’s preferences towards an alternative products |  |  |  |  |  |
| The Chinese government is tightening the regulations on Russian suppliers. |  |  |  |  |  |
| Chinese customer’s negative reaction to STOD’s production |  |  |  |  |  |
| Decrease in OSB pellets purchasing in China |  |  |  |  |  |
| Rivals aggressive respond to STOD’s appearance on Chinese market |  |  |  |  |  |
| **Risks associated with a company's internal performance** | | | | | |
| STOD’s low performance while exporting goods to China |  |  |  |  |  |
| Extra manufacturing costs |  |  |  |  |  |
| Loss of partnership agreements with foreign suppliers of equipment |  |  |  |  |  |
| Lack of financial resources to produce and supply OSB to Chinese market |  |  |  |  |  |

*Composed by author*

In a realistic scenario, there is not a high chance of occurrence of the risks mentioned above. The majority of the risks from Table 14 have a medium, low, or extremely low chance of coming true. All risks were divided into three categories: external global economic or political risks; Chinese market risks: customers, competitors, and regulations; and internal corporate performance risks.

According to the table, the potential imposition of sanctions against Russian companies, and more particularly, penalties intended at woodworking businesses in general or sanctions directly related to the industry, pose the greatest threat to the company. The potential for the loss of cooperation agreements with foreign suppliers of equipment is another significant risk. This could result in the requirement of import replacement, which will require significant amounts of time and financial resources.

Other risks mentioned would not have a significant impact on STOD company expansion strategy to China. Overall, possible risks impact on company’s entry into foreign market can be assessed as **Moderate**.

Concluding on the 3rd Chapter, it can be states that although the risks are present the project is effective. Based on this paragraph, it can be concluded that the sale of products will bring profit already in the first year of presence on the market, provided that all goods are sold for the above period.

# CONCLUSION

As a part of the work done, an entry strategy to a foreign market by a wood manufacturing company STOD was developed. Primarily it was required to conduct an analysis of the internal environment of the company with regard to the possibilities of entering overseas markets.

The first section of the term paper was devoted to describing the company by estimating the company's background and history, describing the product, making a managerial problem statement and developing a business model in order to comprehend what difficulties the firm addresses for clients and what advantages the organization could gain on a foreign market. The Canvas Business Model is a strategic management template that was used in the analysis, which is made up of nine interconnected blocks: key partners, key activities, value proposition, customer relationships, customer segments, key resources, channels, cost structure, and revenue streams.

Analyzing macro and microenvironments with the aid of managerial tools in the face of the 5 Forces of Porter and PESTEL analysis, which provide with industry-specific and national level estimations, was the topic of the second chapter of the article. Based on the findings of the PESTEL analysis, the following can be said about the impact of the various aspects of the macroenvironment: Economic, Social, and Technological factors have a positive impact; Political and Environmental factors have a negative impact; and the impact of Legal factors can be evaluated as being controversial. As a result, the analysis of the national level demonstrates the attractiveness of China. Judging by conducted 5 Forces of Porter Analysis on microenvironment factors of China's wood manufacturing market, The threat of new entry is low, while the supplier power is medium, and the power of buyers, along with the threat of substitution and the competitive rivalry, are all high. As a result, companies may find it difficult to enter the industry, necessitating the creation of a strategy for entering the foreign market.

Final part of the work was devoted to selection of entry strategy on China’s market, which happened to be exporting, because of company’s special desire and low-risk perspectives of the method. Afterwards, a plan for entering China's wood manufacturing industry was developed with further selection of most appropriate e-commerce platform for exporting. The company's busines model was then modified to its activities on the international market. Which would totally change due to planned exporting through Alibaba e-commerce platform, except for Key resources and Key activities. Finally, the effectiveness of STOD entering China’s wood manufacturing industry was assessed. Thought analysis project appeared to be financially profitable with degree of risks level assessed as moderate.

Thus, the goal which is to develop practical recommendations for LLC STOD’s entry for China’s wood market was completely achieved.

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