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Overcoming the challenges for consumer product Mexican SMEs to penetrate the European market

by

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Executive Summary

The objective of this thesis is to explore main challenges Small and Medium Enterprises (SMEs) face when trying to expand their business internationally, and to develop a supporting framework that can be used by SMEs to incur in a successful internationalization effort.

This thesis also follows the specific use case of the Mexico-European Union export-import case. This case is interesting because in spite of the Mexican-European Free Trade Agreement, as well as the close relationship between the country and the region, and Mexico being a developing nation with a strong history in manufacturing, there is a large trade deficit from Mexico towards Europe. So one of the main driving points behind this research is to understand how can this gap be closed by leveraging mexican SMEs.

The basis for the framework developed in this work is rooted in a literature review and a set of expert interviews that uncovered that the main challenges for SMEs to internationalize are a lack of education regarding specific export and import processes, uncertainty regarding the demand for the SME's products, and misconceptions and ignorance related to the different costs associated with exporting and importing.

Based on these challenges, a model was developed to illustrate the different costs and their interaction in the exportation, importation and sales process. This model was applied to the specific case of Mexican SMEs exporting towards Europe and provided insight on how the predominant risks in the supply chain are marketing costs and discounts on the sales price.

Additionally, it was also uncovered during the literature review that the most successful way for SMEs to internationalize was to have a local partner supporting them in the destination country. The model was extended to provide for the case of collaboration between a manufacturer and an importer.

Finally combining the insights of the model with the findings from literature, a decision making framework is provided that can be followed by SMEs in order to identify which products are most likely to be successful and which are the steps that they can follow in order to reduce risk and maximize success.

1. Introduction

The research for this thesis began with the observation that even though there is a Free Trade Agreement between the European Union and Mexico since 2000, there is currently a large trade imbalance between the EU and Mexico, specifically Mexico is importing 1.5 times what it's exporting to Europe (European Commission, 2019).

When looking into the trade relationship, there is a trade surplus in mineral products, and a relative balance in transport equipment. But in consumer products like shoes or ceramics, the imbalance in favour of the EU is much more noticeable. This is counter intuitive since the expectation would be for a developing country with high availability of natural resources and much lower wages[1] to be exporting this kind of goods towards a developed region such as Europe and not the other way around.

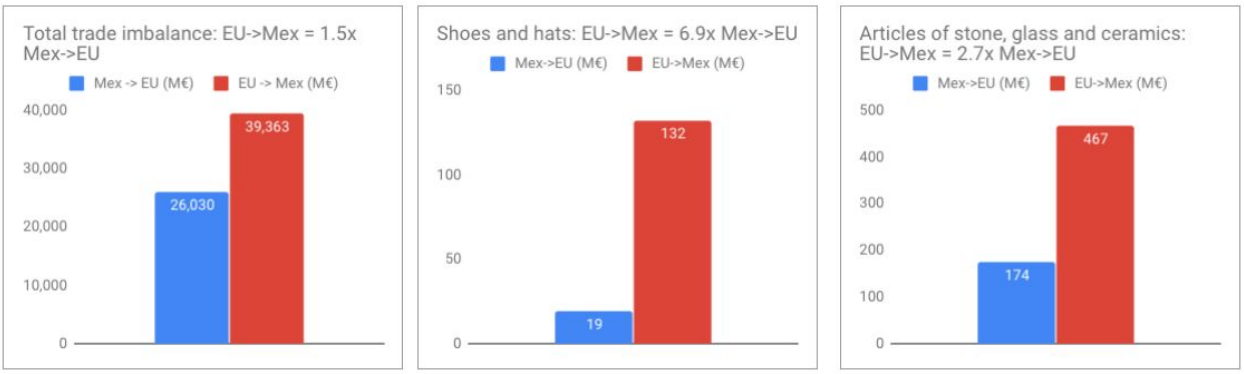


Figure 1: Sample trade imbalance (*European Commission,* 2018)

Additionally these types of products are generally produced in Mexico by small or medium enterprises (SMEs). And these same SMEs have reported that they would be interested in exporting their products to Europe (Alvarez, 2014).

This leads us to hypothesize that there are some challenges for small and medium enterprises (SMEs) in Mexico to sell their products in the European Market, which in turn leads us to the problem identified for this master thesis, that: **"Consumer product SMEs in Mexico are not exploiting their potential to sell their products in Europe"**.

This problem is related to all three pillars of the Customs and Supply Chain compliance master program, since all three pillars work together to facilitate trade. To illustrate this there are some examples below:

[1] The real minimum wage in Mexico is 0.6 dollars/hours compared to 2.2 dollars in the Slovak Republic (stats.oecd.org, 2018)

- Customs pillar: There is a Free Trade Agreement between Mexico and the EU. But are companies aware of the agreement and how can they benefit from it? What specific trade barriers might be in place for SMEs?
- Supply Chain pillar: What are the unit economics for exporting products? What are the distribution channels? What are the different costs for each supply chain configuration?
- IT pillar: What are the tools available for SMEs to submit the required documents? What is the information available to SMEs?

2.Goals and research questions

The Research questions for this thesis are:

1. *Identify what are the main challenges for SMEs that want to bring consumer products to foreign markets*
2. *Design a compilation of the most successful methods SMEs can use to overcome these challenges and bring their products to a foreign country in a economically sustainable way*
3. *Provide a framework to evaluate the effectiveness of these methods*

This project will be successful if we are able to provide a robust and rigorous answer to these questions that together can be used by SMEs in Mexico to support their internationalization process.

2.1 Methodology and Action Planning

In this project we will take a design science approach to solving the research question. More specifically we aim to develop an artifact that can help SMEs make decisions regarding which are the best circumstances for them to internationalize, which are the steps they need to take and what are the challenges that they need to overcome to be able to do it successfully.

Due to the complexity of the system we are trying to study in this thesis[2], a design science approach is a good fit to achieve the research goals because of the "*focus on shifting perspective between design processes and designed artifacts for the same complex problem*" (Salvatore et. al. *(2004))*. This means that we can build artifacts and models that can be validated through real life tests and interviews, and then modify them again, eventually reaching the desired level of rigour to generalize our findings.

[2] In this thesis we are studying the complex relationships between the interest of expansion from business owners, supply chain costs and activities spread across several different actors, legislative controls and requirements and economic incentives, and ultimately provide a recommendation to business owners in Mexico on the most efficient and effective ways of launching products in Europe.

In detail the research will focus on a small set of simple products (shoes, purses and artisanal plates) and will consist of a data gathering section and an analysis section.

The data gathering section consists of:

- Identifying the main challenges from literature on the internationalization of SMEs
- Identifying the different costs and regulations related to the export
- Conducting in a set of in-depth interviews with SMEs, embassies trade consultants
- Initial tests of with consumers to gauge the interest in importing and launching a Mexican product in Europe

The data analysis will:

- Enumerate the main challenges from literature and interviews
- Develop an economic model for different product types that models the sensitivity of different variables (e.g price, manufacturing cost, size, weight, etc.) on end to end profitability of the export and use it to simulate different scenarios
- Register challenges faced during the experiment

We expect from the data analysis section to be able to come up with an artifact, which in the case of this thesis will be a decision support framework that can be used by SMEs. Our artifact will follow the conceptual model of an artifact provided by Salvatore et. al. (2004) adapted below. This decision support framework will have the main objective of answering the question of "In which cases and what is the process an SME should follow to internationalize?"

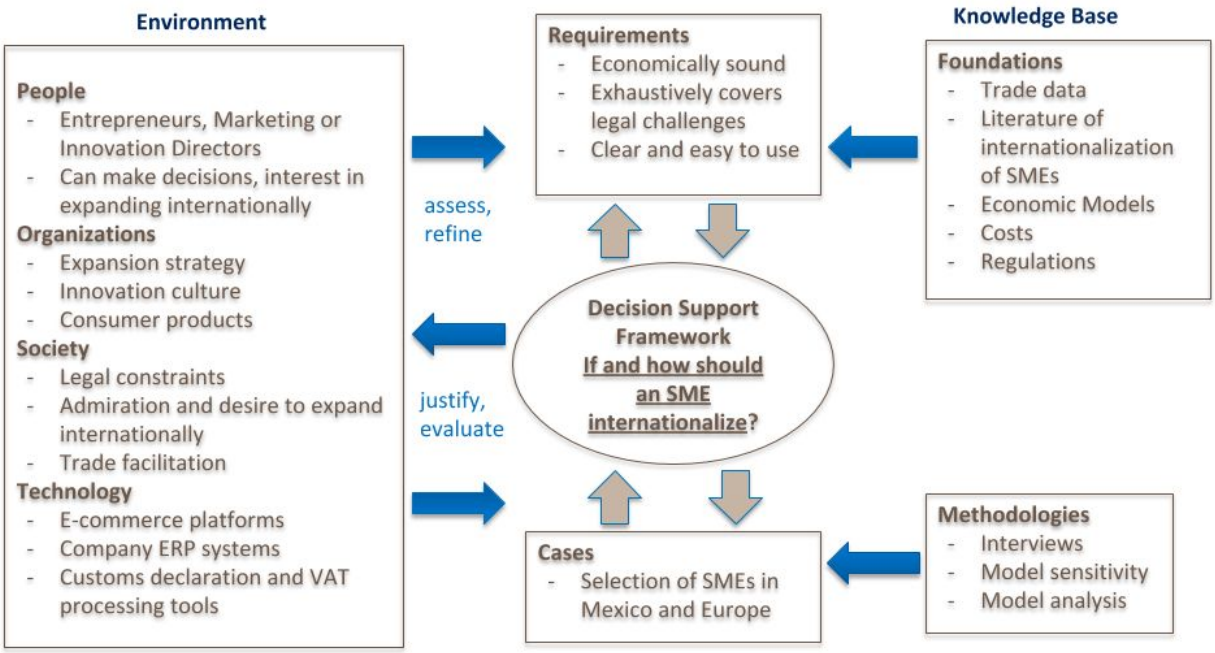


Figure 2. Artifact research framework applied the decision "If and how should and SME internationalize?"

More in detail the decision support framework will receive its rigour from being based on a knowledge base consisting of trade data, past research, benchmark costs and existing regulations, as well as case specific interviews and a model representing the different costs involved and their interaction. Additionally, the framework will receive its relevance from being grounded in real world people, organizations, society and technological constraints, as well as specific cases studied. Finally it will be designed in a way that it can be used and tested in a real world context without significant extensions.

3.Literature Review

The topic of internationalization of Small and Medium Enterprises (SMEs) has been extensively studied in journals of marketing, international management and business reviews, complemented by international trade statistics published by the European Commision.

Due to the nature of this thesis we will split the literature review into two parts. On the first part we will tackle the general case of internationalization by SMEs, and on the second part we will focus on the specific case of Mexico-EU trade.

Specifically the section on the general case of internationalization will focus on:

1. The reasons why SMEs internationalize and which steps they generally follow
2. Which methods for internationalization have been most successful

And the section on the specific case of Mexico-EU trade will focus on:

1. General Mexico-Europe trade and the impact of the Mexico-Europe free trade agreement (FTA)
2. The main barriers and opportunities for Mexican SMEs to internationalize
3. Industry data on manufacturing, export, import, storage and distribution costs in Mexico and the EU

3.1 The general case of internationalization

3.1.1 Globalization and why do companies internationalize?

According to Tallmand & Karin (2002), firms internationalize based on their ability to match their unique capabilities with a demand in a foreign country. More in detail this refers to them being in possession of processes, technologies or resources that can provide them a competitive advantage in a particular market.

These capabilities, assuming they are correctly matched with local demand, can allow a firm to arrive in a new market, either through acquisition of a local company or through organic growth, and quickly take a dominant position that is difficult to be challenged by local competitors that

might lack either the know how, technologies, economies of scale of resources of the foreign firm.

Additionally, according to Contractor (2007), firms that internationalize benefit from additional knowledge developed when entering a new market (smaller markets present a good opportunity for controlled experiments that may later be rolled out globally), as well as a positive feedback loop of economies of scale in R&D (a company that has a larger scale due to a larger international footprint can easier justify a large R&D investment, since that technology will impact a larger business) and production (production cost per unit will be lower by having larger production batches).

Finally internationalization provides diversification for companies in the sense that a one market may be on the rise while the other is on the downturn, creating an internal hedging for companies that makes them more stable in the financial cycles.

It;s important to point out that many of these benefits apply to larger corporations that have the resources to enter new markets. In the next section we will explore the specific case of Small and Medium Enterprises (SMEs)

3.1.2 Why do SMEs internationalize?

The body of literature on the internationalization of SMEs converges to there being three main factors driving SMEs to internationalize: 1) Founder/directors pushing for internationalization, 2) Liberalization of international markets, 3) Avoidance intense competition in domestic industries (Ethemad, H., 2004, O'Cass, A. & Weerawardena, J. 2009)

More in detail, the first factor (founders/managers pushing from internationalization), comes from the variety of studies showing the strong correlation between the founder's vision/desire to internationalize and the decision to explore international opportunities (O'Cass, A. & Weerawardena, J. 2009, Fernández Z. & Nieto M.J., 2005), combined with the *Uppsala Theory of Internationalization,* which proposes that "*internationalization is the process of acquisition, integration, and utilization of both knowledge and expertise in international operations with incremental participation in international markets*" (Liñán, F., Paul, J. & Fayolle, A., 2019).

Further exploration of this theory interprets it as firms gaining experiential knowledge through insurges by first entering foreign markets with close "psychic distance" (Stottinger & Schlegelmilch, 1998), one example being Latin American firms gaining international experience by entering the United States market first (Paul, J. & Mas, E. 2019). These studies together suggest that internationalization is deeply linked to the personal experiences of founders and managers of SMEs, which choose to internationalize towards markets where they have some previous familiarity.

Regarding the liberalization of international markets, literature suggests that the emergence of the internet as a key component to the liberalization of international markets (Ethemad, H., 2004, Bose, T. 2016, Ouyang, C. et al, 2017, Lanz, R. et al., 2018). This is mostly due to the communication, information transfer speed and knowledge democratization that the internet provides. Surprisingly there is not a lot of research supporting the idea of the existence of free trade agreements or other market facilitation mechanisms provided by nation-states as a determining factor for an SME to decide to internationalize. This suggests that internationalization has accelerated in recent years mostly by the simplification of communication between different markets and the democratization of information provided by the development of the internet.

Finally, in regards to avoidance of intense competition, it has been noted it is possible for SMEs to internationalize if their business is either knowledge intensive, or focused on narrow but well defined market segments where they have proven to be successful, delivering specialized or higher value (higher quality and lower prices) products or services than competitors (Ethemad, H., 2004). This suggests that part of the reason to internationalize is because the SMEs have unique or innovative products or services that do not have a lot of competition in the local markets (Ripolles et al., 2010).

Considering all of these factors together, one preliminary conclusion is that SMEs in Mexico internationalize if their founder has an international mindset, and if they choose to internationalize they are most likely to do it in the United States first before venturing into Europe due to short “psychic distance”. Additionally there is an opportunity for firms to internationalize if they can deliver specialized or higher value (higher quality and lower prices) products or services. Finally the use of ICT technologies, especially the internet, can play a critical role in educating, providing confidence and information for an SME to decide to internationalize.

3.1.3 Main barriers for SMEs to internationalize

According to the OECD (2019), the main barriers for SMEs to internationalize are:

- Informational Barriers: problems in identifying, selecting, and contacting international markets due to information inefficiencies.
- Human Resource Barriers: Lack of managerial time to deal with internationalisation, Insufficient quantity of and/or untrained personnel for internationalisation, Difficulty in managing foreign employees:
- Financial Barriers: lack or insufficiency of finance with regard to internationalisation.
- Product and Price Barriers: Difficulty in developing/adapting products for foreign markets, Difficulty in meeting product quality/standards/specifications of foreign markets Difficulty in offering satisfactory prices to customers
- Distribution, Logistics and Promotion Barriers: barriers associated with the distribution, logistics and promotion aspects of in foreign markets.
- Unfamiliar exporting procedures/paperwork

- Difficulty in communicating with foreign customers:
- Slow collection of payments from abroad
- Difficulty in enforcing contracts and resolving disputes
- Lack of home government assistance/incentives
- Unfavourable/ not transparent rules and regulation
- Foreign currency exchange risks
- Unfamiliar foreign business practices:
- High tariff barriers: the burden associated with excessive tax applied to imported goods to artificially inflate prices of imports and protect domestic industries from foreign competition
- Inadequate property rights protection (e.g. intellectual property)
- Restrictive health, safety and technical standards (e.g. sanitary requirements): difficulties associated with meeting high, non-transparent, inconsistent and/or discriminatory country-specific standards for imported goods including: sanitary and phytosanitary requirements; industrial and environmental protection standards; conformity assessment procedures (testing and re-testing, verification, inspection and certification to confirm products fulfil standards); and technical standards (e.g. preparation, adoption and application of different standards for specific characteristics of a product such as production, design, functions and performance)
- Arbitrary tariff classification and reclassification: problems and costs associated with the practices by Customs administrations of classifying goods in a way which is not in accordance with internationally accepted rules and principles of tariff classification (e.g. increasing the level of duty payable for imported goods either for trade policy, trade protection and/or revenue raising reasons; imposing tariffs less favourable than those implied previously through reclassification of imported goods; inability to obtain firm rulings from overseas Customs authorities on duties for some products; and/or lack of technical knowledge by Customs' administrations to enable them to provide correct tariff classifications to importers)
- Unfavourable quotas and/or embargoes: unreasonable prohibition of commerce and trade with a certain country or unreasonable restrictions on the quantity of specific goods being imported to certain countrie
- High costs of Customs administration: costs associated with: divergent interpretations of customs valuation rules by different Customs administrations (including the use of arbitrary or fictitious customs values); delay in customs clearance procedures (e.g. excessive and/or irrelevant paperwork, congestion at points of entry, delay and cost of cargo clearance); lack of procedures for prompt review; and lack of transparency and/or irregular/illegal practices (e.g. unofficial customs procedures, unwritten rules and unpublished changes, unofficial fees to accelerate processing, and the absence of information on customs regulations and procedures in English)
- Competitors with preferential tariff by regional trade agreement: disadvantageous competition with competitors who can benefit low or zero tariff from regional trade agreement between host country and home country of competitors.

In the following sections we will go into the literature of how these barriers are overcome through the most successful methods for SMEs to internationalize.

3.1.4 Which methods for internationalization are most successful?

The methods and pitfalls for SMEs to successfully internationalize have been recently collected into a 7-P framework (Potential, Path, Process, Pace, Pattern, Problems and Performance) by Paul, J. & Mas, E. (2019). This paper synthesizes a substantial amount of previous relevant papers on the topic and additionally focuses on Latin America. For these reasons, this framework will be used as the model to successfully internationalize in this thesis and is summarized in the following figure:

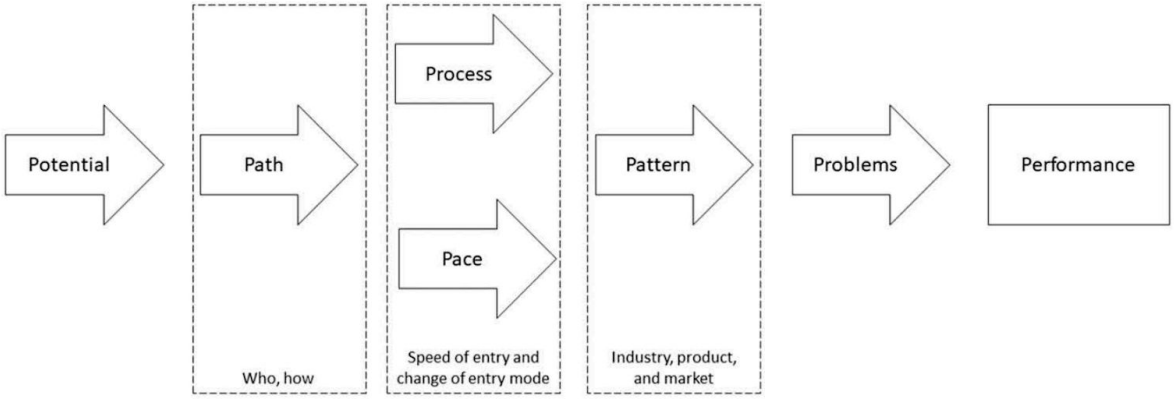


Figure 3: 7 Ps for international marketing (Paul, J. & Mas, E. 2019)

This figure demonstrates the sequence in which the P-construct can be analyzed in the internationalization process. All arrows in the Figure are of the exact same size because each one leads to the next, in the order of which the phenomenon or firm's decision takes place. Process and Pace are stacked because they are very similar and can occur simultaneously (Paul, J. & Mas, E. 2019)

We will go into detail on each of the parts of the model described in this paper below:

Potential: Potential considers the opportunities and activities in a foreign market that create a favorable or unfavorable position for incoming firms. Identifying the best and most appropriate potential foreign market is crucial for the success of a firm in an emerging market.

Path: Path in this context can be equalled to strategy. Strategy, when developed successfully, involves deploying the firm's scarce assets to support market needs, while recognizing market and technological opportunities and any constraints imposed by the firm's historical path of evolution.

There are different paths outlined in the literature, most notably expansion through direct exports and through partnerships.

In general, research suggests that in the long run the strategy of forming partnerships is the most successful. Kotabe et al. (2000) demonstrate this with evidence that Latin American enterprises operating in the US with local partners show average foreign sales of 32.8%, while Latin American enterprises operating in the US with non-US partners show average foreign sales of 24%. Research also suggests that while establishing local subsidiaries will help to ensure sustained growth and profitability in the long-run, Latin American firms traditionally start their international marketing efforts using exporting as their first mode of entry, then set up subsidiaries. This is in line with the internationalization process of Swedish multinationals reported in the Uppsala model.

As a final point related to path, the article points out that the majority of Mexican firms (54%) focus their marketing efforts on the quality of their products, while a large portion (38%) use a mix of price and quality competition. The rationale behind the quality focus is to overcome the Country of Origin (COO) effect – where consumers make positive or negative inferences on the quality of products based on the country that they come from. When the host country has a positive COO perception of products from the incoming firm's home country, the firm's ethnic identity can be used as a competitive advantage, as discussed by Miller, Thomas, Eden, and Hitt (2008).

Process: Process in this paper refers to the speed of internationalization. In the paper it is mentioned that Latin American firms tend to internationalize slowly, after gaining success locally. The paper does not describe if there is research proving or disproving this as a successful strategy.

Pace: Pace in this paper refers to the agility of a company to switch internationalization strategies. The paper suggests that Mexican firms are relatively agile in terms of switching strategies (e.g. export vs partnerships) and that this agility has contributed to the success of the internationalization efforts by these firms.

Pattern: Paul, J. & Mas, E. (2019) refer to pattern as firm structure, sector and destination. They mention that because of the psychic proximity mentioned earlier, and due to the vast natural resources available, Latin American firms are best suited to export agricultural products. But they present no evidence that there is a difference in performance or agricultural firms or firms in other sectors.

Problems: Problems refer to issues that happen once the internationalization process has begun. The main problems identified are:

- Domestic regulations
- Economic environment
- Poor information on external markets

- External institutional barriers
- Cognitive bias of the destination market (perception in the host market that the foreign firm's product is inferior based on country of origin)
- Liability of foreignness (social costs associated with a lack of knowledge and experience of the exporting company in a foreign country)
- Internal resource/capability limitations (available capital, managerial talent, technology, and brand equity among others)

Performance: Performance in this context refers to whether or not internationalization favorably affects the performance of a firm.This is a factor of the other 6 Ps (potential, path, process, pace, pattern and problems).

From this research we can derive that if a firm wants to be successful in its internationalization it has to:

1. Pick a foreign market with the right potential, which in this case is a market that has:
    a. A certain degree of natural affinity for the products that the firm is looking to export
    b. Limited external institutional barriers
    c. A niche that can be filled by the exporting firm's products being differentiated in terms of innovation (broadly speaking limited or non-existent local competition) or better price/quality ratio than local competition
    d. High "psychic proximity" with management, meaning to choose a market where the managers/founders already have some familiarity
2. Choose the right path towards internationalization. This means:
    a. In the short-term to decide whether to start exporting directly or through strategic partnerships
    b. In the long-term to form strategic partnership with a local company, since this has proven to significantly impact the long term success of the internationalization effort
3. Implement a lean and agile process to constantly evaluate the internationalization efforts, allowing for frequent iterations of combinations of right market and right paths to internationalize, while keeping close control of the capital spent and the return on investment of every iteration

3.1.4.1 The specific case of e-commerce as an internationalization method

If we look into a country that has successfully internationalized their SMEs[3], it is not possible to ignore the specific case of China, a country that has successfully internationalized a large portion of their SMEs using the power of technology.

[3] China accommodates nearly 40 million SMEs, of which 5 million engage in international trade and contribute approximately 60% of China's total export and import volume (Pan et al. 2017)

Specifically, the biggest opportunity to learn from China is the focus on *cross-border* e-commerce trade[4]. Using this as an example, SMEs can have access to the international markets by becoming more active in e-commerce websites used frequently across the world, such as Amazon[5]. This boom in China can be attributed to marketplaces that democratized access to SMEs from international importers in a way that information was transparent and minimum order quantities were small but could be ramped up, allowing for new business to boom across the world through a series of small entrepreneurs instead of just a reduced group of large corporations that had the resources and relationships to set up factories in China (Pan et al. 2017)

On the other side and in relevance to the specific case of Mexico, Latin America in particular seems not to have taken advantage of e-commerce opportunities. A study by UPS pointed out that 48% of Latin American Exporters don't sell online compared with only 12% of US exporters (UPS, 2018).

It is worth noting that the opportunity for direct cross-border e-commerce trade particularly into the EU is going to be significantly diminished once the current exemption from import VAT for small consignments worth not more than €22 is removed in January 2021 (Wesche et al. 2019). For this reason the opportunity will shift from shipping individual items directly from the exporting country to the customers, to shipping in batches to the importing country and then fulfilling orders locally.

3.1.5 Free trade agreements and their general impact

According to Myers (2016) there are about 420 regional trade agreements in force around the world. The largest one is the North American Free Trade Agreement (NAFTA), between Mexico, the USA and Canada, which between 1994 and 2014 had accrued total trilateral merchandise trade exceeding US$1.12 trillion. Free trade agreements are created with the objective of increasing trade and cooperation between countries by removing some of the challenges companies face when internationalizing in the form of import and export related regulations, procedures and duties.

Free trade agreements and their impact is a topic of intense debate (Schott 2004). Advocates propose that the benefits are creating more trade, which results in jobs and welfare for participating countries, the move to common security and health standards based on objective

[4] Cross-border e-commerce is built on a free, open, universal and inclusive global trade platform, where billions of consumers and SMEs are directly linked across the globe and, to a certain extent, the vision of global connection and interaction is fulfilled. In 2015, global trade growth was stagnant while cross-border e-commerce in China beat the market with ascending penetration rates in both import and export. In 2015, China's cross-border e-commerce volume rose to RMB 4.8 trillion, with year-on-year growth of 28%. The number is expected to reach RMB 12 trillion by 2020 with the compound annual growth of 20.1% (Pan et al. 2017)

[5] https://www.retail-index.com/E-commerceretail.aspx

data, modernization due to increased competition and stronger trade relations between participating countries.

Opponents of FTAs argue that they present only a temporary diversion of goods from one country to another (for example NAFTA shifted the textile industry from caribbean countries to Mexico, but later this was reverted when the US entered into a trade deal with these countries) and also create a big distraction from more focused trade deals that countries could be making instead of a blanked deal. Additionally criticism of FTAs is that they are more favourable to developed countries, since developing countries cannot really compete in many industries that require automation technology, resulting in SMEs closing down.

Unfortunately Free Trade Agreements are very different from each other, and it is also very difficult to accurately measure their independent impact. For these reasons there is no general measure that determines the benefits and costs of FTAs, and whether they have been net beneficial for the countries involved. So in order to assess that it is necessary to look at each FTA individually.

3.2 The specific case of Mexico-EU trade

3.2.1 General Mex-EU trade

EU-Mexico Trade has been steadily increasing since the 2009 financial crisis, totalling in 2019 39,363 million euros exported from the EU towards Mexico and 26,030 million euros imported from Mexico towards the EU. Additionally over the period of time between 2010 and 2018 exports towards Mexico have grown on average 11% every year and imports from Mexico have grown on average 11.7% every year (European Commission, 2018)

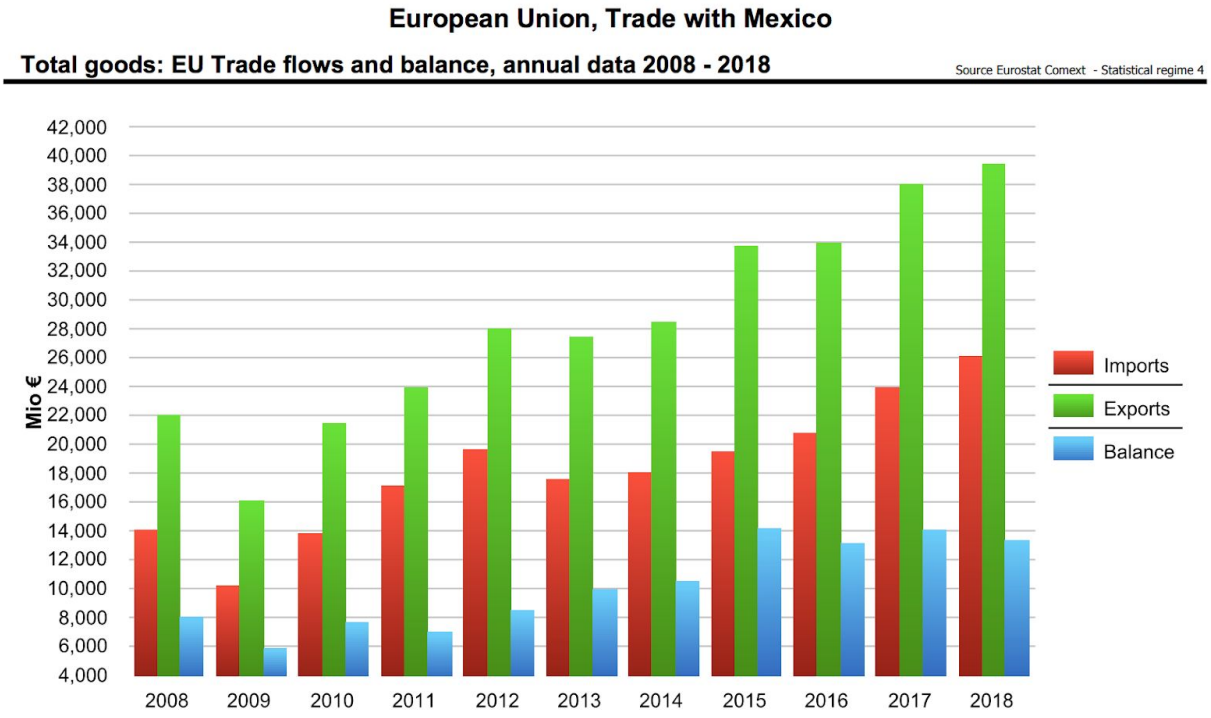


Figure 4: EU-Mexico trade flows and balance (*European Commission, 2018*)

Trade between Mexico and the EU is heavily dominated by the automotive and industrial processing industries. We can observe this by identifying that the main imports to EU from Mexico are in the Harmonized System (HS) categories of *Transport Equipment* (24.4%), *Machinery & Appliances* (24.3%) and *Mineral Products* (18.7%) and the main exports from EU to Mexico are in the HS categories of *Machinery & Appliances* (34.3%), *Transport Equipment* (17.9%) and *Products of the Chemical or Allied Industries* (13.5%)

European Union, Trade with Mexico

Trade flows by HS section 2018

Source Eurostat Comext - Statistical regime 4

HS Sections	Imports				Exports			
	Value Mio €	% Total	% Extra-EU	% Growth	Value Mio €	% Total	% Extra-EU	% Growth
I Live animals; animal products	233	0.9	0.8	56.9	168	0.4	0.6	-23.8
II Vegetable products	531	2.0	0.9	-4.3	319	0.8	1.3	30.2
III Animal or vegetable fats and oils	44	0.2	0.4	15.2	95	0.2	1.7	9.0
IV Foodstuffs, beverages, tobacco	634	2.4	1.4	4.4	815	2.1	1.0	3.6
V Mineral products	4,870	18.7	1.1	13.5	922	2.3	0.8	-9.7
VI Products of the chemical or allied industries	1,031	4.0	0.6	21.0	5,297	13.5	1.7	-1.9
VII Plastics, rubber and articles thereof	700	2.7	1.1	-4.6	1,959	5.0	2.6	8.3
VIII Raw hides and skins, and saddlery	72	0.3	0.5	25.9	192	0.5	1.1	7.4
IX Wood, charcoal and cork and articles thereof	3	0.0	0.0	-5.1	123	0.3	0.9	8.6
X Pulp of wood, paper and paperboard	20	0.1	0.1	-21.6	765	1.9	2.4	14.8
XI Textiles and textile articles	162	0.6	0.1	-0.1	966	2.5	1.9	4.3
XII Footwear, hats and other headgear	19	0.1	0.1	-2.7	132	0.3	1.2	13.6
XIII Articles of stone, glass and ceramics	174	0.7	1.2	18.4	467	1.2	2.2	0.8
XIV Pearls, precious metals and articles thereof	647	2.5	1.0	10.2	137	0.3	0.2	10.1
XV Base metals and articles thereof	666	2.6	0.5	22.6	3,410	8.7	3.0	19.7
XVI Machinery and appliances	6,333	24.3	1.3	5.0	13,496	34.3	2.7	-0.9
XVII Transport equipment	6,359	24.4	4.6	13.2	7,048	17.9	2.3	12.8
XVII Optical and photographic instruments, etc.	3,102	11.9	4.3	8.3	1,850	4.7	1.8	7.9
XIX Arms and ammunition	0	0.0	0.0	69.5	12	0.0	0.3	-40.5
XX Miscellaneous manufactured articles	221	0.8	0.4	1.0	663	1.7	2.0	4.8
XXI Works of art and antiques	11	0.0	0.3	-29.1	36	0.1	0.4	-48.9
XXII Other	196	0.8	1.0	-48.4	489	1.2	2.1	-19.5
AMA / NAMA Product Groups								
Total	26,030	100.0	1.3	8.9	39,363	100.0	2.0	3.8
Agricultural products (WTO AoA)	1,313	5.0	0.1	0.6	1,507	3.8	0.1	4.2
Fishery products	181	0.7	0.0	83.7	27	0.1	0.0	50.1
Industrial products	24,536	94.3	1.2	9.1	37,828	96.1	1.9	3.8

% Growth: relative variation between current and previous period

% Total: Share in Total: Total defined as all products

% Extra-EU: imports/exports as % of all EU partners i.e. excluding trade between EU Member States

Figure 5: EU-Mexico trade flows and balance by HS code (*European Commission, 2018*)

3.2.2 What is the impact of the Mexico-EU FTA?

The EU-Mexico Free Trade Agreement (FTA) entered into force in October 2000 for the part related to trade in goods, and in 2001 for the part related to trade in services. At the time the FTA was concluded, it was the most extensive trade agreement ever signed by the EU. The EU-Mexico FTA establishes trade disciplines in 11 areas: a.Market access, including a tariff liberalisation schedule of trade in goods; b.Origin Rules, and customs cooperation; c.Safeguards; d.Standards, Technical Regulations and Conformity Assessment Procedures; e.Sanitary and Phytosanitary Measures; f.Government procurement; g.Competition; h.Trade in services; i.Investment and related payments; j.Intellectual property; and k.Dispute settlement.

According to a study published by the European Commision (European Commission, 2018. *Ex-post evaluation of the implementation of the EU-Mexico Free Trade Agreement*), the impact of the EU-Mexico FTA has been positive, although also modest. Specifically the trend in bilateral exports largely follows the trend in overall exports of both partners, but there was a small increase in the importance of both partners in each other's trade flows over time: the EU's share of Mexican exports was 3.8 percent in 1999 and 4.9 percent in 2013, whereas Mexico's

share of EU exports increased from 0.5 to 0.7 percent, and this effect can be mainly attributed to tariff reductions in the FTA.

Additionally, the study provides a model that predicts that for Mexico the benefits from the bilateral tariff liberalisation under the agreement amount to €2,876 million in real income per year, while, for the EU, these gains amount to €1,559 million annually. In percentage terms, Mexico's GDP is estimated to be 0.34 percent higher due to the Agreement and the EU's GDP is estimated to be 0.01 percent higher. This asymmetrical effect is due to the difference in importance of the two parties for each other as trading partners. The increase in income is also reflected in real wages. Compared to the counterfactual scenario without an FTA, real wages in the EU are 0.02 percent higher, while in Mexico wages are between 0.24 and 0.45 percent higher, depending on the skill group.

In relation to increases in trade, the model predicts that the FTA contributed to increases in trade, amounting to an increase of 1.5-1.7 percent in Mexico's aggregate exports and imports, and a 0.05 percent increase in the EU's aggregate trade flows.

At sector level, the model suggests that, in the EU, the changes in output have been small, varying between 0 and 0.2 percent. In Mexico, the output effects seem to have been more pronounced, with the largest changes according to the model taking place in two sectors: motor vehicles (+16.5 percent) and electrical machinery (-11.5 percent). The motor vehicle sector witnessed a large reduction in import tariffs in the EU, thereby increasing export opportunities and related output increases. The expansion of this sector led to a contraction of the electrical machinery sector.

Interestingly although tariffs for textiles and clothing on Mexican exports to the EU were also high, these sectors did not expand in Mexico compared to the counterfactual, as there were significantly larger tariff reductions for EU exporters, who thereby gained competitiveness against Mexican producers and pushed some of them out of production.

Finally, the study concludes that the main causes behind the relative modesty of the results do not seem to relate to the specific provisions of the FTA, but, rather, to more general factors, such as the lack of awareness, equal or better market access conditions in countries in the region, and differences in standards.

3.2.3 What are the main barriers and opportunities for Mexican SMEs to internationalize?

While there has been a relatively strong push from the mexican government for SMEs to internationalize, specifically in terms of initiatives related to efficiency improvements, education about export processes & opportunities, and innovation & design (Álvarez S. 2014), it seems that their efforts have not been effective. Latin American SMEs are still mainly held back by lack

of innovation, low productivity and very low levels of formality in work and fiscal structures (CAF Banco de desarrollo de América Latina, 2018).

While there is limited research specifically for Mexico, this is supported by Lopez et al. (2015) who found that in Mexico the main barriers SMEs to innovate are financial resources, lack of control of external factors and human resources deficiency.

Additionally we conducted in-depth interviews with an internationalization consultant focused on exporting from Mexico to The Netherlands (Appendix 2) and with the Ministry of Economic Affairs for the Mexican Embassy in The Netherlands (Appendix 3). During these interviews the main barriers identified were lack of education in trade processes and international demand, and lack of government support.

All of these barriers are in line with what the OECD identified (see section 3.1.3), which suggests that Mexico is not a specific case in terms of barriers to internationalize.

In regards to opportunities, our interviews suggest that Mexican SMEs should start viewing exporting as a strategic investment. In the EU SMEs reported that they started exporting due to three perceived benefits: market development, financial return and brand building, with market development being either reactive to meet demand from online channels or proactive to explore opportunities in larger markets. Additionally, 97% reported that the quality of their products and services as their main determinant for export success, with other determinants being customer relationships (91%), logistics (92%), pricing (91%), innovation (86%), reactivity to changing markets (84%) and product design (81%) (UPS, 2014)

Taking the points above into consideration, for Mexican SMEs to internationalize they need to understand that 1) Internationalization is a strategic investment and it will require a financial investment, 2) they need to get educated on the destination market and trade flows and regulations. Finally, governments, expert consultants and partners in the destination country can help in providing education regarding the export import process and intelligence regarding the destination market.

3.2.4 Industry data on manufacturing, export, import, storage and distribution costs, specific Mexico-Europe case

For this thesis we have gathered industry data on the costs for manufacturing in Mexico, export towards EU, import into the EU, storage in the EU and distribution within the EU.

Manufacturing: It is difficult to get quotations up front for the manufacturing of goods. What we can identify is that average hourly compensation in the manufacturing industry in Mexico is

€3.60[6], which is significantly lower than €31.50 for The Netherlands, and even much lower than €8.90 for Taiwan which is another developing nation.

Export & import: For export and import costs we have gathered quotations from 2 different freight forwarders. Here we have already encountered the first challenges in exporting items:

1. It's difficult to get a quotation as a small company, freight forwarders are not very interested in small volumes. Additionally some online freight forwarders will only give a quotation to companies registered in the EU.
2. It's hard to compare between two different offers, since there is not a lot of transparency from freight forwarders into what is included in each service and why one costs more than another
3. It's difficult to get information from freight forwarders on the price and coverage of insurance
4. It's hard to compare between freight forwarders in terms of quality of service and reliability

With that in mind below is the quotation data:

Prices for a 40 foot container		
Service	**Freight forwarder 1**	**Freight forwarder 2**
Land transport Mexico	€1,593	€1,638
Port and export fees Mexico	€1,060	€532
Container shipping fees	€1,600	€1,092
Port and import fees Europe	€1,456	€910
Land transport EU port to warehouse in continental europe	€865	€774
Total	**€6,573**	**€4,946**

Table 1: Sample quotations from freight forwarders for exporting out of Mexico and into the EU mainland

Storage: For storage we will use the Amazon warehouse storage cost as reference, which at the moment are €0.29 per month[7] for a standard size item.

Distribution: For distribution we will use the Amazon European shipping costs at reference, which at the moment range from € 2.28 to € 3.18 for a standard 500g parcel[8]

[6] https://www.conference-board.org/ilcprogram/index.cfm?id=38269
[7] Storage fee for January to September is €0.23 per month. Price is for a standard size item(sample a toaster)
https://services.amazon.co.uk/services/fulfilment-by-amazon/pricing.html/ref=as_uk_fba_mcfpricing
[8] The fee is€ 2.41for Germany, € 2.74 for France, € 3.18 for Italy and € 2.28 for Spain
https://services.amazon.com/fulfillment-by-amazon/pan-european-fba.html,

4. Economic model

Using the information presented in the literature review we have constructed a model with the objective of simulating the economic impact of different exporting scenarios. Using this model it will be possible through a sensitivity analysis to identify the key variables for Mexican SMEs to consider when deciding to export goods.

According to Saltelli et al., (2004), a sensitivity analysis is "*the study of how uncertainty in the output of a model (numerical or otherwise) can be apportioned to different sources of uncertainty in the model input*".

The way this chapter is structured is:

1. Description of the model and its variables
2. Test the model by modifying one factor at a time and plot out the sensitivity of each variable
3. Represent using the model a set of practical scenarios based on interviews with potential exporters
4. Conclusions and insights from the model will be outlined

4.1 Description of the Model

In this model we are representing an import-export supply chain from manufacturing to final delivery hub that makes goods available to purchase, including all distribution and promotional costs. The decision to model it this way comes from the objective of quantifying the interaction between all relevant economic terms associated with the process of exporting to a new country.

The model has the following assumptions:

1. Goods will be delivered through an online platform. This means that we are not considering selling to wholesalers who in turn will offer the goods through physical stores. The reasons behind this are twofold:
    a. Many consumer goods SMEs do not have access to the network needed to sell directly in large volumes to manufacturers (see section 3.1.4.1 of the literature review for a longer discussion on how this model worked to expand international access to Chinese SMEs)
    b. There is unproven demand for these particular products in the destination region, so going directly into a partnership with a large wholesaler presents a large risk in terms of financial resources and time (there being *"no market for a product*" is recognized as one of the top 5 reasons why a new product fails by Schneider & Hall 2011)

https://m.media-amazon.com/images/G/02/FBA_Files/2019/191111-FBA-Rate-Card-UK.pdf?Id=NSGoogle_null

2. Goods are manufactured in a specific country, and then after going through export processes are transferred to a first destination region through regular maritime means. This assumption was taken to represent regular goods that do not require specialized containers or air travel.
3. Goods are transferred from the port at the destination country to a central warehouse through land transport.
4. The online platform will take care of all distribution to the final customers in return for a fixed fee.
5. Goods are covered by a free trade agreement, meaning that they are not subject to customs duties.

The objective of the model is to represent the main costs associated with the process of manufacturing, exporting, importing, selling and distributing goods. More specifically the model represents selling goods manufactured in Mexico through an online e-commerce platform that handles the last mile logistics like Amazon.com, although the model could just as well be used to represent goods moving between any pair of countries that have a free trade agreement and do not share a border.

A model like this can be useful for SMEs to choose which type of consumer products are more likely to be economically successful. The merit of providing such a model was confirmed during our talk with the head of economic affairs at the mexican embassy in The Netherlands (Appendix 3).

More in detail, in this model there are 4 main actors, the manufacturer, the customer, the freight forwarder and the e-commerce platform[9]. The process in the model is as follows:

1. The manufacturer (in this case an SME) produces the goods in Mexico
2. A freight forwarder picks up the goods in Mexico and transports them to a warehouse in Europe through ocean container shipping, handling all the related processes
3. The e-commerce platform stores the goods in their warehouses and offers them on their website to customers across Europe. Additionally the e-commerce platform carries out internal optimization to get the goods as close to the customers as economically efficient
4. The customer orders the product from a localized version of the website. Once the customer order comes in the e-commerce platform takes care of the last mile delivery

This process is summarized in the figure below:

[9] The reason for choosing an e-commerce platform as the distribution channel for the model is derived from the finding that direct exports and e-commerce represent underutilized export opportunities for Mexican SMEs further described in the literature review section of this thesis

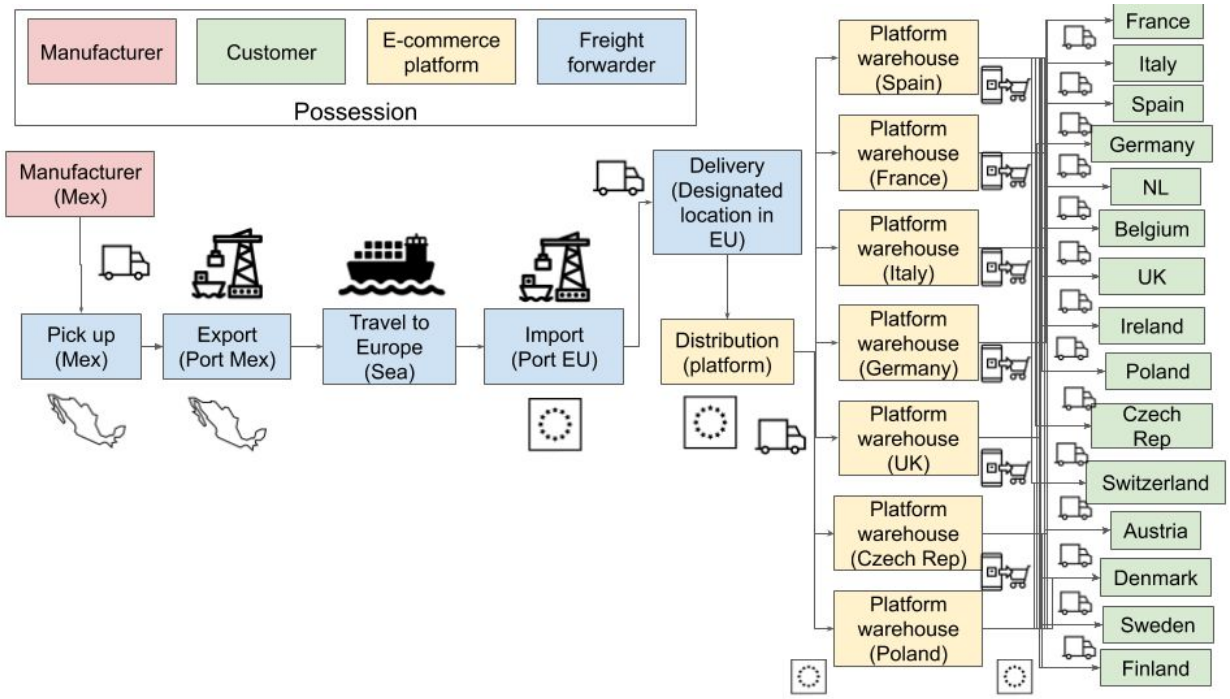


Figure 6: Process for Mex SMEs to offer their products through an EU based e-commerce platform

The model represents the relationship with the main costs associated with the process described above and their relationship to the total cost at a **unit economics** level. We have chosen unit economics because most of the costs can be approximated to be linear variable costs (with some such as trucking or container costs having certain step function behaviour in them), and because by modeling it at unit level, it will be easier for SMEs to understand how the distribution costs related to the manufacturing cost, which is the cost they are most familiar with.

The variables considered in this model are:

Variable	Name	Description	Fixed ratio/value or variable?	Value(€/%)
Sp	Sales Price	Price of a good sold in Euros[10]	**Variable**	€10-€500
VAT	Value Added Tax	Tax based on the value of the good. Set at 21% of the sales price (SP) in the model[11]	Fixed	21% of SP
MKTc	Marketing cost	Marketing investment, represented as a percentage of sales price[12]	**Variable**	10%,15%, 20% of SP
Ec	Export costs	Administrative and logistic costs associated with exporting the product out of Mexico[13]	Fixed	€0.60/ unit
COc	Container costs	This is the cost of a 40 ft container filled with product moving from Mexico to The Netherlands[14]	Fixed	€0.34/ unit
Ic	Import costs	Administrative and logistic costs associated with import excluding custom duties and import VAT[15]	Fixed	€0.50/ unit
CUc	Custom duties	Custom duties to be paid based on the type of good [16]	Fixed	€0.00/ unit
IVAT	Import	VAT paid during the import process[17]	Fixed	€0.00/ unit

[10] Sales Price is defined as an initial sales price that can be modified by the discount variable

[11] The minimum VAT rate in Europe is 15% (Section 1 paragraph 29 or the COUNCIL DIRECTIVE 2006/112/EC) but in this thesis we use 21%, which is the standard VAT rate of The Netherlands (https://ec.europa.eu/taxation_customs/sites/taxation/files/resources/documents/taxation/vat/how_vat_works/rates/vat_rates_en.pdf). It is worth mentioning that the most common standard VAT rates in the EU oscillate between 19 and 23%

[12] In this thesis marketing spend is defined as the investment made in order to sell the product, which in the context of e-commerce is mainly online marketing (e.g. amazon recommendations, facebook ads and google paid search). Additionally, marketing spend is not a variable that can be analytically optimized without prior data for a specific context of product, market and distribution channel. But based on industry research in this thesis we will use the scenarios of 10, 15, and 20% of the sales price, based on a recommendation from the USA Small Business association that establishes that B2C product companies spend on average 9.6% of revenues in marketing and advertising (https://www.sba.gov/blog/how-get-most-your-marketing-budget)

[13] Exports costs in the model represent the transportation costs from central Mexico to Mexico's main ports (Veracruz or Altamira), port fees, export administrative fees and container loading fees

[14] Based on a standard size for a shoe we will assume 4,000 shoes fit in a 40ft container and scale other products to that capacity

[15] Imports costs in the model represent the port fees and unloading costs in Rotterdam and the transportation costs from the port of Rotterdam to one of the main cities in Germany

[16] Customs duties are a tax imposed on imports and exports of goods. Mexico has a Free Trade agreement with the EU, so for the goods investigated in this thesis this value will be assumed to be zero. This is expanded in the scenario section of this chapter

[17] Import VAT is a transactional VAT paid when goods are imported into the EU. It is possible for companies planning to sell consumer goods (like the one described in this model) to recover these duties. For this reason they are modelled as zero in this thesis. It is worth mentioning that in most of the EU these duties represent a cash flow impact, since they can only be recovered after the duty is paid during

	VAT			
Dc	Delivery costs	Delivery costs charged by the platform[18]	Fixed	€4.80/ unit
Sc	Storage costs	Storage costs charged by the platform[19]	Fixed	€0.70/ unit
PFc	Platform costs	Listing fee charged by the e-commerce platform[20]	Fixed	15% of SP
MANc	Manufacturer costs	Manufacturer costs to produce the goods[21]	**Variable**	5-30% of SP
PKc	Packaging costs	Cost to package the goods[22]	Fixed	€0.88 per unit
Disc	Discount	% of the sales price that goods get sold in the different scenarios	Fixed	0, 25%, 50%, 70%
SC	Scenario	% of goods sold under a specific price discount[23]	**Variable**	Pessimistic Average, Positive

Table 2: Description of the variables in the economic model

the monthly VAT declaration of the company. But there is a special reverse charge mechanism in The Netherlands that allows companies to recover them at the same time they are paid during the import declaration, which supports this cost to be modelled as zero in this thesis. (https://www.belastingdienst.nl/wps/wcm/connect/bldcontenten/belastingdienst/business/vat/vat_in_the_netherlands/vat_relating_to_purchase_and_sale_of_goods/import_from_non-_eu_countries_to_the_netherlands/reverse-charge_mechanism_on_import_article_23)

[18] Delivery costs in this model are based on Amazon.eu's delivery costs. We assume that every delivery is 4 euros and that 10% of the items are returned and sent out again. This means delivery costs are 4+4*0.1+4*0.1=4.8 euros

[19] Storage costs are based on Amazon.eu's storage costs, which are 15 euros per cubic meter per month. This means converting a standard product size to cubic meters (which for a shoe or an artisanal plate converts to about 135 products per cubic meter, https://www.quora.com/How-many-shoe-boxes-fit-in-a-cubic-meter) and multiplying times and expected storage time of 6 months results in about 70 euro cents.

[20] For platform costs we will use the standard Amazon EU fee of 15% https://sellercentral.amazon.de/gp/help/external/200336920?language=en_US&ref=efph_200336920_cont_19211

[21] This is one of the variables that are tested with the model. The test variables will be in the range of 5-30% of the sales price

[22] Based on standard costs for label printing (132 euros per label roll with 2100 labels=€0.06), labour (€20 a daym 8 hours a day, 3 labels per minute=€0.02 per unit), boxes (€2.5 per box, 4 shoes per box=€0.65/unit) and pallets (10 euro per pallet, 16 boxes per pallet, 4 shoes per box=€0.16/unit), this cost adds up to €0.88 per unit

[23] We assume that a portion of each container imported will have some level of price discounts to incentivize sales. This discount is set to either 25%,50% or 70% of the initial sales price. How much of the imported container will be sold at each price level is based on 3 different scenarios, a positive, a negative and an "average" scenario

The equations below summarize how the model is used to represent the end to end (E2E) supply chain profitability. This end to end profit is calculating by:

1. Taking the sales prices times the expected discount required to incentivize sales unders different scenarios
2. Subtracting from the sales price the costs of the supply chain, which are the manufacturing costs, the VAT on sales, the marketing spent, the export and import costs (both transaction and logistics), the fee of the online platform based on the sales price, the online platform's storage and distribution costs, the cost of returns and the packaging costs

End to End Profitability

$$E2Eprof_{i,j,k,z} = Sp_i * ESp_j - Sp_i * MANc_k - Sp_i * (1 - 1/VAT) * ESp_j - Sp_i * MKTc_z$$
$$- Ec - COc - Ic - CUc - IVAT - Dc - Sc - Sp_i * PFc * ESp_j - PKc$$

Expected Sales Price

$$ExpectedSalesPrice_j\ (ESp_j) = 1 - \sum_{j=O,A,P} Disc_a * SC_b$$

In these equations *i* represents the different sales prices (10-500), *k* represents the different manufacturing costs (5-30%), *z* represents the different marketing costs, and *j* represents the different sales scenarios, which are a combination of a % of goods sold under a discount (*a*) and the amount discounted (*b*), summarized below:

	% of goods sold under discount			
Discount scenario	No discount	25% off	50% off	70% off
Optimistic (O)	*60%*	*25%*	*12%*	*3%*
Average (A)	*30%*	*30%*	*30%*	*10%*
Pessimistic (P)	*20%*	*30%*	*30%*	*20%*

Table 3: Breakdown of discount scenarios

4.2 Sensitivity Analysis

Using the model described above we set out to explore different scenarios with the objective of understanding under which circumstances it's economically interesting to import goods into Europe.

4.2.1 Base Model Analysis

The initial set of tests we carried out were focused on the relationship between the sales price and manufacturing cost (as a percentage of sales price) on the overall Supply Chain profitability. The initial hypothesis is that due to the set of variable costs related to importing, marketing and

distributing goods, supply chain profit will be higher for products with high sales price and low manufacturing costs.

Using the model we illustrated the different scenarios in a set of 3d plots:

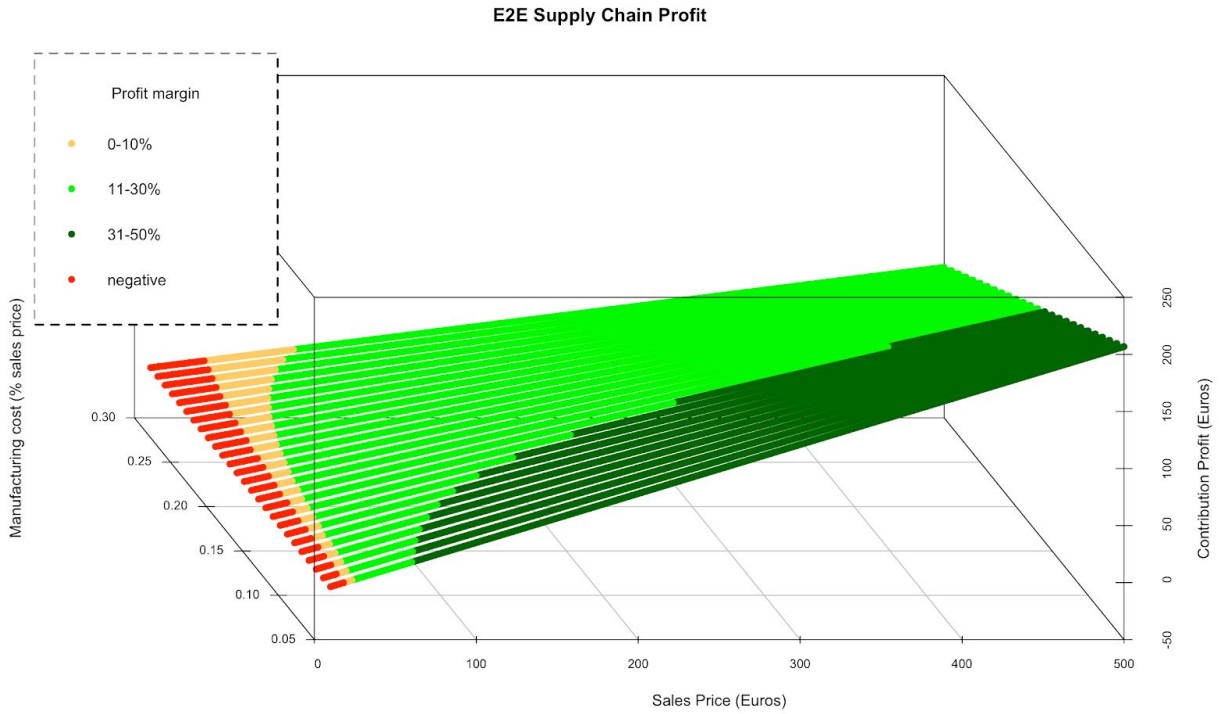


Figure 7: E2E supply chain profitability OPTIMISTIC scenario, marketing cost =10% of sales price

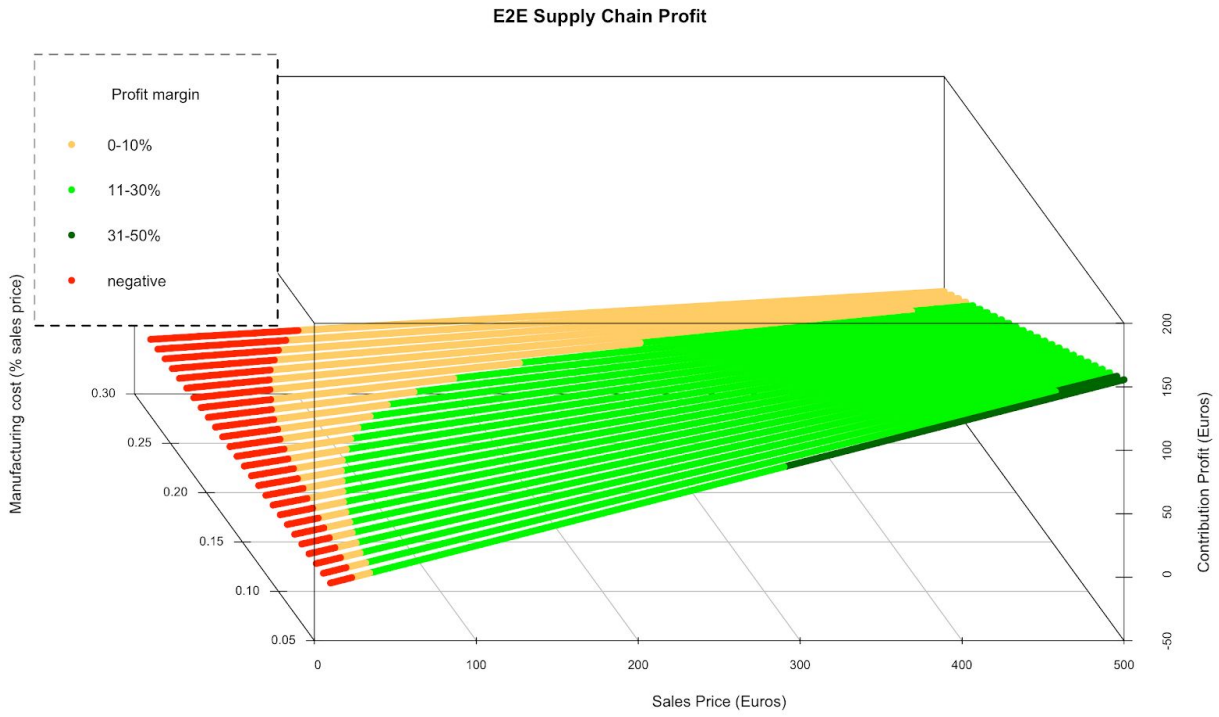


Figure 8: E2E supply chain profitability AVERAGE scenario, marketing cost =10% of sales price

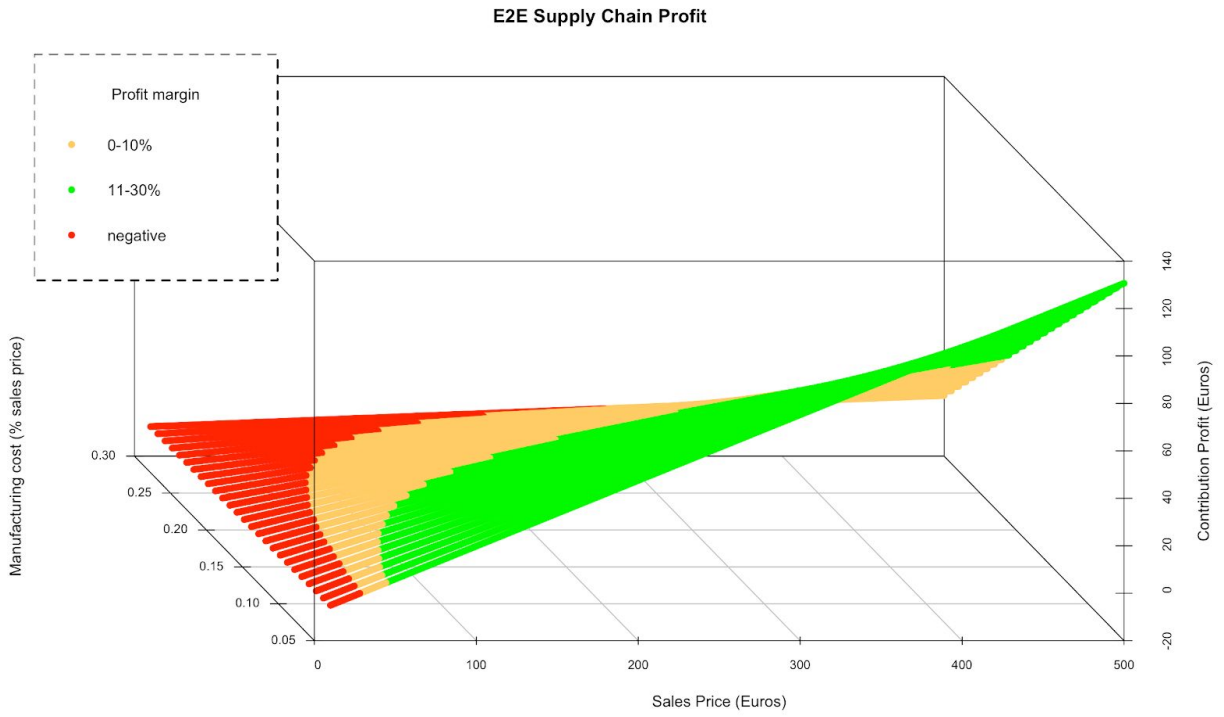


Figure 9: E2E supply chain profitability PESSIMISTIC scenario, marketing cost =10% of sales price

From these initial scenarios we can observe that products with a sales price >100 euros and manufacturer costs <20% of the sales price have the highest likelihood to have an E2E supply chain profit margin of more than 10%. Considering that in real life scenarios there are very frequently unexpected costs, we consider in this thesis a profit margin of >10% as the minimum needed to have confidence that the supply chain can be consistently economically sustainable. Less than that creates a significant risk of negative profit margins and unit economics.

In order to further test this conclusion we have run the analysis above for the situations where a larger marketing budget is required in order to sell the goods (for full scenario analysis refer to Appendix 4).

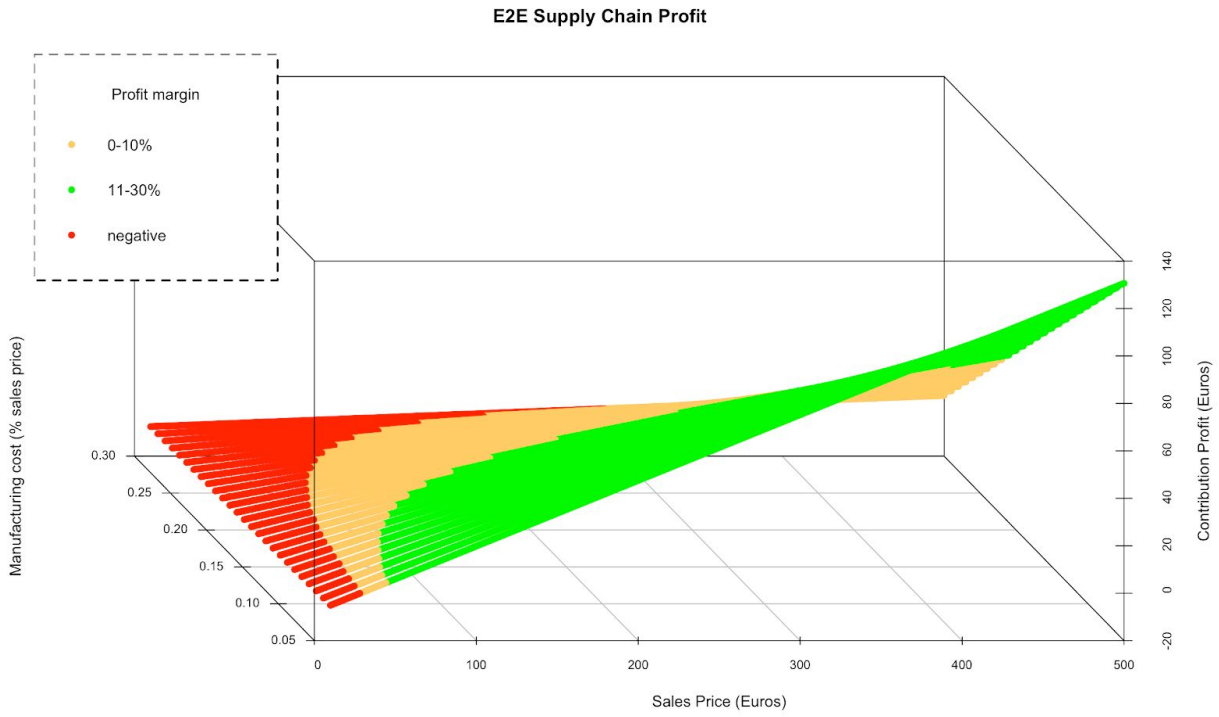


Figure 10: E2E supply chain profitability AVERAGE scenario, marketing cost =15% of sales price

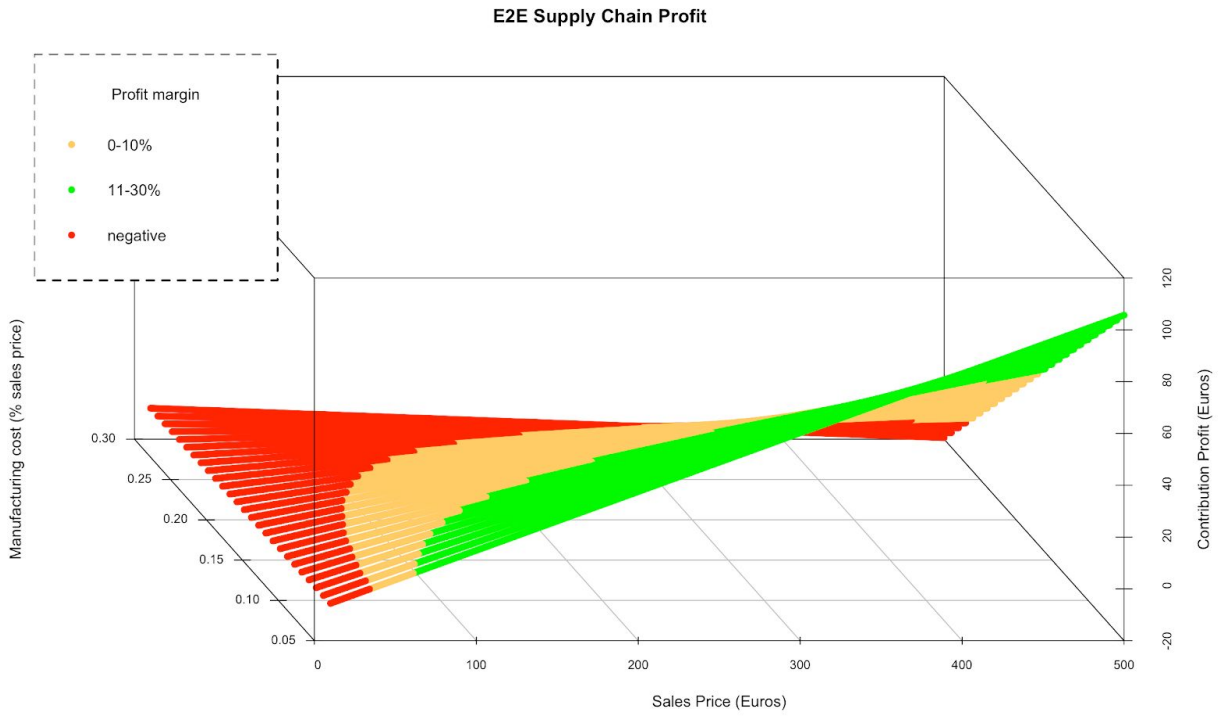


Figure 11: E2E supply chain profitability Average scenario, marketing cost =20% of sales price

By analyzing the figures above we can see that as marketing spend increases, the circumstances where the supply chain is sustainably profitable decrease. This leads us to revisit our earlier statement regarding our specific case study and adjust it to products with a sales price >100 euros and manufacturer costs <15% of the sales price have the highest likelihood to have an E2E supply chain profit margin of more than 10%, and marketing spend should not exceed 20% of the sales price.

The main insights that can be generalized from the behaviour of the model are:

1) As the sales price increases, relatively standard and stable costs per product such as exporting, importing and delivery costs become a smaller factor of the total sales price component and that drives higher profitability.

2) Non-standard and relatively unstable costs such as manufacturing and marketing can play a very large component of the total costs, so it's important to consider them in detail when deciding which product to export, since at certain levels they can become so large that the operation can no longer be profitable

This means that for higher end products, it's rational to spend a high proportion of the sales price in marketing and product quality (as a proxy for manufacturing costs), since at unit economic levels this will more likely result in profitability.

Inversely in the case of negligible marketing spend, manufacturing costs and returns, it's possible to offer products cross border at very low sales prices and still have a profitable supply chain. This explains the case of China selling their products across the globe through online platforms.

The difficulty lies in the middle of the pack products which are neither very expensive nor very affordable. These products, which represent a large portion of consumer goods, are where it is difficult to assess the right amount to spend in manufacturing costs and marketing spend. In chapter 4 of this thesis an artifact that can help SMEs make this assessment for the specific case of Mexico-Europe will be proposed.

4.2.2 Model Extension

After conducting an interview with a Mexican SME (Appendix 1), it was suggested that they would be interested in a partnership with a company that would import and sell their goods in Europe. This is supported by literature that suggests that in the long-term the most effective way for an SME to internationalize is to form strategic partnership with a local company, since this has proven to significantly impact the long term success of the internationalization effort (Paul, J. & Mas, E. 2019).

With this in mind we have extended our model to incorporate a profit splitting alternative, where a manufacturer provides the goods to a local company in Europe in consignment and in return gets a percentage of the sales price, and the local company in Europe is responsible for the export, import, marketing and sale of the products through an e-commerce channel.

The assumptions behind this profiting splitting model are that:

1. The manufacturer will provide the goods to the importer on a consignment basis. This means that the importer will not have to pay for the goods until they are sold.
2. The manufacturer will receive a portion of the actual sales price of the goods instead of a fixed amount
3. The only costs incurred by the manufacturer are the manufacturing costs
4. Importers have the responsibility of taking the goods from the manufacturer and selling them at the highest price possible with the lowest marketing spent possible
5. The importer’s costs are the manufacturer’s share of the sales price, the VAT, the marketing spent, the costs incurred in the export and import of the goods, the fee of the online platform based on the sales price, the online platform’s storage and distribution costs, the cost of returns and the packaging costs

6. Sales prices are influenced by different discounts the importer might implement to incentivize sales.

The way the profit is split is outlined in the model below:

Importer's profit

$$IMPprof_{i,j,k,z} = Sp_i * ESp_j - Sp_i * MANshare * ESp_j - Sp_i * (1 - 1/VAT) * ESp_j - Sp_i * MKTc_z - Ec - COc - Ic - CUc - IVAT - Dc - Sc - Sp_i * PFc * ESp_j - PKc$$

With $MANshare = 30\%$

Importer's costs

$$IMPcost_{i,j,k,z} = Sp_i * MKTc_z + Ec + COc + Ic + CUc + IVAT + Dc + Sc + Sp_i * PFc * ESp_j + PKc$$

Importer's Return on Investment

$$IMProi_{i,j,k,z} = \frac{IMPprof_{i,j,k,z}}{IMPcost_{i,j,k,z}}$$

Manufacturer's profit

$$MANprof_{i,j,k,z} = Sp_i * MANshare * ESp_j - Sp_i * MANc_k$$

Manufacturer's cost

$$MANcost_{i,j,k,z} = Sp_i * MANc_k$$

Manufacturer's Return on Investment

$$MANroi_{i,j,k,z} = \frac{MANprof_{i,j,k,z}}{MANcost_{i,j,k,z}}$$

Using this model we have identified under which scenarios it is profitable for the importer of the goods and for the manufacturer of goods to import goods from Mexico and sell them in Europe. This is exemplified in the plots below (full scenarios in Appendix 4):

Looking at the importers perspective first:

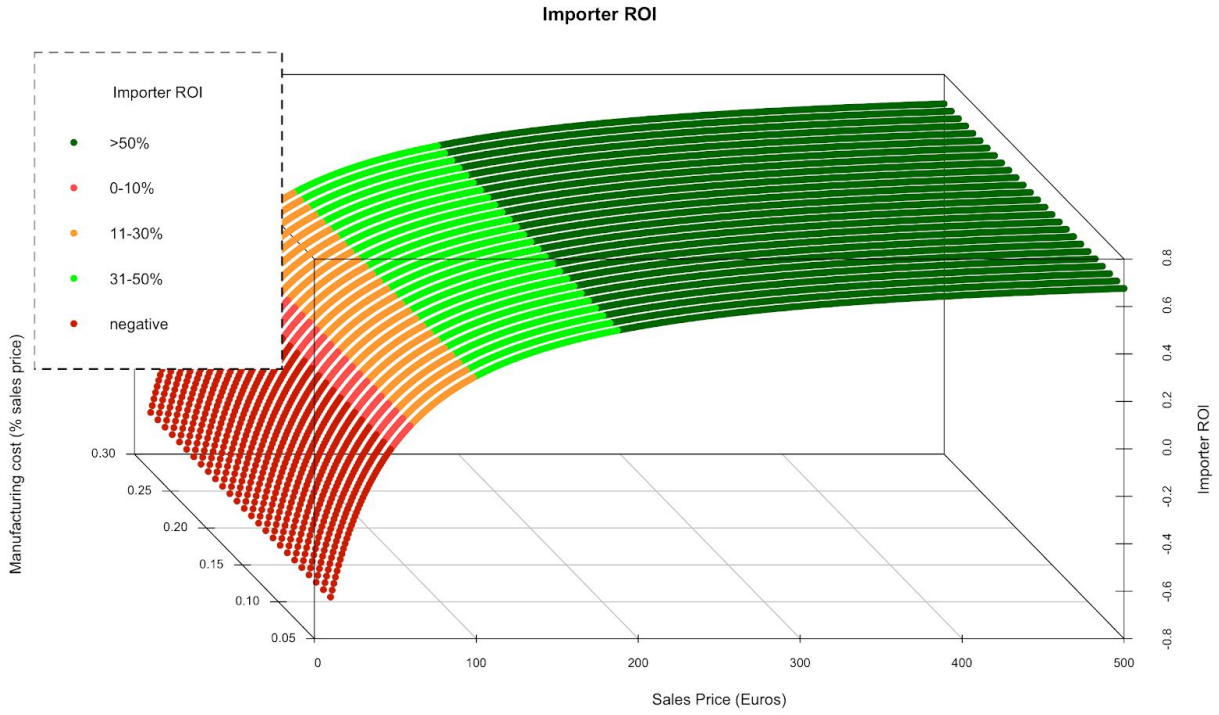


Figure 12: Importer Return on Investment AVERAGE scenario, marketing cost=10% of sales price

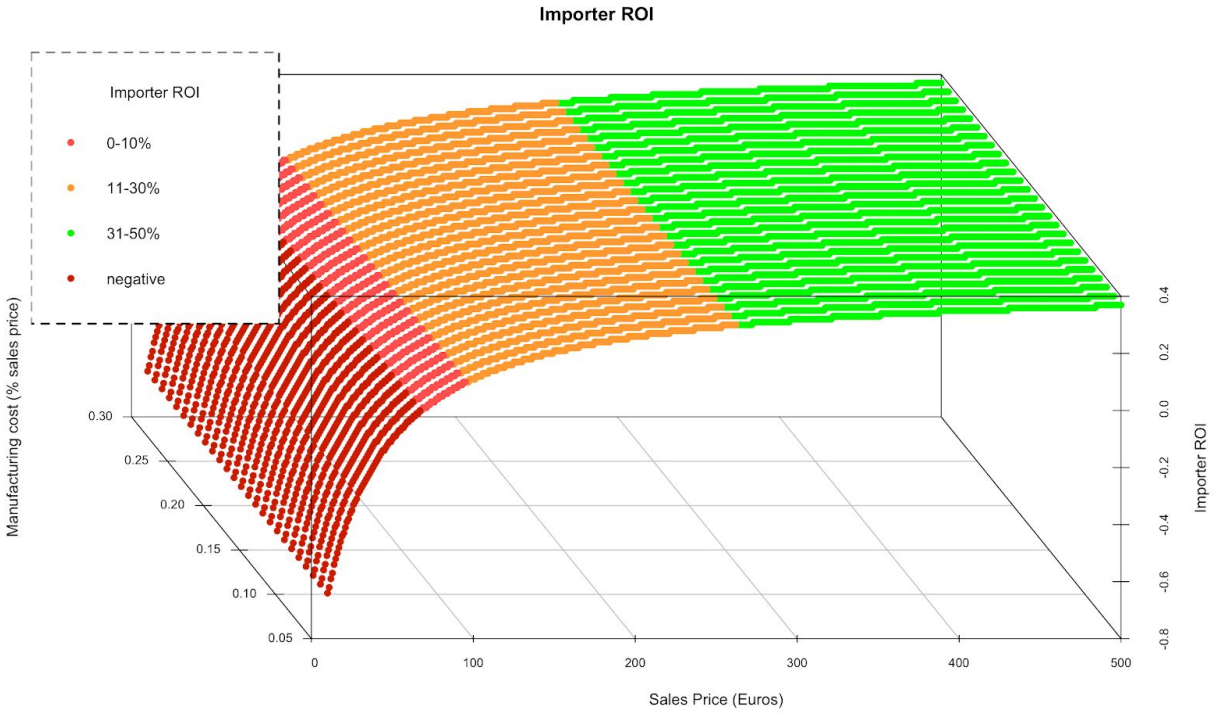


Figure 13: Importer Return on Investment AVERAGE scenario, marketing cost=15% of sales price

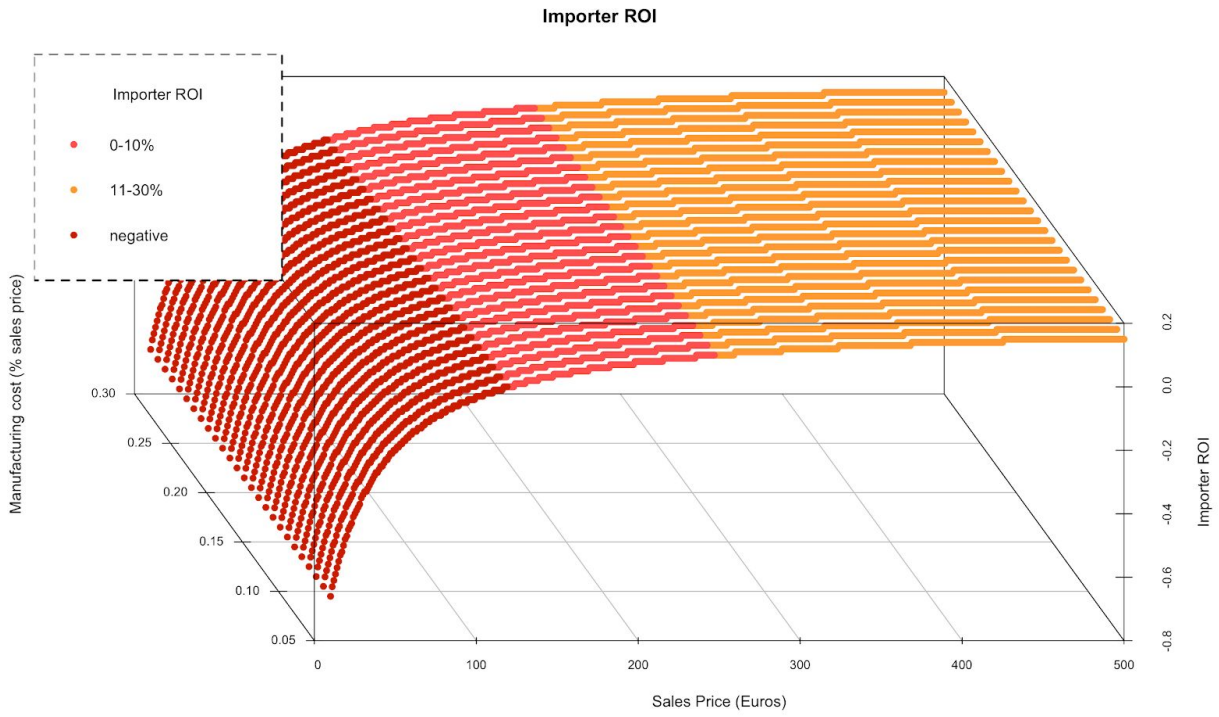


Figure 14: Importer Return on Investment AVERAGE scenario, marketing cost=20% of sales price

From the plots above we can conclude that:

1. As expected, importer ROI is not influenced by the manufacturing cost
2. Importer ROI is heavily influenced by marketing costs, with cases where marketing is over 15% of the sales price frequently resulting in very low or negative return on investing
3. Sales price influences importer profitability and return on investment, but only to a certain extent, with diminishing returns over 200 euro sales price, so from an importers perspective it's more important to keep the marketing costs under control than to find very expensive products to sell

Generalizing the importer's perspective we can observe that:

In this case the risk is split between the importer and the manufacturer. The manufacturer is protected from any risk related to the manufacturing cost. Then as a consequence for the importer the main factor needed to consider is the marketing spend, all other costs are controllable and can be easily assessed. Additionally it is interesting that because of how the profit sharing is set up, there are diminishing returns for the importer to increase the sales price beyond a certain point, so it is more interesting for them to increase the sales price to a certain extent and then focus on optimizing the marketing spend.

<u>From the manufacturer's perspective:</u>

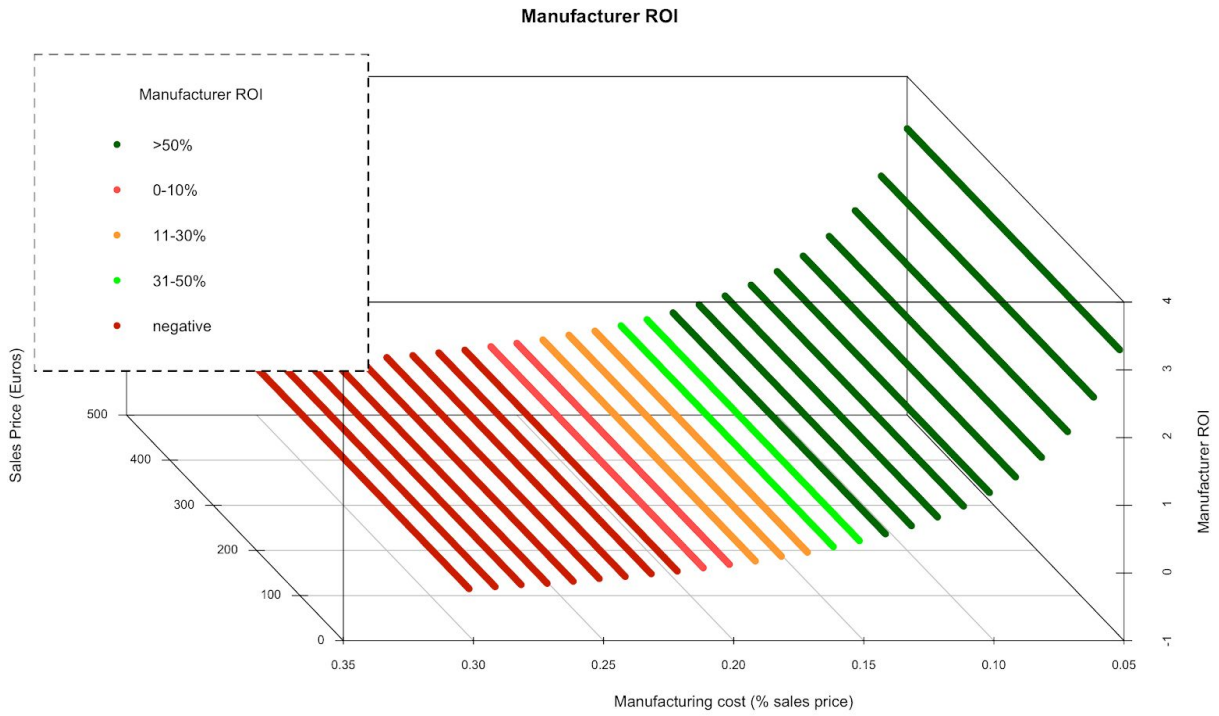


Figure 15: Manufacturer Return on Investment AVERAGE scenario

Observing the plots above we can derive some interesting insights:

1. Because of the way we have constructed the model, the sales price does not have an impact on the manufacturer ROI. This is a consequence of the manufacturer's cost being a factor of the sales price. In reality, these two factors are not perfectly linearly correlated.
2. Since we have fixed the manufacturer's margin as 30% of the sales price, as expected the manufacturer's profitability is mainly dependent on the manufacturer's cost. At a low cost it is possible for the manufacturer to highly profitable
3. Due to the fact that the manufacturer margin is dependent on the realized sales price and not the sales price set initially, discounts on the initial sales price have a significant impact on the manufacturer ROI. Nevertheless, even under pessimistic scenarios, as long as the manufacturer cost is relatively low (<15%) then the manufacturer is likely to have a profitable transaction

Generalizing the manufacturer's perspective we can observe that:

In this case the manufacturer is mostly impacted by the sales price of the item and by their own costs. This can put them in a complicated position since they do not have control over the sales price. Additionally the manufacturer under this arrangement bears the risk of the products being

heavily discounted or not selling at all. For this reason an arrangement like this likely requires additional provisions from the manufacturer to reduce their risks.

Furthermore, based on our interview with a manufacturer (Appendix 1), it was mentioned that manufacturers would be interested in providing a portion of the marketing spend if it would help the product succeed faster and reduce that likelihood of heavy discounts. We decided to model with the equation below:

Manufacturer's profit

$$MANprof_{i,j,k,z} = Sp_i * MANshare * ESp_j - Sp_i * MANc_k - Sp_i * MANmkt$$

Manufacturer's cost

$$MANcost_{i,j,k,z} = Sp_i * MANc_k + Sp_i * MANmkt$$

Manufacturer's Return on Investment

$$MANroi_{i,j,k,z} = \frac{MANprof_{i,j,k,z}}{MANcost_{i,j,k,z}}$$

Using 5% as the portion of marketing provided by the manufacturer (*MANmkt*) we obtain the results in the plot below (full scenarios in Appendix 4):

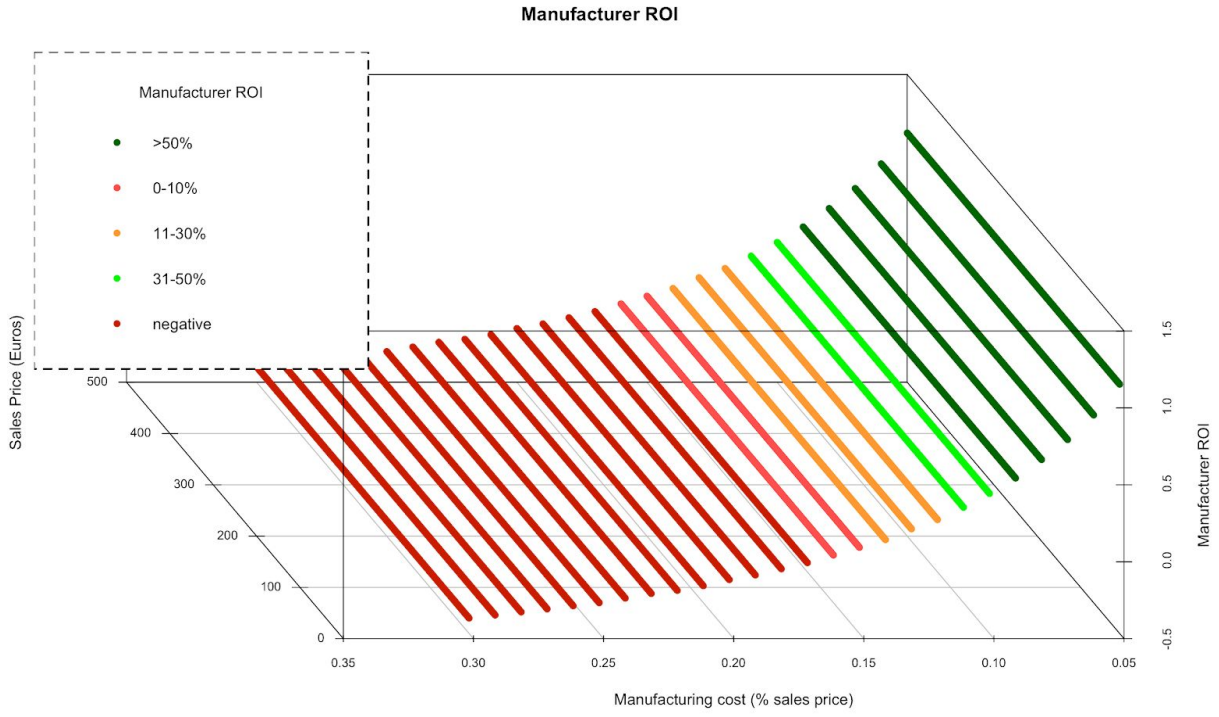


Figure 16: Manufacturer Return on Investment AVERAGE scenario, 5% manufacturer marketing

From these plots we can derive that in the cases of manufacturers providing some of the marketing budget, the manufacturing cost becomes even more relevant. In these cases the manufacturer should only provide some marketing support if the manufacturing cost is less than 15% of the sales price. It is also relevant to consider that the efficiency of the marketing spend is relevant in this case for the manufacturer, since it has an impact on the portion of items sold under a discount, which in turn impacts the sales price.

Generalizing the manufacturer's perspective on the case where there is shared marketing spend we can observe that:
In this case the manufacturer has more control over the sales price, since they can choose to supplement the sales process with marketing spend. But from a perspective of the manufacturer having a positive return on investment, this puts additional pressure on the manufacturing costs. This is something the manufacturer will need to balance since an investment in marketing only further increases their risks.

4.3 Scenarios

In addition to the generalized plots of the model behaviour, in this thesis we will explore two specific product types, in order to provide a concrete example of the interaction of the different costs and how risks can be mitigated by SMEs.

Specifically in this thesis we will **explore artisanal plates and leather fashion items (shoes & handbags)**. The choice for these products is on one hand that they represent products where Mexico already has a strong manufacturing industry, and on the other hand these are products where Mexico, either due to cultural aesthetics or low labour costs, can have a competitive advantage in comparison to other countries.

Before reviewing the economics specifics of these products, it's important to review that they are covered under the Europe-Mexico Free Trade Agreement. This is done by first identifying the harmonized system (HS) code for the product types, and then by using the tools from the European Commission to review if they are covered by the agreement.

First we will look at the use case for leather shoes. Using the Market Access Database[24] from the European Commission we find the leather shoes fall under HS code: 64039118

[24] https://madb.europa.eu/madb/euTariffs.htm?productCode=64039118&country=MX, the legal basis for this website is TARIC, the integrated Tariff of the European Union, which has a legal base of Council Regulation (EEC) No 2658/87 of 23 July 1987 on the tariff and statistical nomenclature and on the Common Customs Tariff (Official Journal L 256, 07/09/1987)

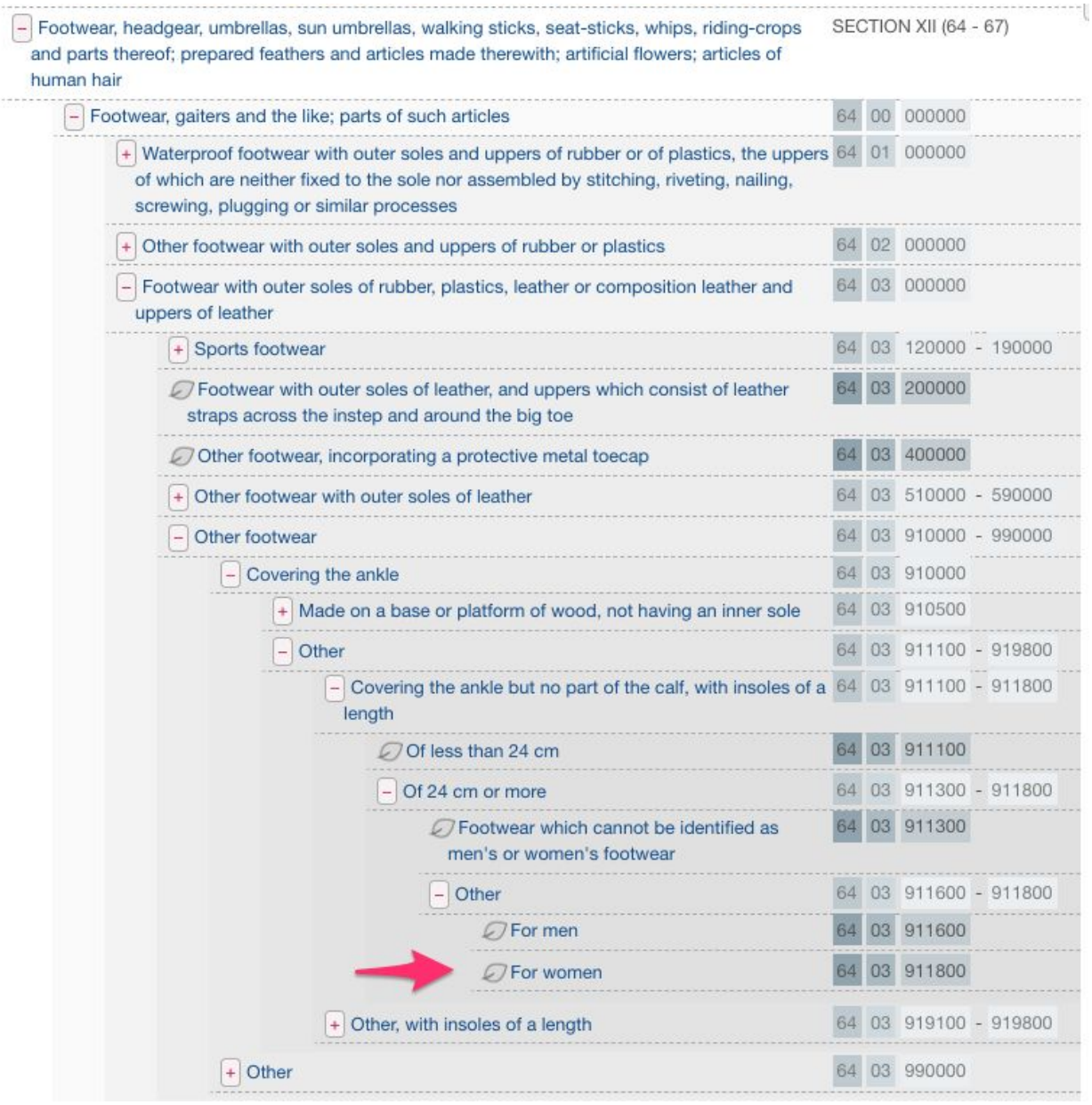


Figure 17: HS code for women shoes made of leather with rubber undersoles

Using the Market Access Database website we can see that the tariff for products with HS code 64039118 is 0%

EU Import duties

Origin	Measure Type	Tariff	Conditions	Footnote	EU Law
Any Country	Third country duty	8.00%			R9431150
Any Country	Supplementary unit	pa			R8726581
Any Country	Suspension - goods for certain categories of ships, boats and other vessels and for drilling or production platforms	0%	Show	EU003 TM510	R8726583
Mexico	Tariff preference	0%			D0004150
Any Country	Import control - CITES		Show	CD370	R1921170

Footnotes

Code	Description
EU003	According to The Special Provisions of Section II (A) (3) of the Preliminary Provisions of the Combined Nomenclature the suspension of customs duties for goods for certain categories of ships, boats and other vessels and for drilling or production platforms shall be subject to conditions laid down in the relevant provisions of the European Union with a view to customs control of the use of such goods.
TM510	1. Customs duties shall be suspended in respect of goods intended for incorporation in the ships, boats or other vessels classified at the following CN codes 8901 10 10; 8901 20 10; 8901 30 10; 8901 90 10; 8902 00 10; 8903 91 10; 8903 92 10; 8904 00 10; 8904 00 91; 8905 10 10; 8905 90 10; 8906 10 00; 8906 90 10 for the purposes of their construction, repair, maintenance or conversion, and in respect of goods intended for fitting to or equipping such ships, boats or other vessels. 2. Customs duties shall be suspended in respect of: (a) goods intended for incorporation in drilling or production platforms: (1) fixed, of subheading ex 8430 49, operating in or outside the territorial sea of Member States, or (2) floating or submersible, of subheading 8905 20, for the purposes of their construction, repair, maintenance or conversion, and in respect of goods intended for equipping the said platforms. (b) tubes, pipes, cables and their connection pieces, linking these drilling or production platforms to the mainland.
CD370	If the product is mentioned in the list annexed to Regulation (EC) No 338/97 and its last amendments, an import authorization must be presented.

Source: DG-TAXUD (TARIC) , last update 16 Jan 2020

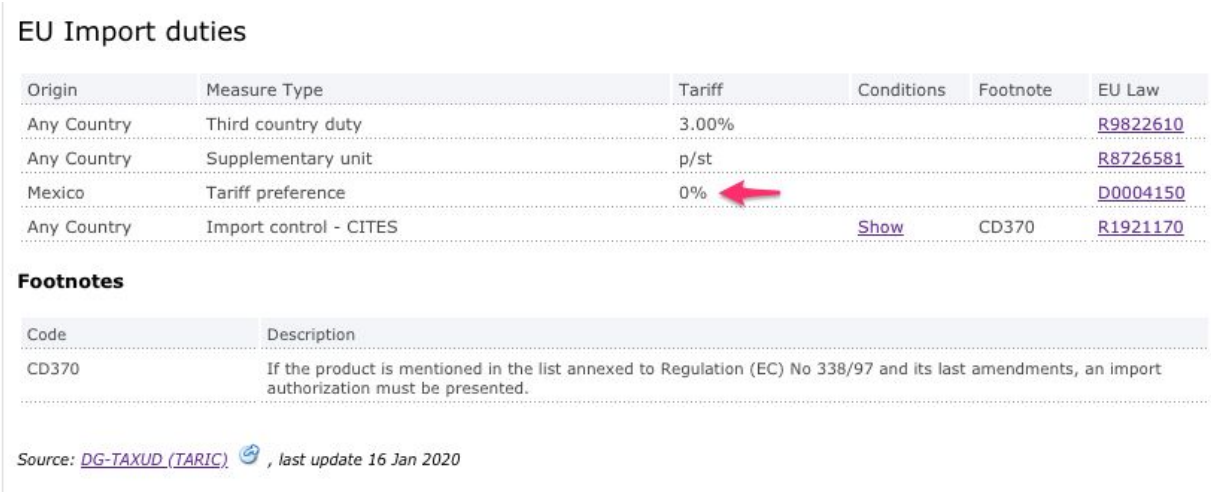
Figure 18: Custom duties for products with HS code 64039118 coming from Mexico to the EU

Second we will look at leather purses, which fall under HS code 4202210090:

− Raw hides and skins, leather, furskins and articles thereof; saddlery and harness; travel goods, handbags and similar containers; articles of animal gut (other than silkworm gut)	SECTION VIII (41 - 43)			
+ Raw hides and skins (other than furskins) and leather	41	00	000000	
− Articles of leather; saddlery and harness; travel goods, handbags and similar containers; articles of animal gut (other than silkworm gut)	42	00	000000	
+ Saddlery and harness for any animal (including traces, leads, knee pads, muzzles, saddle-cloths, saddlebags, dog coats and the like), of any material	42	01	000000	
− Trunks, suitcases, vanity cases, executive-cases, briefcases, school satchels, spectacle cases, binocular cases, camera cases, musical instrument cases, gun cases, holsters and similar containers; travelling-bags, insulated food or beverages bags, toilet bags, rucksacks, handbags, shopping-bags, wallets, purses, map-cases, cigarette-cases, tobacco-pouches, tool bags, sports bags, bottle-cases, jewellery boxes, powder boxes, cutlery cases and similar containers, of leather or of composition leather, of sheeting of plastics, of textile materials, of vulcanised fibre or of paperboard, or wholly or mainly covered with such materials or with paper	42	02	000000	
+ Trunks, suitcases, vanity cases, executive-cases, briefcases, school satchels and similar containers	42	02	110000	- 190000
− Handbags, whether or not with shoulder strap, including those without handle	42	02	210000	- 290000
− With outer surface of leather or of composition leather	42	02	210000	
Hand-made	42	02	210010	
Other	42	02	210090	
+ With outer surface of sheeting of plastics or of textile materials	42	02	220000	
Other	42	02	290000	
+ Articles of a kind normally carried in the pocket or in the handbag	42	02	310000	- 390000
+ Other	42	02	910000	- 990000
+ Articles of apparel and clothing accessories, of leather or of composition leather	42	03	000000	
+ Other articles of leather or of composition leather	42	05	000000	
Articles of gut (other than silkworm gut), of goldbeater's skin, of bladders or of tendons	42	06	000000	

Figure 19: HS code for leather handbags

Here we can see that the tariff for products with HS code 4202210090 is 0%:



EU Import duties

Origin	Measure Type	Tariff	Conditions	Footnote	EU Law
Any Country	Third country duty	3.00%			R9822610
Any Country	Supplementary unit	p/st			R8726581
Mexico	Tariff preference	0%			D0004150
Any Country	Import control - CITES		Show	CD370	R1921170

Footnotes

Code	Description
CD370	If the product is mentioned in the list annexed to Regulation (EC) No 338/97 and its last amendments, an import authorization must be presented.

Source: DG-TAXUD (TARIC) , last update 16 Jan 2020

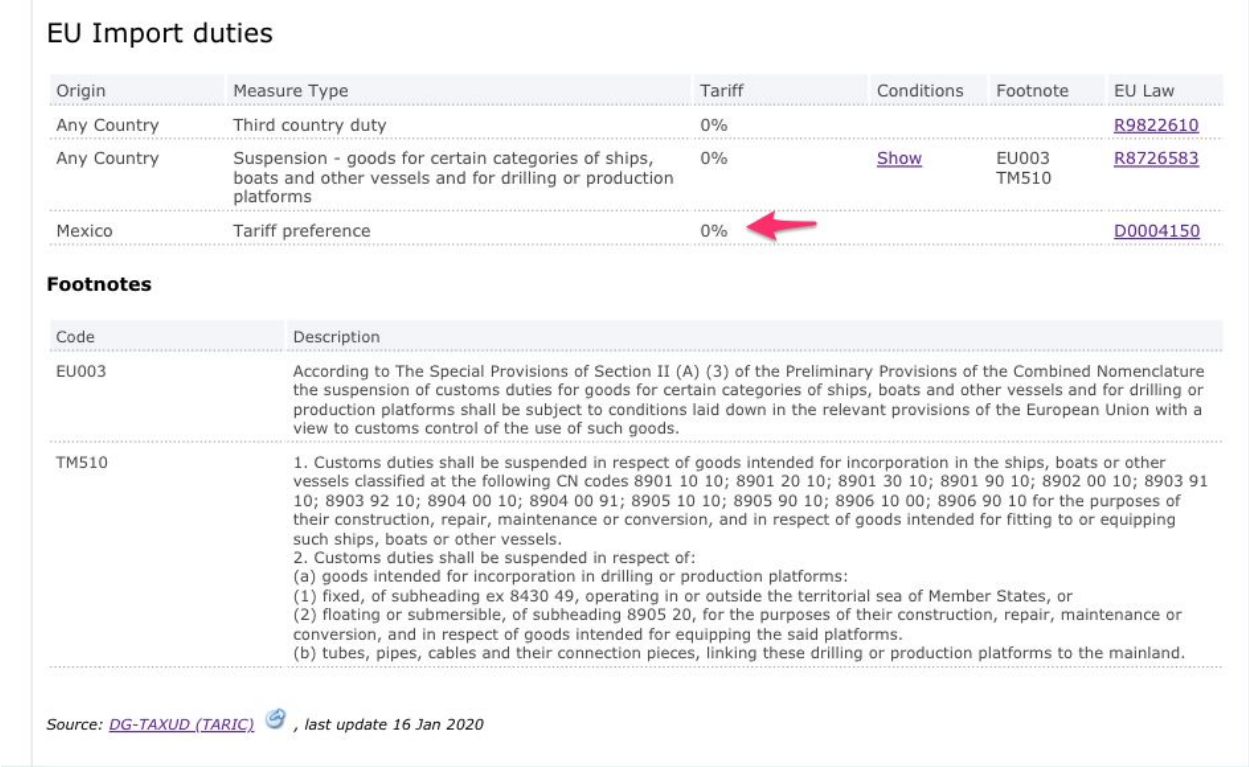
Figure 20: Custom duties for products with HS code 4202210090 coming from Mexico to the EU

Third we will look at artisanal plates, which fall under HS code 681599

− Articles of stone, plaster, cement, asbestos, mica or similar materials; ceramic products; glass and glassware	SECTION XIII (68 - 70)			
− Articles of stone, plaster, cement, asbestos, mica or similar materials	68	00	000000	
Setts, curbstones and flagstones, of natural stone (except slate)	68	01	000000	
+ Worked monumental or building stone (except slate) and articles thereof, other than goods of heading 6801; mosaic cubes and the like, of natural stone (including slate), whether or not on a backing; artificially coloured granules, chippings and powder, of natural stone (including slate)	68	02	000000	
+ Worked slate and articles of slate or of agglomerated slate	68	03	000000	
+ Millstones, grindstones, grinding wheels and the like, without frameworks, for grinding, sharpening, polishing, trueing or cutting, hand sharpening or polishing stones, and parts thereof, of natural stone, of agglomerated natural or artificial abrasives, or of ceramics, with or without parts of other materials	68	04	000000	
+ Natural or artificial abrasive powder or grain, on a base of textile material, of paper, of paperboard or of other materials, whether or not cut to shape or sewn or otherwise made up	68	05	000000	
+ Slag-wool, rock-wool and similar mineral wools; exfoliated vermiculite, expanded clays, foamed slag and similar expanded mineral materials; mixtures and articles of heat-insulating, sound-insulating or sound-absorbing mineral materials, other than those of heading 6811 or 6812 or of Chapter 69	68	06	000000	
+ Articles of asphalt or of similar material (for example, petroleum bitumen or coal tar pitch)	68	07	000000	
Panels, boards, tiles, blocks and similar articles of vegetable fibre, of straw or of shavings, chips, particles, sawdust or other waste of wood, agglomerated with cement, plaster or other mineral binders	68	08	000000	
+ Articles of plaster or of compositions based on plaster	68	09	000000	
+ Articles of cement, of concrete or of artificial stone, whether or not reinforced	68	10	000000	
+ Articles of asbestos-cement, of cellulose fibre-cement or the like	68	11	000000	
+ Fabricated asbestos fibres; mixtures with a basis of asbestos or with a basis of asbestos and magnesium carbonate; articles of such mixtures or of asbestos (for example, thread, woven fabric, clothing, headgear, footwear, gaskets), whether or not reinforced, other than goods of heading 6811 or 6813	68	12	000000	
+ Friction material and articles thereof (for example, sheets, rolls, strips, segments, discs, washers, pads), not mounted, for brakes, for clutches or the like, with a basis of asbestos, of other mineral substances or of cellulose, whether or not combined with textile or other materials	68	13	000000	
+ Worked mica and articles of mica, including agglomerated or reconstituted mica, whether or not on a support of paper, paperboard or other materials	68	14	000000	
− Articles of stone or of other mineral substances (including carbon fibres, articles of carbon fibres and articles of peat), not elsewhere specified or included	68	15	000000	
+ Non-electrical articles of graphite or other carbon	68	15	100000	
Articles of peat	68	15	200000	
− Other articles	68	15	910000 - 990000	
Containing magnesite, dolomite or chromite	68	15	910000	
Other	68	15	990000	

Figure 21: HS code for stone plates

Here we can see that the tariff for products with HS code 681599 is 0%



EU Import duties

Origin	Measure Type	Tariff	Conditions	Footnote	EU Law
Any Country	Third country duty	0%			R9822610
Any Country	Suspension - goods for certain categories of ships, boats and other vessels and for drilling or production platforms	0%	Show	EU003 TM510	R8726583
Mexico	Tariff preference	0%			D0004150

Footnotes

Code	Description
EU003	According to The Special Provisions of Section II (A) (3) of the Preliminary Provisions of the Combined Nomenclature the suspension of customs duties for goods for certain categories of ships, boats and other vessels and for drilling or production platforms shall be subject to conditions laid down in the relevant provisions of the European Union with a view to customs control of the use of such goods.
TM510	1. Customs duties shall be suspended in respect of goods intended for incorporation in the ships, boats or other vessels classified at the following CN codes 8901 10 10; 8901 20 10; 8901 30 10; 8901 90 10; 8902 00 10; 8903 91 10; 8903 92 10; 8904 00 10; 8904 00 91; 8905 10 10; 8905 90 10; 8906 10 00; 8906 90 10 for the purposes of their construction, repair, maintenance or conversion, and in respect of goods intended for fitting to or equipping such ships, boats or other vessels. 2. Customs duties shall be suspended in respect of: (a) goods intended for incorporation in drilling or production platforms: (1) fixed, of subheading ex 8430 49, operating in or outside the territorial sea of Member States, or (2) floating or submersible, of subheading 8905 20, for the purposes of their construction, repair, maintenance or conversion, and in respect of goods intended for equipping the said platforms. (b) tubes, pipes, cables and their connection pieces, linking these drilling or production platforms to the mainland.

Source: DG-TAXUD (TARIC), last update 16 Jan 2020

Figure 22: Custom duties for products with HS code 681599 coming from Mexico to the EU

After confirming that the products in our scenarios are covered by the Free Trade Agreement, we have adapted the model described in the previous section to estimate the potential of importing these products from Mexico and selling them in the EU.

The first product we ran through the model were shoes. In this case we made an adaption to the model increasing the return rate from 10% to 30%, since this is more in line with actual return rates for shoes sold through e-commerce[25].

As a starting point for the model we will pick a price of €80. This price has been derived from a survey conducted on the target demographic in the EU (see Appendix 5 for details on the survey).

Using the model and the scenarios outlined in the previous section, we can observe that shoes sold at €80 present a medium to low Return on Investment for Manufacturers and Importers, in line with the graphs presented in the previous section. This suggests that exporting shoes could be profitable for Mexican SMEs, although at this price point the Return on Investment presents some risk of becoming negative in some scenarios.

[25] https://blog.addi.fit/how-to-reduce-your-footwear-ecommerce-return-rate

Unit economics for 1 pair of shoes	Initial price	25% off	50% off	70% off	Optimistic Scenario	Average Scenario	Pessimistic Scenario
Selling price	€80.00	€60.0	€40.0	€24.0	€68.5	€56.4	€50.8
VAT (21%)	-€13.9	-€10.4	-€6.9	-€4.2	-€11.9	-€9.8	-€8.8
Marketing (10%)	-€8.0	-€8.0	-€8.0	-€8.0	-€8.0	-€8.0	-€8.0
Export and Import (4k shoe boxes per cont.)	-€1.4	-€1.4	-€1.4	-€1.4	-€1.4	-€1.4	-€1.4
Delivery, storage & returns (30% returns)	-€6.5	-€6.5	-€6.5	-€6.5	-€6.5	-€6.5	-€6.5
Platform fee (15% sales price)	-€12.0	-€9.0	-€6.0	-€3.6	-€10.3	-€8.5	-€7.6
Customs and Import VAT	€0.0	€0.0	€0.0	€0.0	€0.0	€0.0	€0.0
Packaging cost	-€0.9	-€0.9	-€0.9	-€0.9	-€0.9	-€0.9	-€0.9
Total sales minus costs (before profit split)	**€37.3**	**€23.8**	**€10.3**	**-€0.5**	**€29.6**	**€21.4**	**€17.6**
Manufacturer cost	€10.0	€10.0	€10.0	€10.0	€10.0	€10.0	€10.0
E2E Supply Chain profitability	**€27.3**	**€13.8**	**€0.3**	**-€10.5**	**€19.6**	**€11.4**	**€7.6**
Manufacturer sales share (30%)	€24.0	€18.0	€12.0	€7.2	€20.6	€16.9	€15.2
Marketing Manufacturer (additional 5%)	€4.0	€4.0	€4.0	€4.0	€4.0	€4.0	€4.0
Manufacturer profit (witout 5% marketing)	**€14.0**	**€8.0**	**€2.0**	**-€2.8**	**€10.6**	**€6.9**	**€5.2**
Manufacturer profit (with 5% marketing)	**€10.0**	**€4.0**	**-€2.0**	**-€6.8**	**€6.6**	**€2.9**	**€1.2**
Importer profit	**€13.3**	**€5.8**	**-€1.7**	**-€7.7**	**€9.0**	**€4.5**	**€2.3**
Manufacturer ROI (without marketing)	**140.0%**	**80.0%**	**20.0%**	**-28.0%**	**105.6%**	**69.2%**	**52.4%**
Manufacturer ROI (with 5% marketing)	**71.4%**	**28.6%**	**-14.3%**	**-48.6%**	**46.8%**	**20.9%**	**8.9%**
Importer ROI	**46.3%**	**22.5%**	**-7.6%**	**-38.0%**	**33.3%**	**17.6%**	**9.6%**

Table 4: Unit economics of importing and selling shoes from Mexico to EU

The second product we used in our model was leather handbags. Surprisingly these products scored better in our survey than shoes, so there is reason to believe they have more potential to be imported into the EU (Appendix 4). The starting price we got from our survey for these products was €70, and we have set their return rate to a more standard 10%. From the table below we can observe that the ROI for handbags is slightly better than for shoes, but due to the similar price point and relative manufacturing cost, the actual economics are very similar.

Unit economics for 1 purse	Initial price	25% off	50% off	70% off	Optimistic Scenario	Average Scenario	Pessimistic Scenario
Selling price	€70.00	€52.5	€35.0	€21.0	€60.0	€49.4	€44.5
VAT (21%)	-€12.1	-€9.1	-€6.1	-€3.6	-€10.4	-€8.6	-€7.7
Marketing (10%)	-€7.0	-€7.0	-€7.0	-€7.0	-€7.0	-€7.0	-€7.0
Export and Import (6k purses per cont.)	-€1.0	-€1.0	-€1.0	-€1.0	-€1.0	-€1.0	-€1.0
Delivery, storage & returns (10% returns)	-€5.5	-€5.5	-€5.5	-€5.5	-€5.5	-€5.5	-€5.5
Platform fee (15% sales price)	-€10.5	-€7.9	-€5.3	-€3.2	-€9.0	-€7.4	-€6.7
Customs and Import VAT	€0.0	€0.0	€0.0	€0.0	€0.0	€0.0	€0.0
Packaging cost	-€0.9	-€0.9	-€0.9	-€0.9	-€0.9	-€0.9	-€0.9
Total sales minus costs (before profit split)	**€33.0**	**€21.2**	**€9.3**	**-€0.1**	**€26.2**	**€19.1**	**€15.7**
Manufacturer cost	€7.5	€7.5	€7.5	€7.5	€7.5	€7.5	€7.5
E2E Supply Chain profitability	**€25.5**	**€13.7**	**€1.8**	**-€7.6**	**€18.7**	**€11.6**	**€8.2**
Manufacturer sales share (30%)	€21.0	€15.8	€10.5	€6.3	€18.0	€14.8	€13.3
Marketing Manufacturer (additional 5%)	€3.5	€3.5	€3.5	€3.5	€3.5	€3.5	€3.5
Manufacturer profit (witout 5% marketing)	**€13.5**	**€8.3**	**€3.0**	**-€1.2**	**€10.5**	**€7.3**	**€5.8**
Manufacturer profit (with 5% marketing)	**€10.0**	**€4.8**	**-€0.5**	**-€4.7**	**€7.0**	**€3.8**	**€2.3**
Importer profit	**€12.0**	**€5.4**	**-€1.2**	**-€6.4**	**€8.2**	**€4.2**	**€2.4**
Manufacturer ROI (without marketing)	**180.0%**	**110.0%**	**40.0%**	**-16.0%**	**139.8%**	**97.4%**	**77.8%**
Manufacturer ROI (with 5% marketing)	**90.9%**	**43.2%**	**-4.5%**	**-42.7%**	**63.5%**	**34.6%**	**21.2%**
Importer ROI	**48.4%**	**24.5%**	**-5.9%**	**-36.8%**	**35.3%**	**19.5%**	**11.4%**

Table 5: Unit economics of importing and selling handbags from Mexico to EU

Finally, we used the model to assess the potential of the artisanal plates. In this case it was more difficult to assess a starting price for these items, so we used similar items sold online (Appendix 6), and concluded that a set of 4 could be sold for €100. For this type of goods we can see that since their manufacturing cost is higher than for shoes and bags (20% instead of 10%), the probability of the manufacturer having a positive ROI is significantly lower.

Unit economics for 1 set of 4 plates	Initial price	25% off	50% off	70% off	Optimistic Scenario	Average Scenario	Pessimistic Scenario
Selling price	€100.00	€75.0	€50.0	€30.0	€85.7	€70.5	€63.5
VAT (21%)	-€17.4	-€13.0	-€8.7	-€5.2	-€14.9	-€12.2	-€11.0
Marketing (10%)	-€10.0	-€10.0	-€10.0	-€10.0	-€10.0	-€10.0	-€10.0
Export and Import (6k purses per cont.)	-€1.0	-€1.0	-€1.0	-€1.0	-€1.0	-€1.0	-€1.0
Delivery, storage & returns (10% returns)	-€5.5	-€5.5	-€5.5	-€5.5	-€5.5	-€5.5	-€5.5
Platform fee (15% sales price)	-€15.0	-€11.3	-€7.5	-€4.5	-€12.8	-€10.6	-€9.5
Customs and Import VAT	€0.0	€0.0	€0.0	€0.0	€0.0	€0.0	€0.0
Packaging cost	-€0.9	-€0.9	-€0.9	-€0.9	-€0.9	-€0.9	-€0.9
Total sales minus costs (before profit split)	**€50.3**	**€33.4**	**€16.5**	**€3.0**	**€40.6**	**€30.4**	**€25.6**
Manufacturer cost	€20.0	€20.0	€20.0	€20.0	€20.0	€20.0	€20.0
E2E Supply Chain profitability	**€30.3**	**€13.4**	**-€3.5**	**-€17.0**	**€20.6**	**€10.4**	**€5.6**
Manufacturer sales share (30%)	€30.0	€22.5	€15.0	€9.0	€25.7	€21.2	€19.1
Marketing Manufacturer (additional 5%)	€5.0	€5.0	€5.0	€5.0	€5.0	€5.0	€5.0
Manufacturer profit (witout 5% marketing)	**€10.0**	**€2.5**	**-€5.0**	**-€11.0**	**€5.7**	**€1.2**	**-€0.9**
Manufacturer profit (with 5% marketing)	**€5.0**	**-€2.5**	**-€10.0**	**-€16.0**	**€0.7**	**-€3.9**	**-€6.0**
Importer profit	**€20.3**	**€10.9**	**€1.5**	**-€6.0**	**€14.9**	**€9.2**	**€6.6**
Manufacturer ROI (without marketing)	**50.0%**	**12.5%**	**-25.0%**	**-55.0%**	**28.5%**	**5.7%**	**-4.8%**
Manufacturer ROI (with 5% marketing)	**20.0%**	**-10.0%**	**-40.0%**	**-64.0%**	**2.8%**	**-15.4%**	**-23.8%**
Importer ROI	**62.8%**	**38.1%**	**6.0%**	**-27.7%**	**49.4%**	**33.0%**	**24.5%**

Table 6: Unit economics of importing and selling handbags from Mexico to EU

One interesting takeaway from this analysis is that setting up a starting price and estimating the marketing budget is determinant to whether a product will have a positive ROI for importers and manufacturers, and previously used methods of benchmarking and small sample surveys seem to be inadequate to accurately estimate these values in a generalizable manner. For this reason we are proposing a novel approach to estimate an initial price, the magnitude of the demand and the efficiency of the marketing budget, a “painted door test” [26].

A painted door test consists of creating a website that offers the product you want to test at a specific price point, but does not actually allow people to order it. Using this website, it's possible to assess how many people would be willing to order a particular product at different price points, and also how much marketing is needed to obtain a user order. This way manufacturers and importers can know in advance, without investing in actually manufacturing and exporting the products, what the expected return on investment will be.

[26] https://medium.com/@crstanier/a-product-managers-guide-to-painted-door-tests-a1a5de33b473

4. Artifact description

In this thesis the primary research objective is to create an artifact that can be used by Mexican SMEs to know:

1. Is a particular product likely to be profitable if offered for sale in the EU?
2. At which price and with which marketing budget should the product be offered?
3. What is the best setup to offer it in the EU and what are the steps taken to set up the export and sale process in the EU?

In order to achieve this we have chosen an algorithm as the main artifact of this thesis. This algorithm can be followed by Mexican SMEs in order to make an informed decision whether their product has potential in the EU and how they can pursue this potential by answering the questions above.

This model is based on academic literature, analysis of market data, and the economic model and scenarios presented in the previous sections. It also addresses the some of the main challenges identified in our literature review and interviews for SMEs to internationalize: 1) Lack of education regarding specific processes to export to the EU, 2) Uncertainty regarding the demand for products 3) Uncertainty in regards to the different costs associated with exporting to the EU

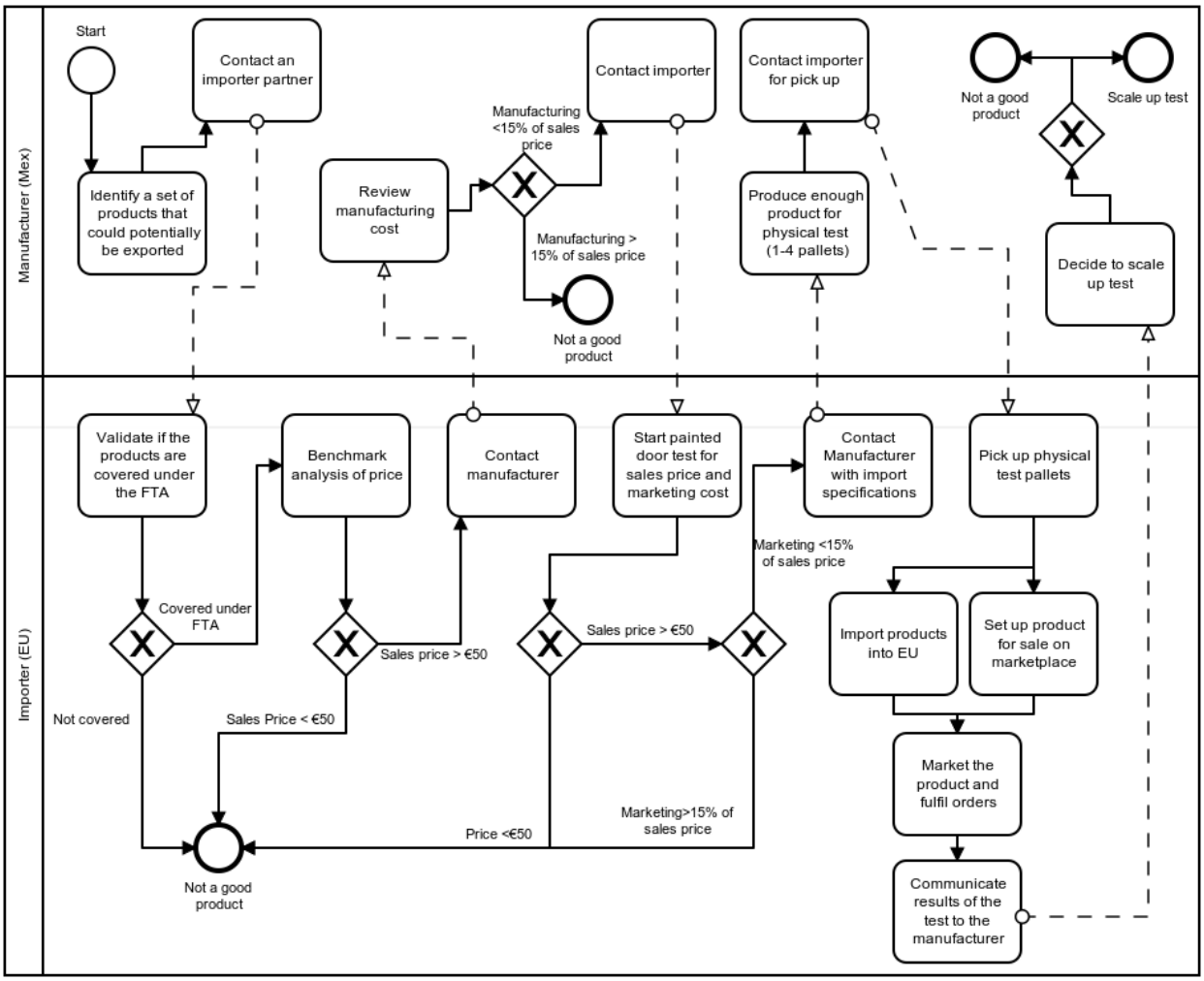


Figure 23: Decision flow diagram to decide if a product is a good candidate to be exported from Mexico and sold in EU

The algorithm consists of 14 steps, and is broken down between two independent actors, a manufacturer that is interested in selling their products in the EU and an importer that is capable of supporting the export from Mexico and import and sales operations in Europe.

Since we assume that the manufacturer is capable of delivering products and the importer is capable of handling the export, import and sales operations through e-commerce, the objective of the algorithm is to help actors assess in advance is whether a particular product will provide End to End Supply Chain Profitability and whether there will be a positive ROI for both the importer and the manufacturer.

The algorithm is rooted in the concepts of Agile Development Practices of early validation of an idea and maximizing the work not done (Beck et al., 2001). By following this algorithm it's possible through small and inexpensive calculations and trials for manufacturers and importers

to discard early products that will not be profitable, before investing large amounts of time and money in importing a whole container of goods.

The steps in the algorithm are:

1. The manufacturer identifies a first set of products that they believe can be successfully sold in the European market. This can be done either through their own experience from observing similar products or from the recommendation of a third party
2. The manufacturer gets in touch with a potential importer in the EU. This can be done through the local chamber of commerce, embassy or through online research (see the interview in Appendix 2 for some examples from an actual importer)
3. The importer validates if the products brought by the manufacturer are covered under the Mexico-Europe Free trade agreement. If they are not, then this is not likely a product that can be exported and sold in the EU in a profitable manner
4. If the products are covered under the FTA, then the importer can conduct a benchmark analysis in order to determine an initial price range for the products. This can be done inexpensively through online research or major e-commerce websites like amazon.eu. If the price range is below €50, then this is not likely a product that can be exported and sold in the EU in a profitable manner
5. If the price range is above €50 then the importer should contact the manufacturer so they can evaluate the manufacturing costs in comparison with the selling price range. If the manufacturing costs are above 15% of the selling price range, then this is not likely a product that can be exported and sold in the EU in a profitable manner
6. If the manufacturing costs are below 15% of the selling price range, then the manufacturer should contact the importer to do a more accurate estimation of the selling prices and to assess the likely marketing costs.
7. The importer should conduct an online painted door test for the products that are being evaluated. In this test the importer should evaluate click through rates at different price points and marketing efficiency in terms of cost per click and click conversion rate. Through this test the importer should be able to have a more accurate estimation of the demand for a particular product at different price points and the marketing investment required to sell the products. If the price range is below €50 or the marketing investment is above 15% of the sales price, then this is not likely a product that can be exported and sold in the EU in a profitable manner
8. If the price range is above €50 and the marketing investment is below 15% of the sales price, then the importer should contact the manufacturer to carry out a physical test
9. The manufacturer should produce between 1 and 4 pallets of product (depending on their risk appetite) and organize with the importer a pick up point for the product
10. The importer should create the digital offering of the product
11. The importer should arrange the pick up, exportation, importation, and delivery of the product in the EU
12. The importer should arrange the sales, delivery and returns handling of the products in the EU

13. Once the inventory has been sold, the importer should communicate to the manufacturing the actual sales prices, marketing expense and any issues or unexpected benefits the products encountered in Europe
14. Using the information from the tests, the manufacturer and the importer together should decide if its economically attractive to scale the import of products into the EU, and what changes/improvements (if any) are needed on the products or processes

5. Conclusions & Further Research

5.1 Conclusions

In this thesis we have explored the question of *what are the main challenges consumer product SMEs in Mexico have when they want to sell their products in Europe, and how can they be overcome?*

We have learned that the main challenges are the lack of information and familiarity with the European processes and regulations, specially compared with the USA where most Mexican SMEs look to export first, the uncertainty regarding the demand for their products in Europe, and the uncertainty in regards to the different costs associated with exporting to the EU. There also seems to be a lack of partners that can help bridge these gaps and give them a blueprint to build confidence that they can succeed in the EU.

We have also learned that long term the most successful methods to internationalize are by developing a relationship with a local partner in the destination region that can help overcome the knowledge gap in processes, regulations, language and market taste, and that using e-commerce as the sales channel has recently become the most effective way to enter a new market. From the literature review and the interviews conducted it was also interesting to find out that systems do not seem to be a major bottleneck for internationalization, which suggests that investments from different nations in this regard have paid off.

Additionally, we have developed a supply chain economic model that describes the costs involved from manufacturing a product in Mexico to selling it to customers in the EU. The model covers the operational side of the supply chain (manufacturing, land freight in Mexico, ocean freight to the EU, land freight in the EU, storage in the EU, distribution and returns in the EU), the legal side of the supply chain (export and import processes, as well as custom duties and VAT), and the commercial side of the supply chain (marketing costs).

By doing several sensitivity analyses using the proposed model, we could observe that there are certain conditions that are more favourable for the export of products to the EU. Specifically due to logistics fees related to importing and distribution, products with a low sales price(e.g. under €50) or products that require a large amount of marketing spend (>15% of the sales price) are not likely to result in a profitable supply chain. Additionally from the manufacturer's

perspective, products where the manufacturing cost is high (>15% of the sales price), are also likely to end up being un-profitable.

Additionally in general the target for importers and manufacturers should be products covered under the Mex-EU FTA, with low marketing and manufacturing costs and high sales price. Based on our interviews (Appendix 2) products with these characteristics are likely to be niche products that leverage the cultural heritage of Mexico and its strong manufacturing sector with relatively low wages.

Finally, since sales price and marketing costs are two key values in the model that are difficult to estimate *a priori*, a novel approach borrowed from product management called “the painted door test” has been suggested. This consists of creating a website that mimics that the products are on sale, but in the last step it is not possible to order them. This way importers can assess the interest of users in the product at different price points, and the marketing costs required to drive traffic and conversion.

These findings are summarized in an algorithm that manufacturers and importers can use to determine if a product is likely to economically succeed. The algorithm draws inspiration from Agile development practices in the sense that it tries to validate information early and iteratively through the process by conducting a set of small analysis and experiments. This is with the objective of increasing the likelihood of success.

Finally we think that by finding reliable partners to work with in the EU, and by following the algorithm proposed in this thesis, Mexican SMEs that have either niche artisanal products, or high quality locally manufactured consumer goods can find large degrees in success by venturing into the European market.

5.2 Further research

The research presented in this thesis has mostly focused on building a theory regarding supply chain economics and devising an artifact that can be used by practitioners. To further this research we believe that a broad test of the algorithm in practice will help determine its rigour as well as its relevance.

To do this we would suggest a field study where a set of manufacturers and importers are introduced to each other and are given the algorithm as a tool to create an initial set of export tests. This can be facilitated through the various trade missions set up between Mexican and European governments to facilitate trade.

Another tool that requires further research are the so-called “painted door tests”. While this type of test seems to be common within web development and product management, it's surprising that there is little formal literature using this kind of inexpensive experiments. We believe there is a lot of potential for testing theories using this kind of experiment.

Additionally, another angle of validation would be to develop an companion algorithm that could be used by importers in the EU to identify which Mexican SMEs would be good candidates to internationalize. In this thesis we took a product focused approach, but we believe there is value in carrying out a company focused study.

This company focused study suggestion is derived from the insight obtained during our interviews that often Mexican SMEs reach out to the embassy or to importers willing to sell in the EU, but they are not prepared, either because they lack experience in exporting, or because they don't have the necessary regulatory certificates to sell in the EU and don't have the time or means to obtain them, or because in case of success they lack the cash or production capabilities to ramp up supply. So we believe it would be interesting and useful to do a similar study to identify which are the steps a company can take in order to prepare itself to internationalize.

5.3 Closing words

Within this thesis we have delved into the opportunity for Mexico to diversify its exports to the European Union beyond agricultural and industrial goods and into consumer goods. Throughout the research it has been made clear that there is a large untapped opportunity for Mexican consumer goods companies to expand into the European market, but this requires companies to be able to have a direct window into the demands and requirements of European consumers.

There is an enormous and continuous effort made by the Mexican and European governments to facilitate trade between the regions, and there is a huge amount of value that can be extracted by the private sector from it. We hope that the information provided in this thesis can help companies take the first steps into validating these demands and venturing into this new market successfully.

Appendix 1: Interview with Mexican manufacturer "Man1"[27]

Q1: Can you describe "Man1" to us?
A1: "Man1" is a 100% mexican company that specializes in manufacturing products for internal sale within Mexico. At the moment the main product of the company are shoes but we are currently expanding to artisanal plates made of stone.

Q2: What is the reason you want to expand to different product types?
A2: Currently the political and economic climate of the country is challenging. At the same time the peso remains relatively weak in comparison with the dollar and the Euro. For these reasons we are interested in expanding outside of Mexico and in order to do that we think it's interesting to offer products that are unique to Mexico in other countries.

Q3: Why do you think artisanal plates are a good opportunity for expansion?
A3: The plates are very new and unique, and they are gaining popularity with customers that value upscale goods in Mexico. We think that customers in Europe with similar sophisticated taste for artisanal and stylish products might be interested. Additionally the plates are made of stone and very resistant, which is a good quality to have for goods to be sold abroad.

[27] The company name has been changed to "Man1" at the request of the interviewee

Image A1-1: Sample artisanal plate

Q5: What are the main challenges or risks you see to expanding outside of Mexico?
A5: First, we don't know if there is a demand for this type of products and at what price could we sell them, since there is nothing similar in the European market right now, and these plates could present a significant inventory risk for us (their production costs are about €5 per plate). Second, we don't know how to best approach the market, if we should we sell online or through a department store. Third, we don't know how much marketing investment is needed for this type of product, and any marketing investment is an additional risk for us. Finally we are a manufacturing company, not an export company, so we don't know how to access the European market, although this feels like a secondary problem compared to the commercial issues related to demand, pricing and marketing.

Q6: Would you be interested in a partnership with a company to help you expand? If so, what would you expect from them?
A6: We think a partnership would be a good way to start up this new line of business. Specifically we would be looking for a partner that would take care of all the operational and legal aspects of the export, and would partially share the inventory risk of moving the product to Europe. Additionally if we could find a partner that could validate for us that there is demand for our product and which would be a reasonable initial pricing without us having to incur a massive expense in market research or test inventory, that would also be very valuable.

Appendix 2: Interview with Mexico/Netherlands importer “Imp1”[28]

Q1: Can you describe “Imp1” to us?
A1:Imp1” consists of 2 companies and a foundation. One of the companies specializes in importing and commercializing services for agricultural products from Mexico into The Netherlands ,such as avocadoes or berries. The other company specializes in importing and commercializing services for non-agricultural products such as Tequila and Mezcal. Finally the foundation focuses on improving the trade relations between Mexico and The Netherlands, and providing consulting services to companies that want to import or export between Mexico and The Netherlands.

Q2: What are the main advantages you see for Mexican companies that want to expand to Europe?
A2: For agricultural products, the strong demand is the main advantage. For products such as avocado there is more demand that can be met with the available supply. For other products such as mechanical parts, the strong relation between the car manufacturing sectors or Europe and Mexico provide a natural advantage for Mexican companies to export. Finally there are certain “boutique” specialty products, such as spirits with origin denomination (e.g. Tequila or Mezcal) or fashion products with an artisanal component, where Mexico has an advantage that can be leveraged to sell in Europe, although consumer taste can vary from country to country.

Q3: How do you validate if there is a demand for a Mexican product in the EU?
A3: We are very careful in which products we decide to partner with. For agro products its more about building the relationship in specialty fairs. For other products it's possible to gauge based on workshops and our own website. It is also easier if there are already some products from the manufacturer already on sale in the EU, so if the brand is already well positioned, then it's easy to infer that there will be a demand for the products.

Q4: What are the main challenges you see for companies exporting out of Mexico?
A4: First we believe companies that want to expand should already have a strong local presence before deciding to expand (with the exception of specialty or boutique products tailored for the European Market). Second companies should have strong human and financial capital to sustain the additional overhead of the exporting operations. Third, the ability to scale supply is needed in case the product proves to be successful. Finally having prior experience exporting to the USA or Latin America is very helpful since the company will already have some understanding of the exporting process and its challenges. But there is no one size fits all recipe for all companies.

[28] The company name has been changed to “Imp1” for GDPR purposes

Another challenge that is faced is the lack of vision from the management teams in Mexico, that fail to grasp the true size of the opportunity, but also that it will take longer than expected and there will be unforeseen challenges.

Finally, another challenge is the lack of willingness to adapt their products to what the European market is asking for, due to an attachment to a purist “Mexican” style.

Q5: How do you come into contact with companies that want to sell in the EU?
A5: Having a strong network is very important. Additionally, we are part of several groups sponsored by the ministries of economics of both countries, as well as the embassies, and finally social media is also a way that companies come into contact with us.

Q6: What type of companies would you say are interested in exporting?
A6: All sizes, although really big companies have different channels to explore internationalization, mainly through governmental brokerage and support. We support mostly medium enterprises, since very small businesses have presented challenges in the past.

Appendix 3: Interview with Head of Economic Affairs, Mexican Embassy in The Netherlands

Q1: Can you tell us about the role of the embassy in facilitating trade?
A1: The embassy is responsible for providing connections to companies that want to expand and sell in The Netherlands to companies that might be interested in buying, as well as providing legal and commercial advice. Additionally the embassy is the liaison between local chambers of commerce in Mexico and The Netherlands

Q2: What type of companies normally reach out to the embassy?
A2: It is mainly companies that sell agricultural products (e.g. avocados, limes). Sometimes also niche products that have a specific fair trade or artesanal story (such as products produced by Mexico's indigenous communities), but this is less common.

Q3: What do you see as the main challenges for mexican companies to expand to Europe?
A3: There seem to be 5 main challenges that come up:

1. Mexico has a lot of trade with the USA, so for any company that is looking to expand internationally they first try to expand to the US and often that is as far as they will go
2. If a company is willing to expand beyond the US, normally because of a language barrier mexican businessmen look to expand either to Latin America or specifically to Spain (not EU as a whole), since they are more comfortable working in spanish
3. For agricultural products the demand is so strong that it overcomes supply, so it is often not even needed to go beyond the regular trade with the USA to expand
4. EU companies have a high threshold for fair trade and compliance when it comes to many products, and getting to know these requirements and complying with them is often seen as too much of a burden for mexican companies
5. Because of the way maritime trade routes are organized and consolidated, often ships that depart from Mexico make a stop in the USA before coming to Europe. This increases the lead time from 14 days (which is the normal maritime lead time from Peru to EU for example) to 28 days. This is very detrimental to all companies, especially those dealing with fresh produce, and as a result Mexico is seen as less competitive than other Latin American companies that have more direct maritime trade routes.

Q4: How do companies get in touch with the embassy?
A4: Normally they reach out online or through their local chamber of commerce.

Q5: Have companies reached out with the objective of diversifying their supply chain?
A5: Yes, last year during the trade war between the US and China, there were some talks with a large manufacturer of electronic goods that had an interest of diversifying their supply chain

away from China and Mexico seemed to them as one of the best options, but as far as the embassy knows this talks did not materialize in specific projects

Q6: What do you think could be improved in order to increase trade between Mexico and the EU?

A6:There are three things that come to mind:

1. There is a lack of education to break the cultural perception that it is difficult to export to the EU. So improving education and access to information could be very effective
2. There is a need for Mexican businessmen to better understand the benefits of diversifying their focus away from only trying to sell in the USA. This requires support in the form of case studies, theoretical frameworks and models that can help broaden their vision
3. Finally there is a need for government support for these companies so that they can reduce the entrepreneurial risk of expanding to the EU

Appendix 4: Sensitivity Analysis (all scenarios)

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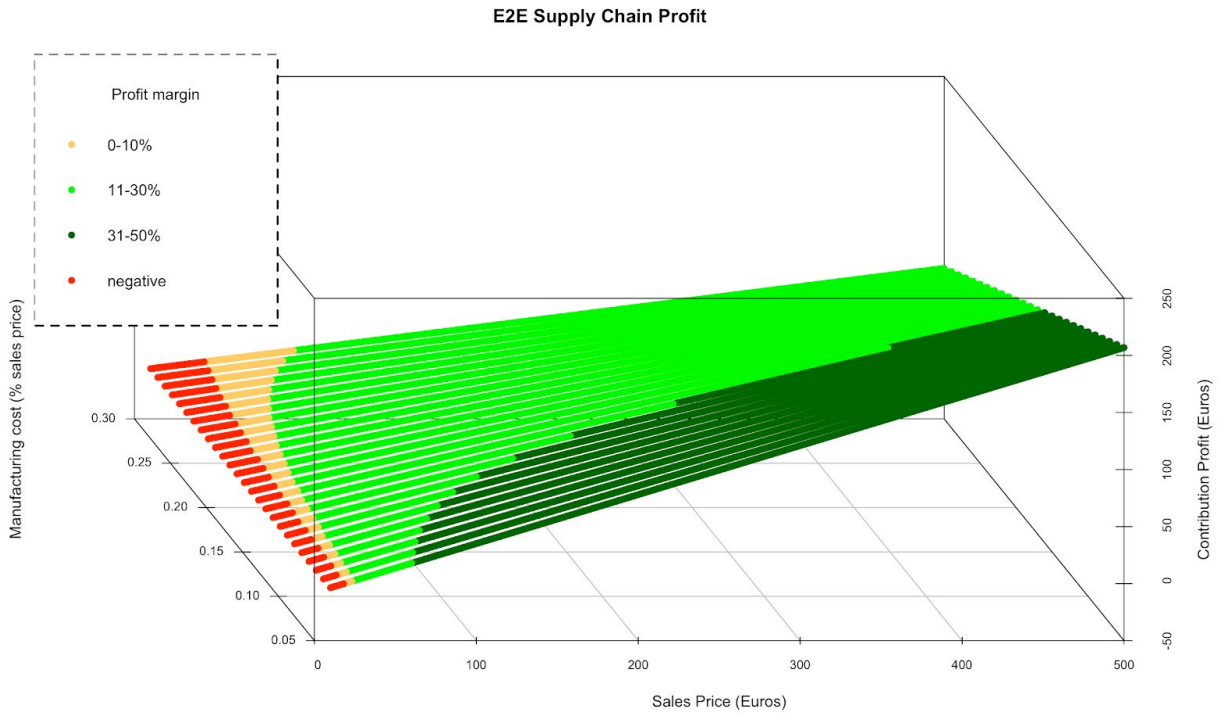


Figure A4-1: E2E supply chain profitability OPTIMISTIC scenario, marketing cost =10% of sales price

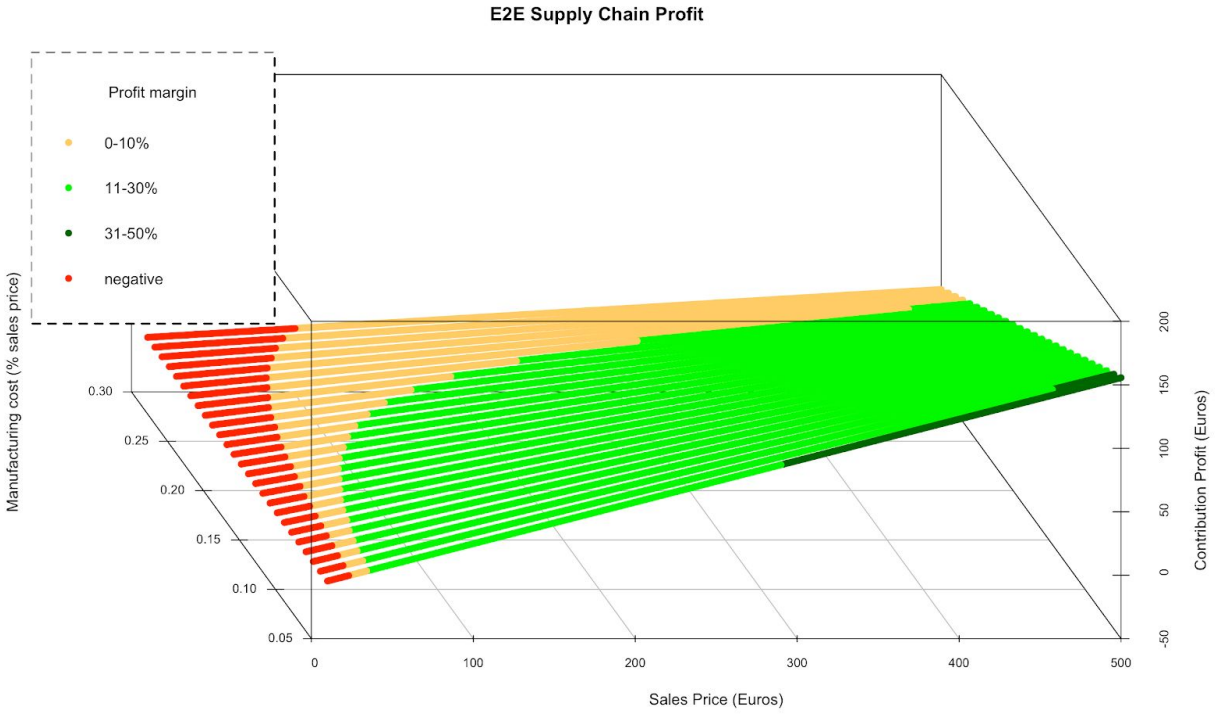


Figure A4-2: E2E supply chain profitability AVERAGE scenario, marketing cost =10% of sales price

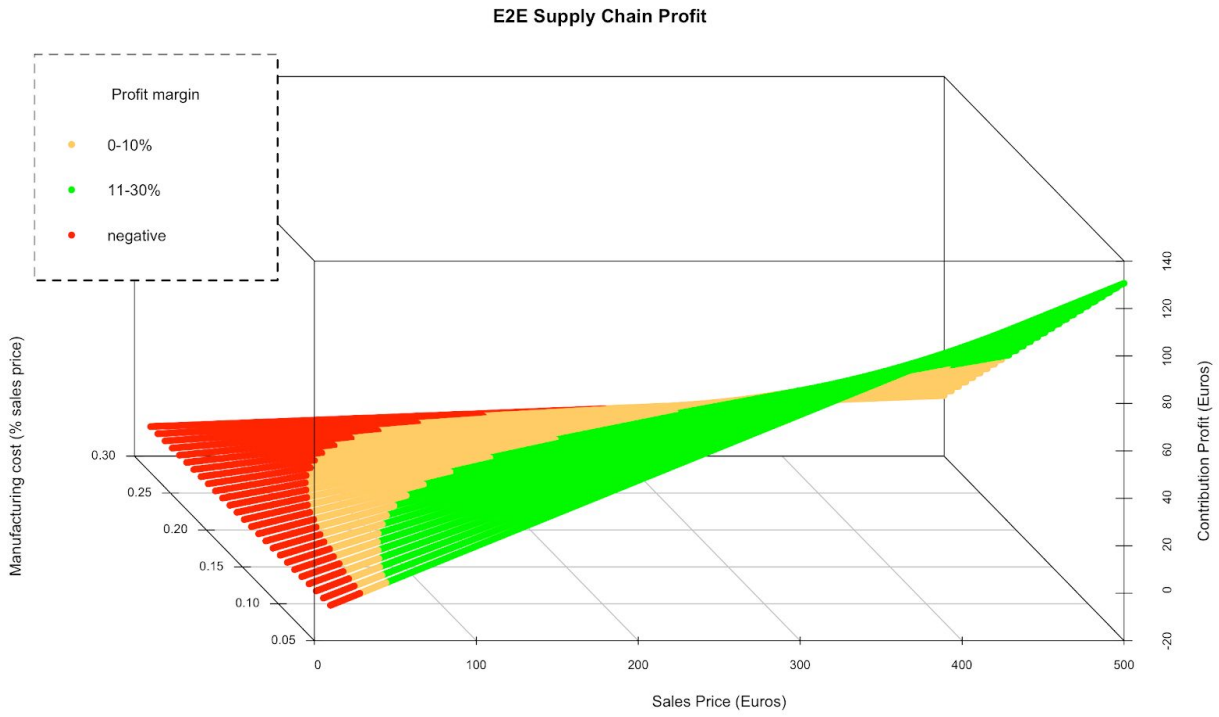


Figure A4-3: E2E supply chain profitability PESSIMISTIC scenario, marketing cost =10% of sales price

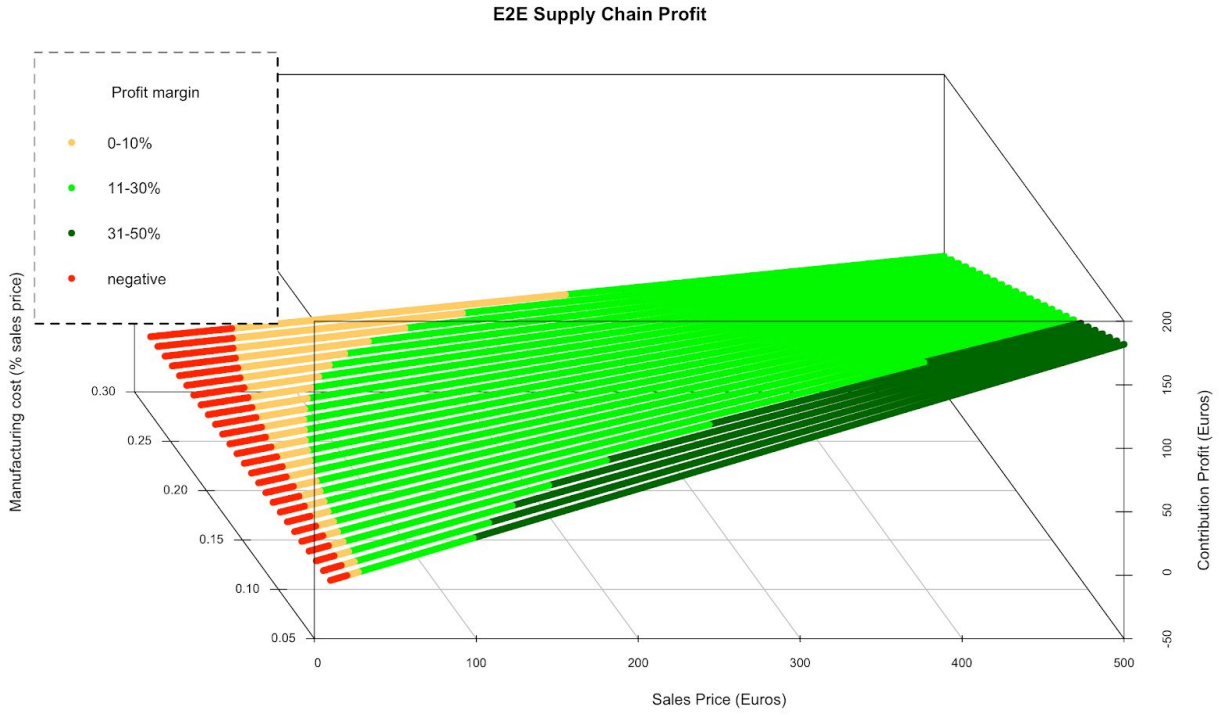


Figure A4-4: E2E supply chain profitability OPTIMISTIC scenario, marketing cost =15% of sales price

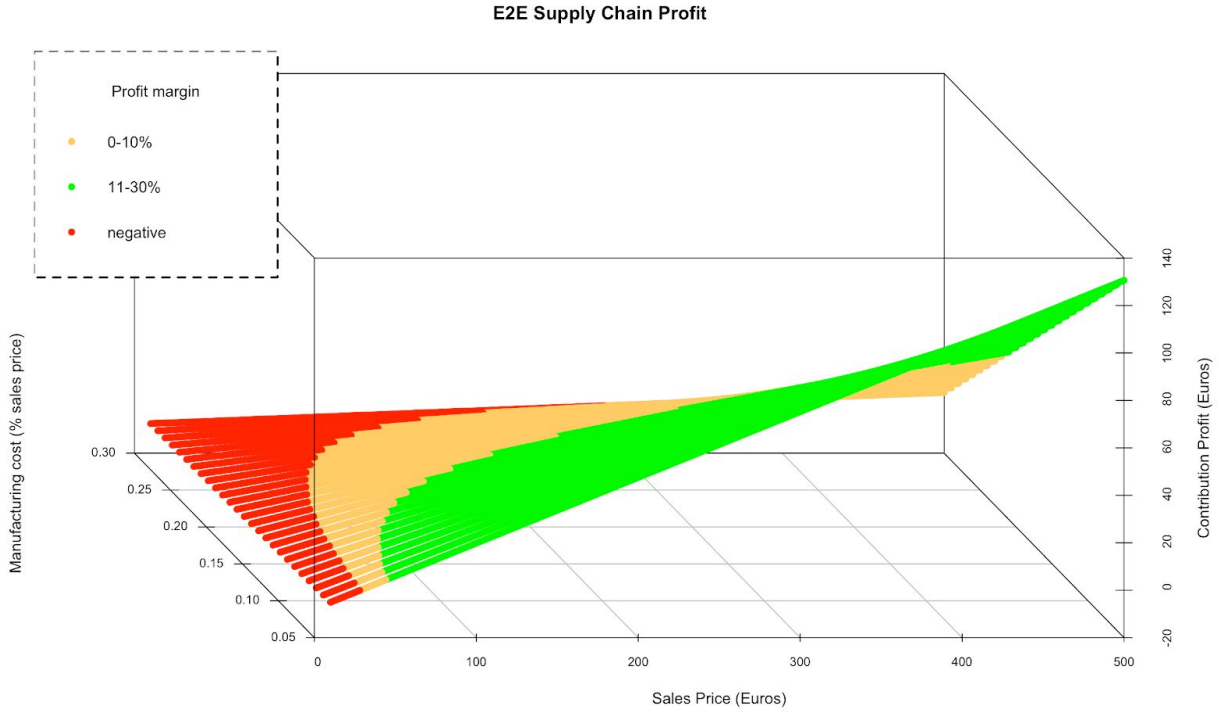


Figure A4-5: E2E supply chain profitability AVERAGE scenario, marketing cost =15% of sales price

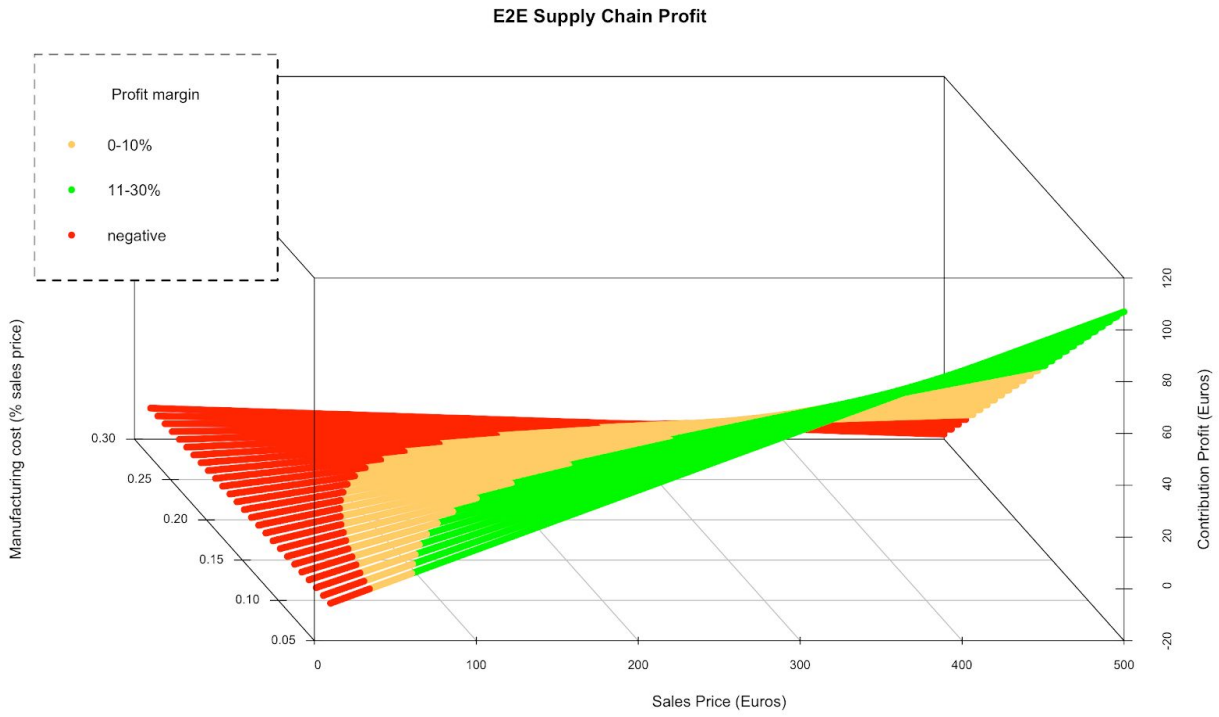


Figure A4-6: E2E supply chain profitability PESSIMISTIC scenario, marketing cost =15% of sales price

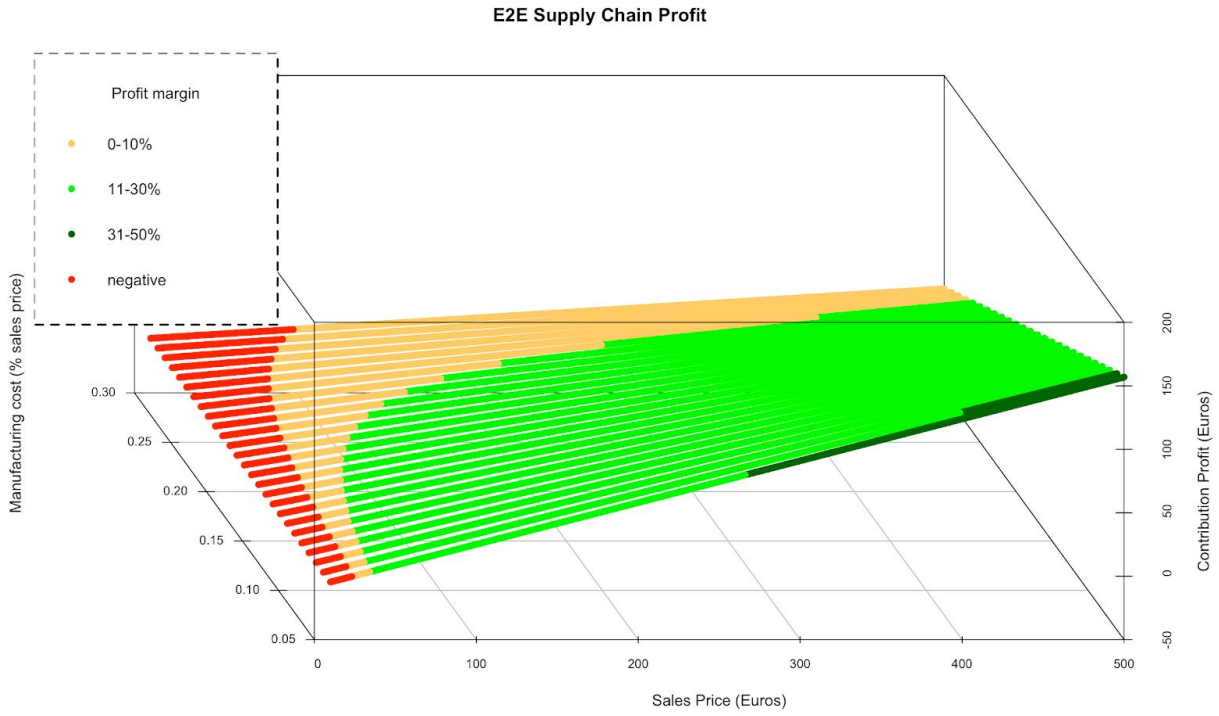


Figure A4-7: E2E supply chain profitability OPTIMISTIC scenario, marketing cost =20% of sales price

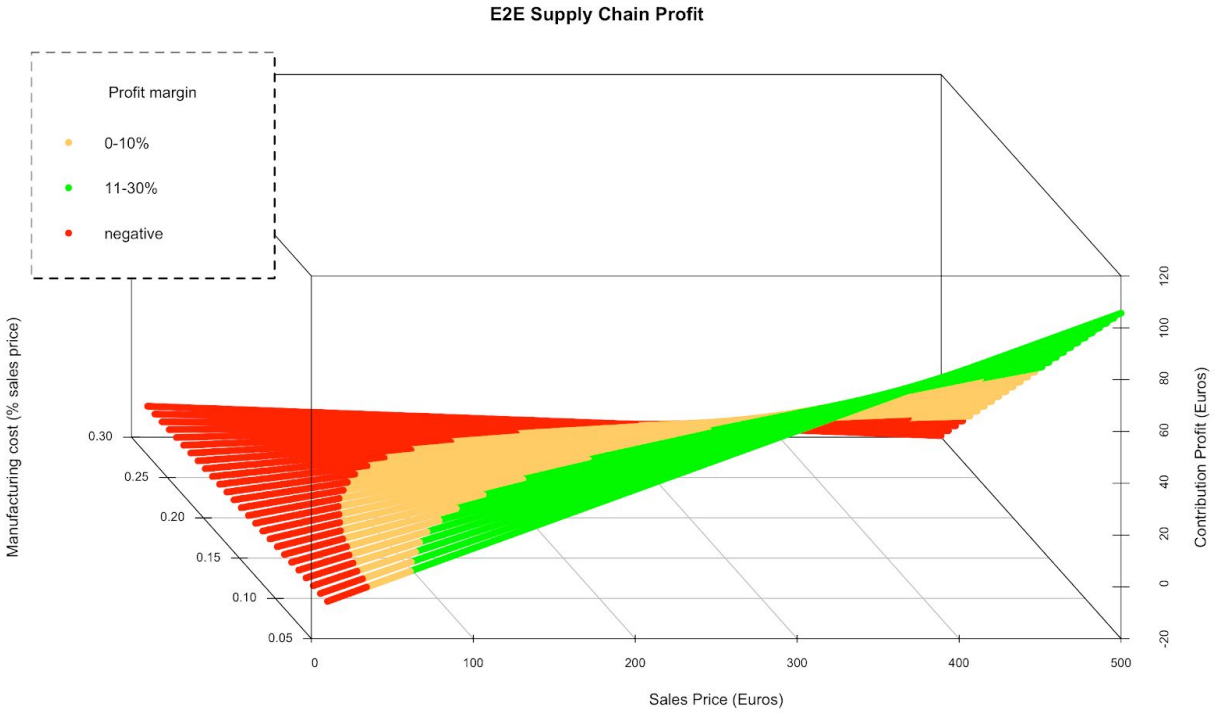


Figure A4-8: E2E supply chain profitability Average scenario, marketing cost =20% of sales price

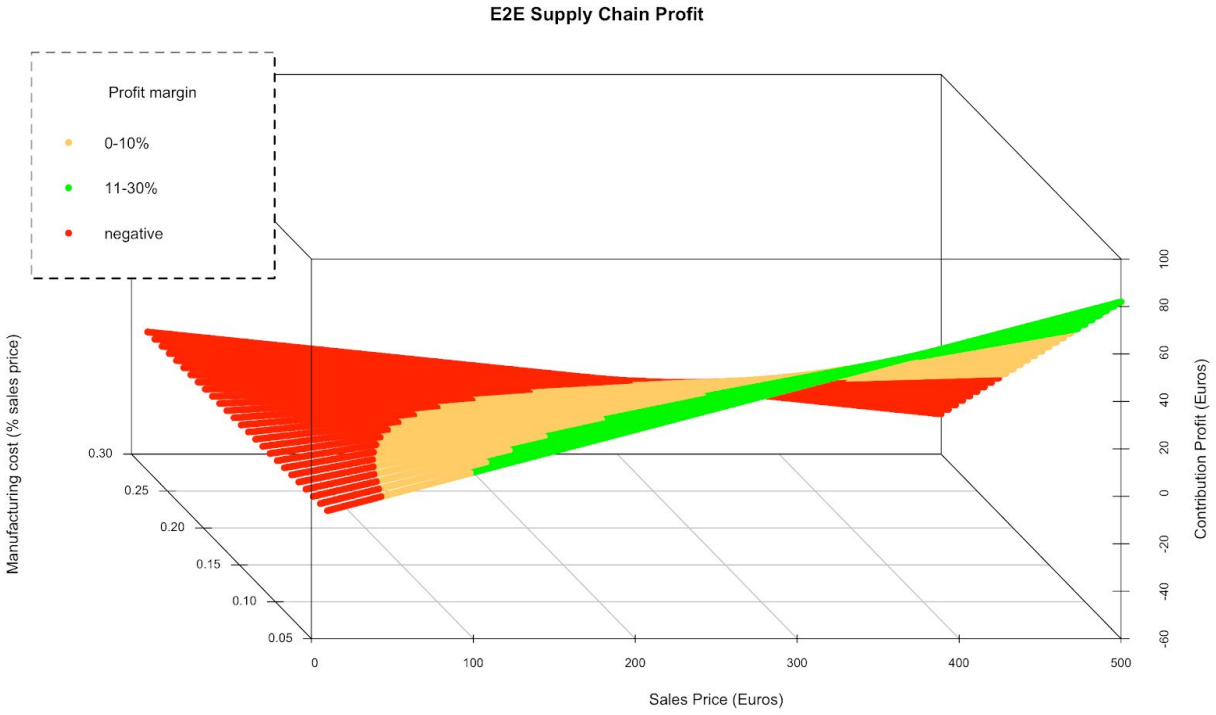


Figure A4-9: E2E supply chain profitability Pessimistic scenario, marketing cost =20% of sales price

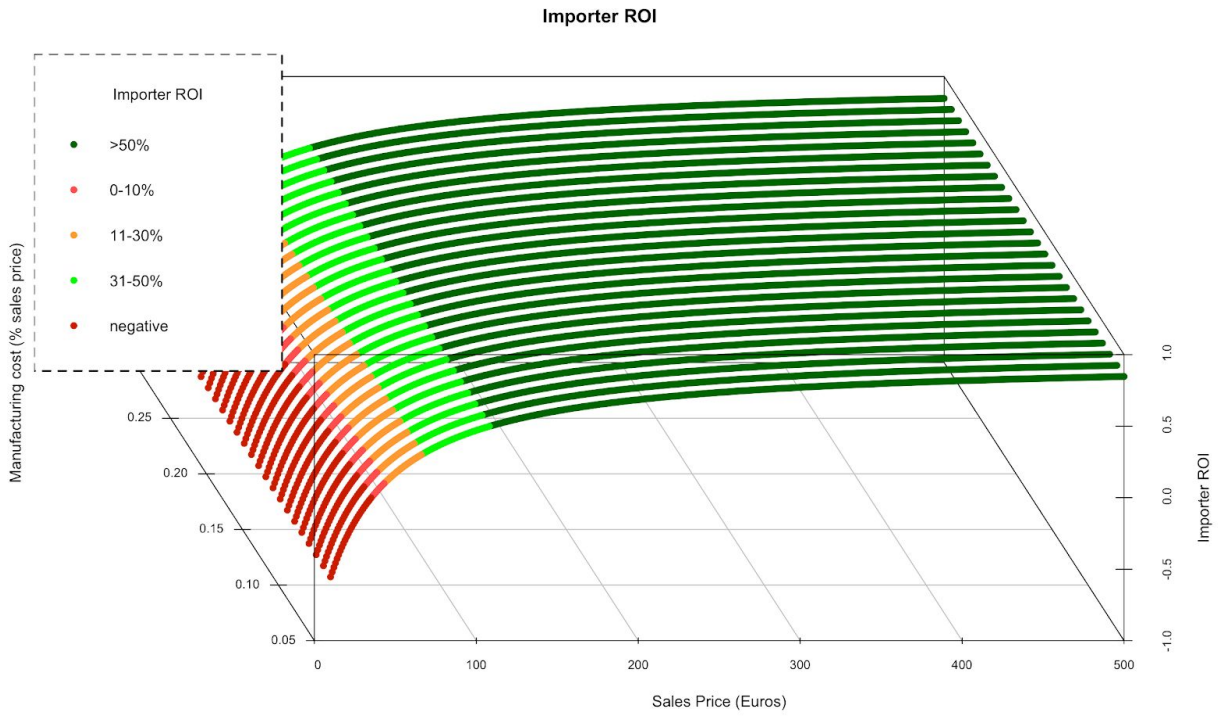


Figure A4-10: Importer Return on Investment OPTIMISTIC scenario, marketing cost=10% of sales price

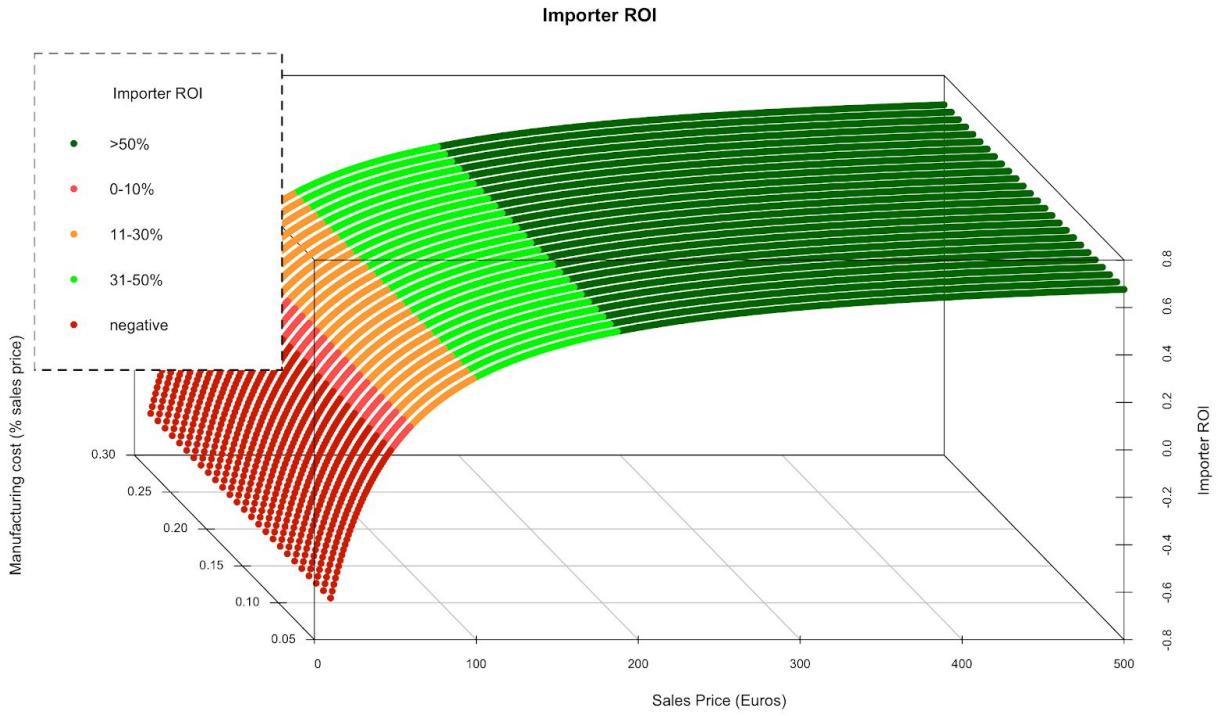


Figure A4-11: Importer Return on Investment AVERAGE scenario, marketing cost=10% of sales price

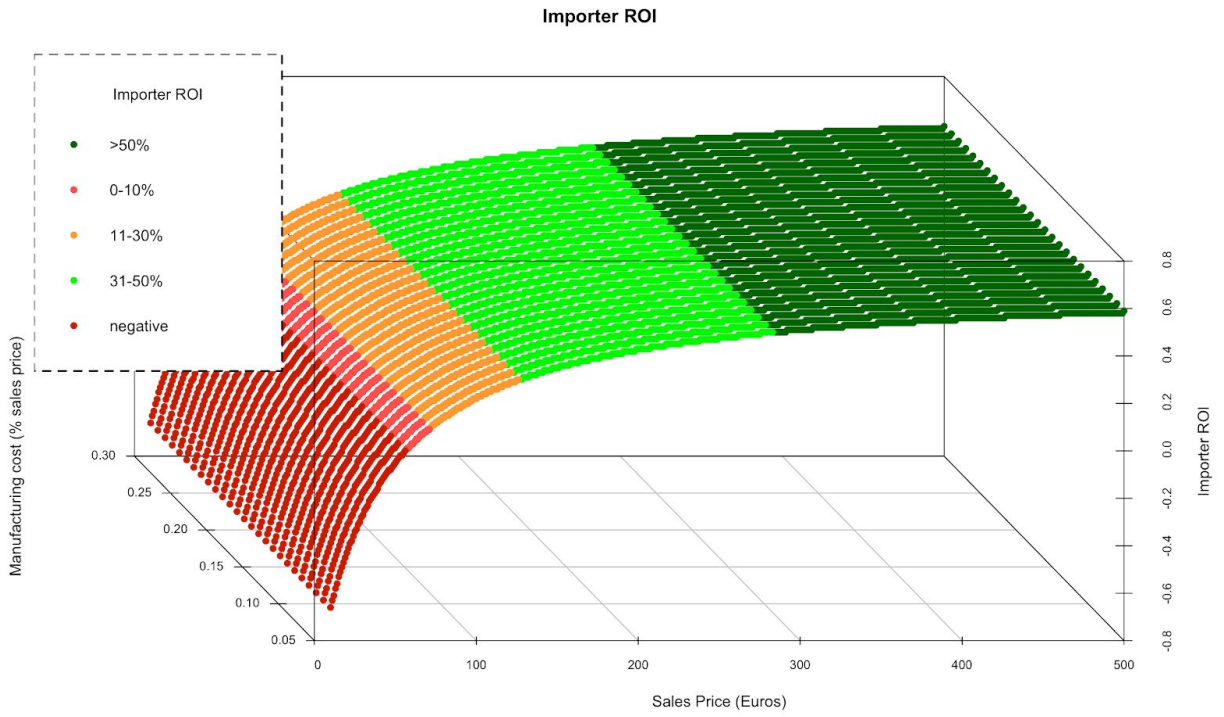


Figure A4-12: Importer Return on Investment PESSIMISTIC scenario, marketing cost=10% of sales price

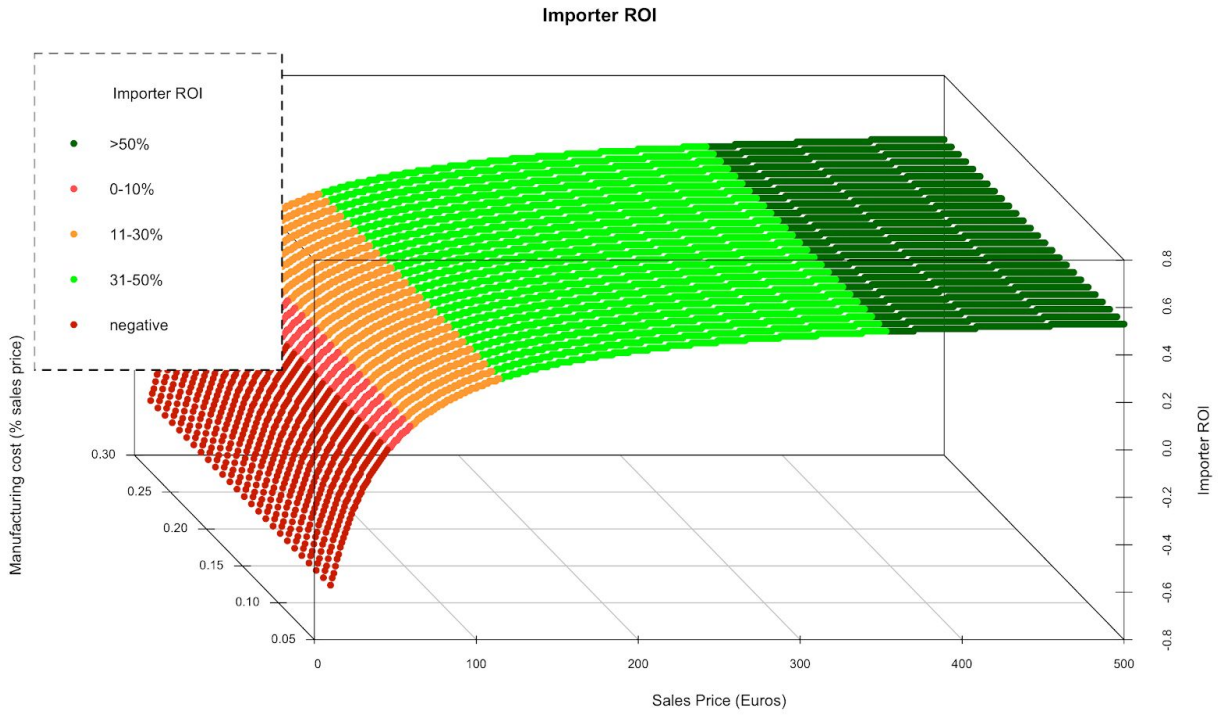


Figure A4-13: Importer Return on Investment OPTIMISTIC scenario, marketing cost=15% of sales price

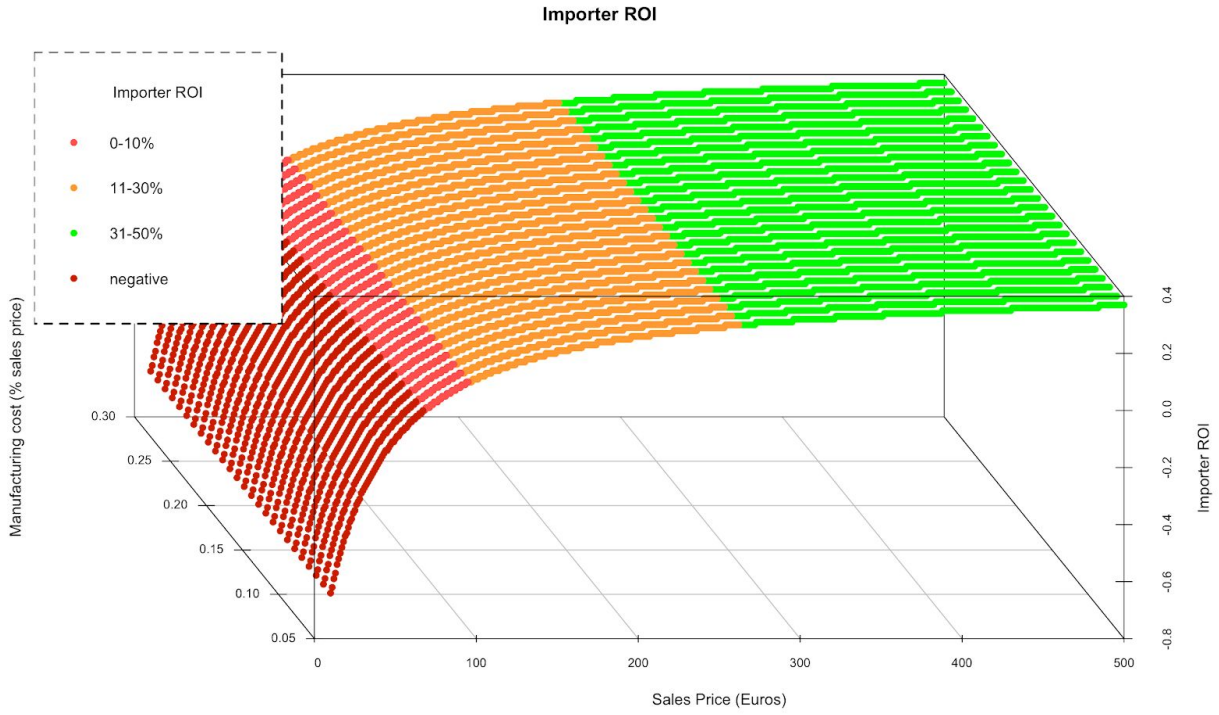


Figure A4-14: Importer Return on Investment AVERAGE scenario, marketing cost=15% of sales price

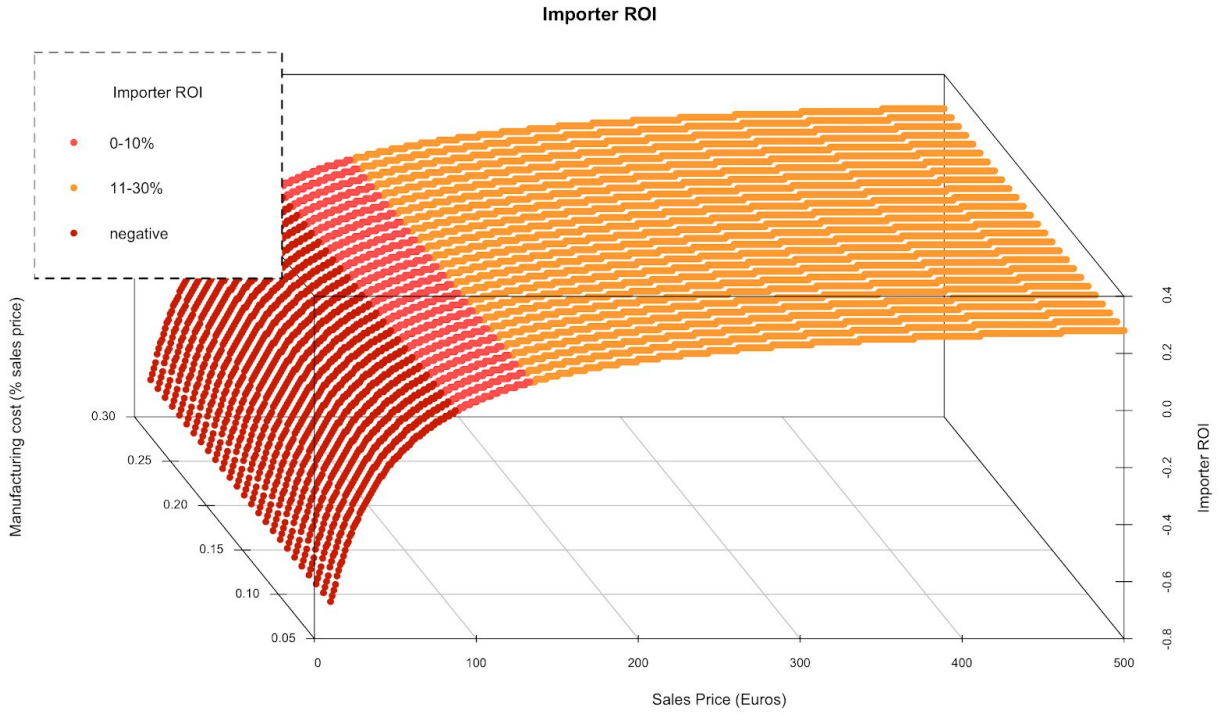


Figure A4-15: Importer Return on Investment PESSIMISTIC scenario, marketing cost=15% of sales price

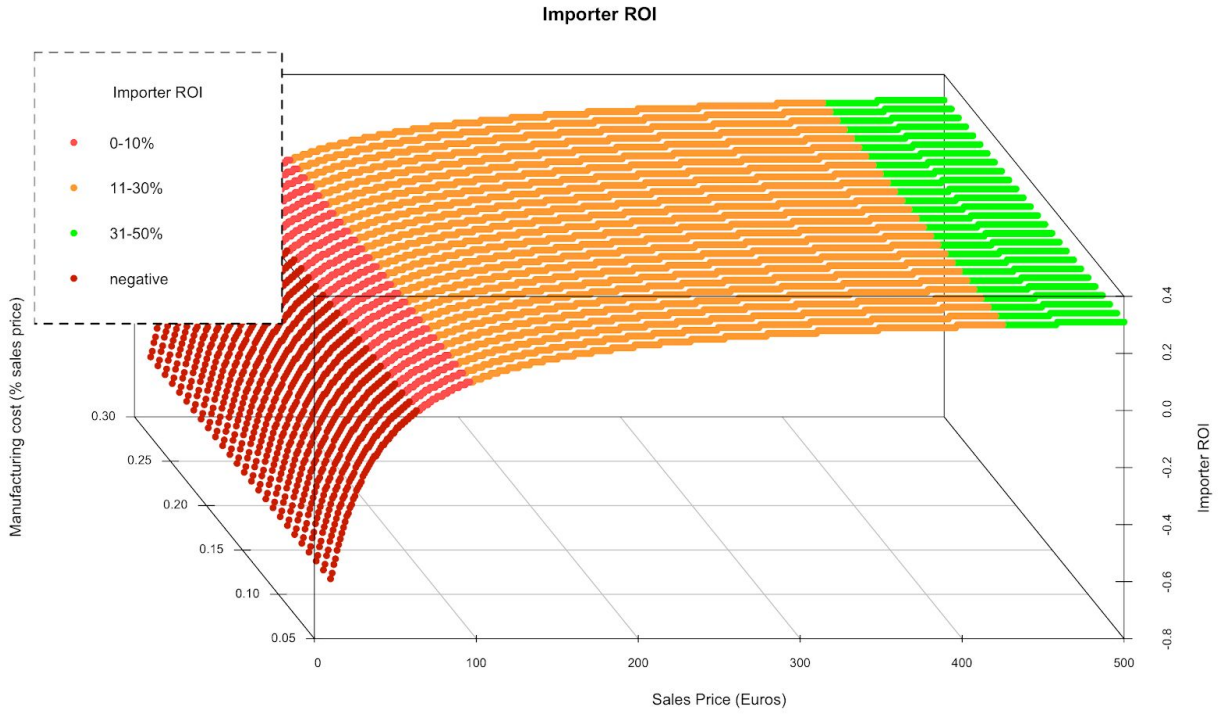


Figure A4-16: Importer Return on Investment OPTIMISTIC scenario, marketing cost=20% of sales price

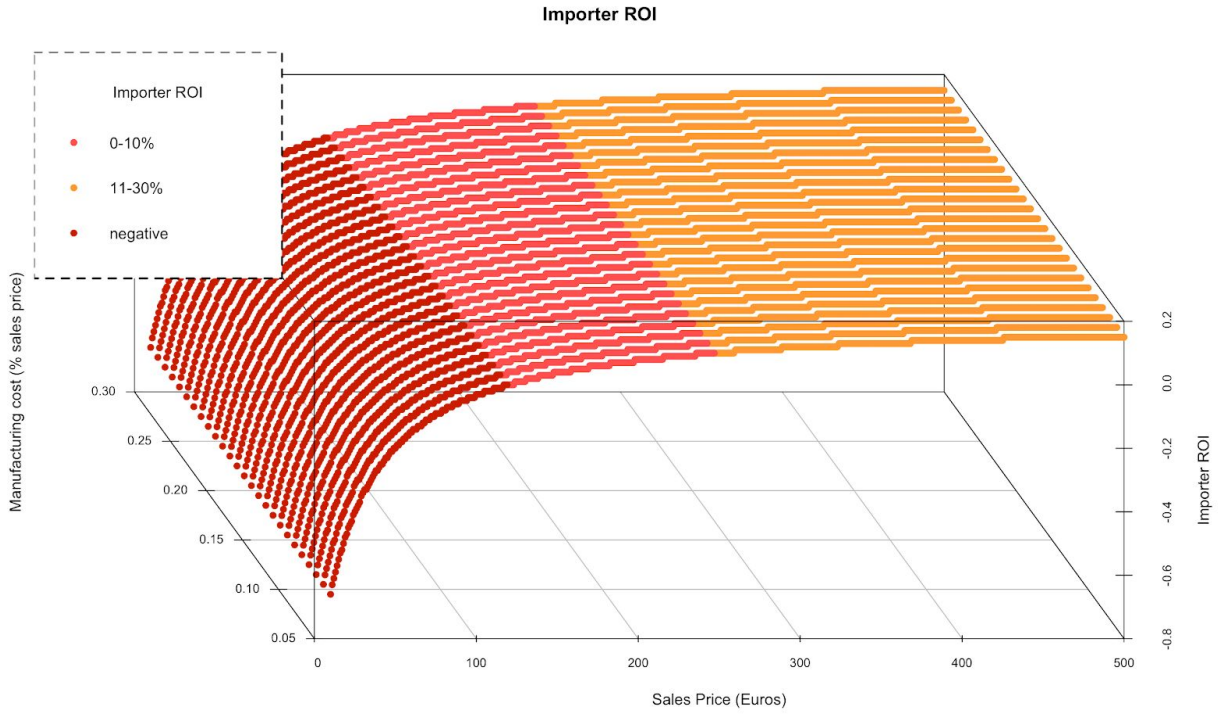


Figure A4-17: Importer Return on Investment AVERAGE scenario, marketing cost=20% of sales price

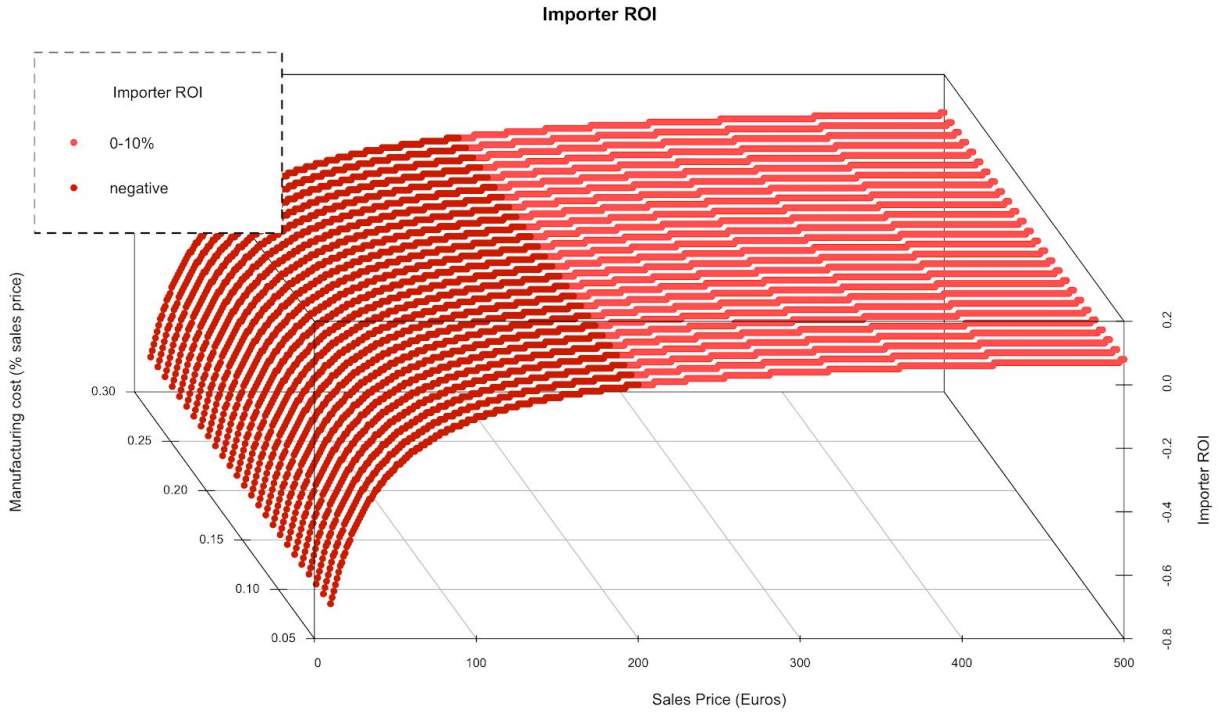


Figure A4-18: Importer Return on Investment PESSIMISTIC scenario, marketing cost=20% of sales price

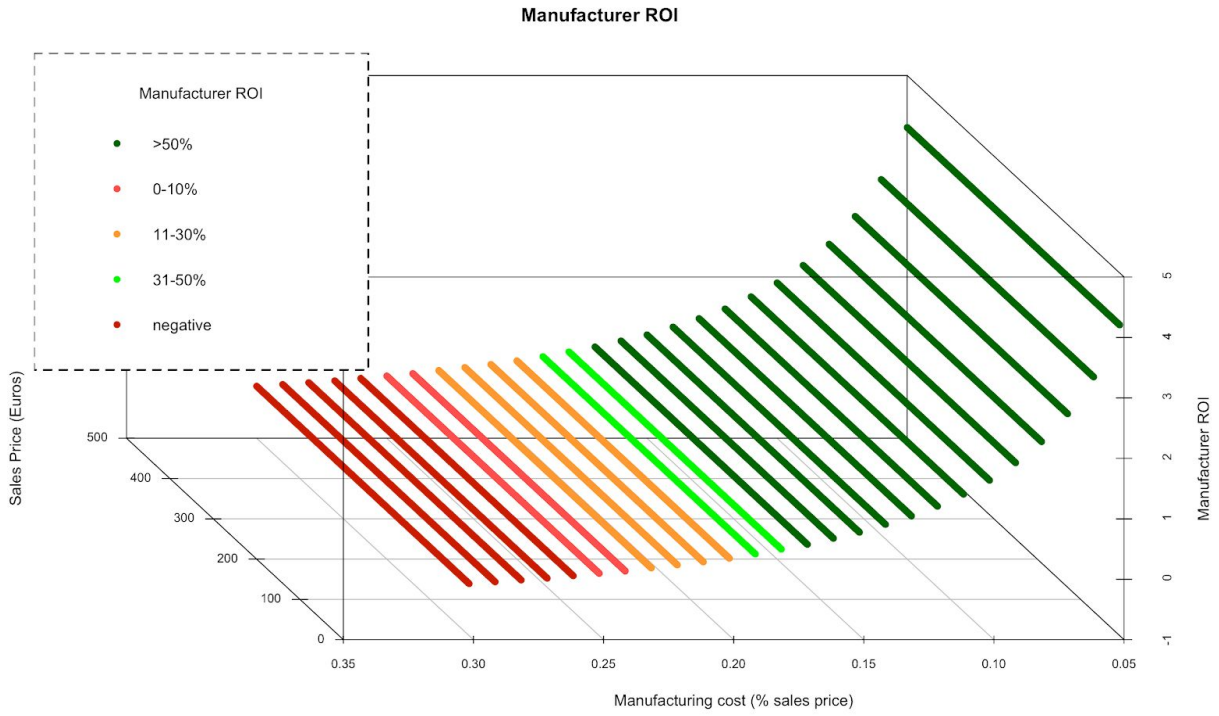


Figure A4-19: Manufacturer Return on Investment OPTIMISTIC scenario

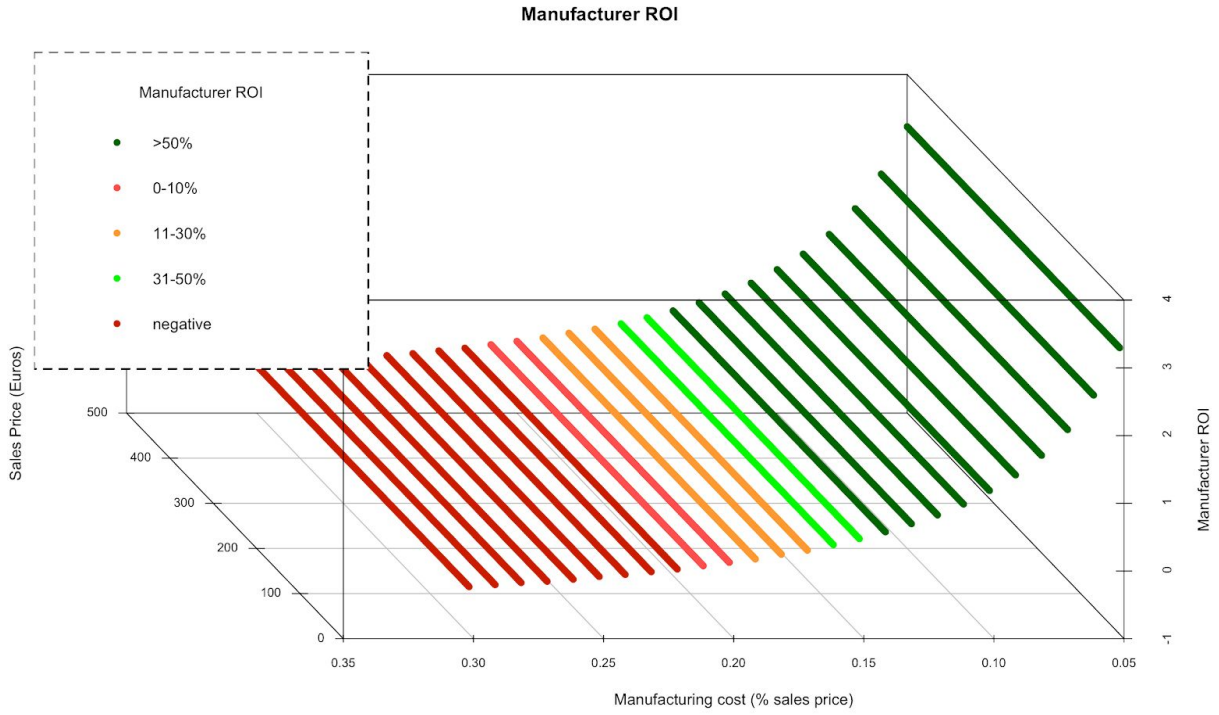


Figure A4-20: Manufacturer Return on Investment AVERAGE scenario

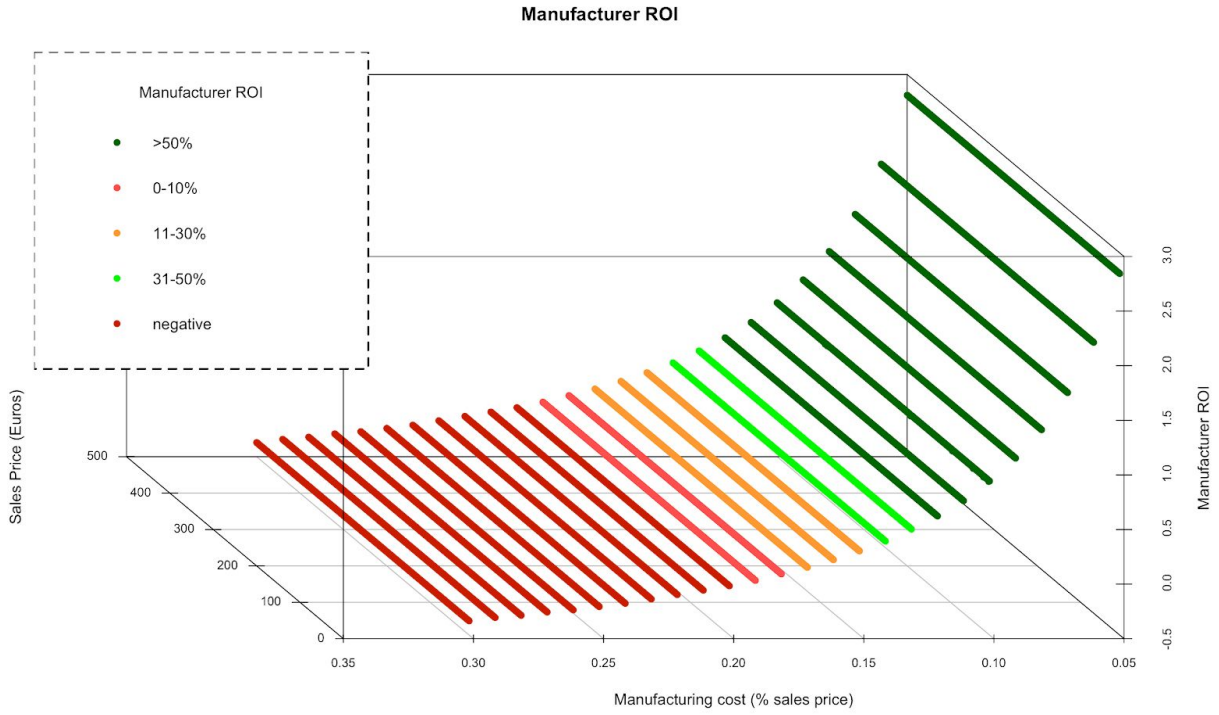


Figure A4-21: Manufacturer Return on Investment PESSIMISTIC scenario

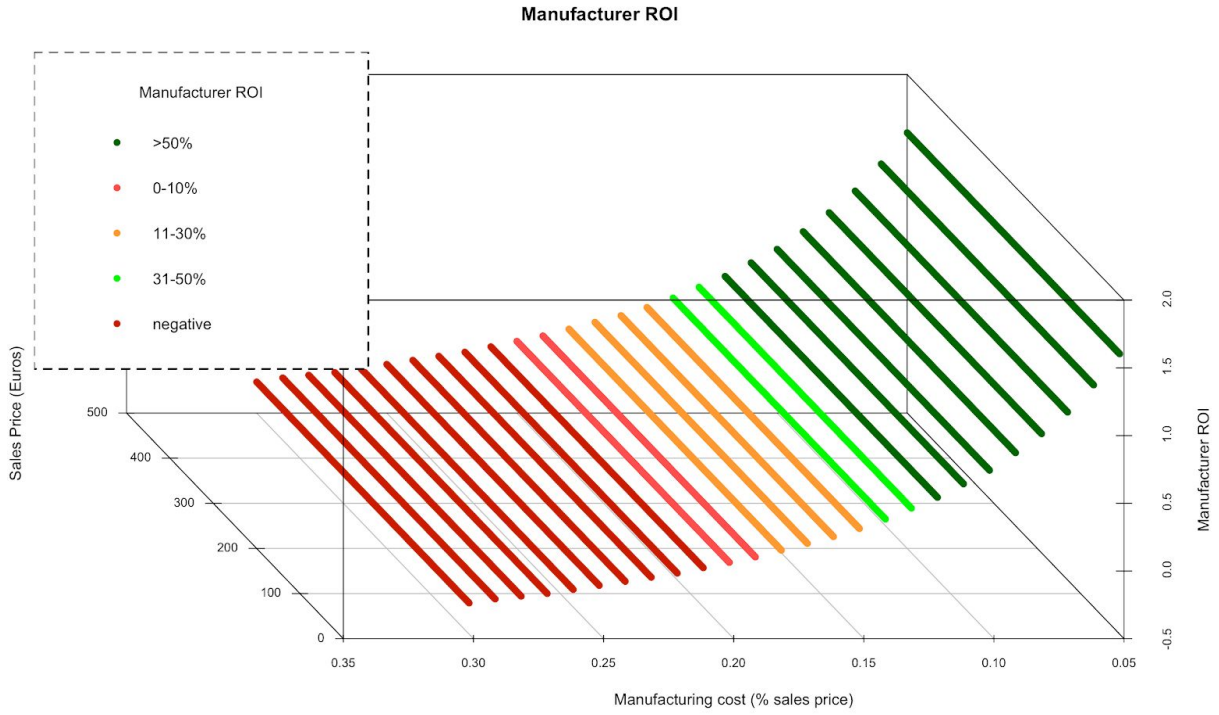


Figure A4-22: Manufacturer Return on Investment OPTIMISTIC scenario, 5% manufacturer marketing

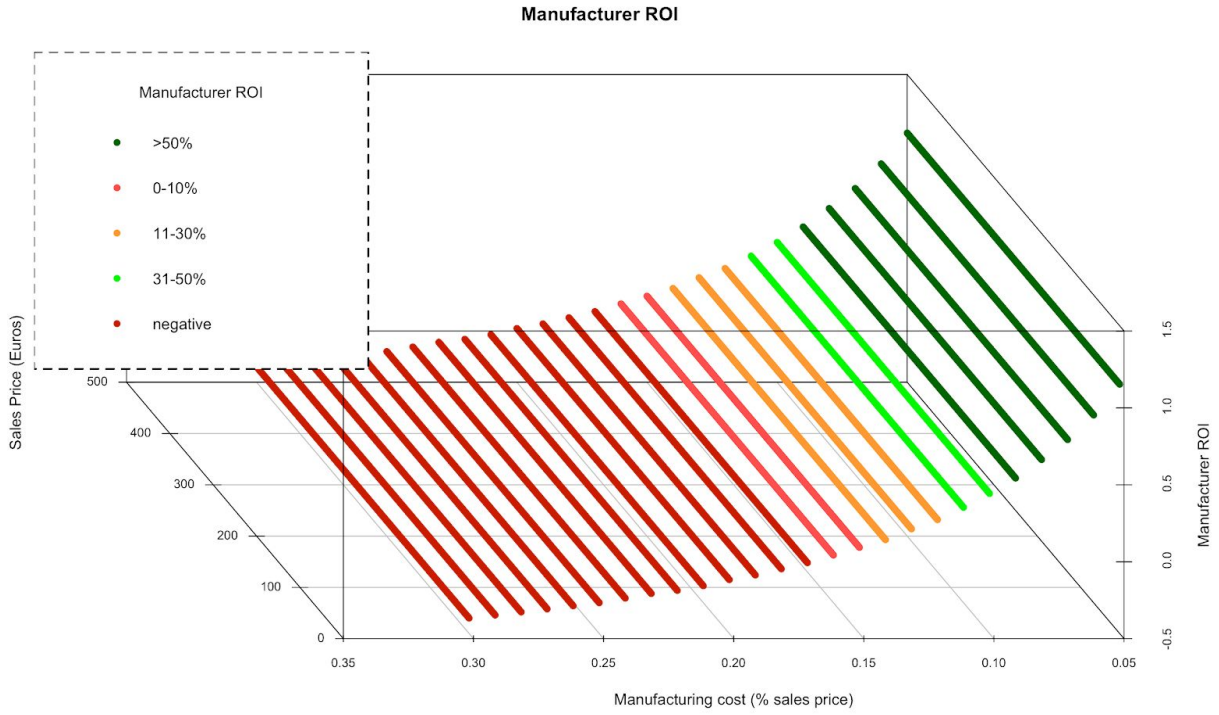


Figure A4-23: Manufacturer Return on Investment AVERAGE scenario, 5% manufacturer marketing

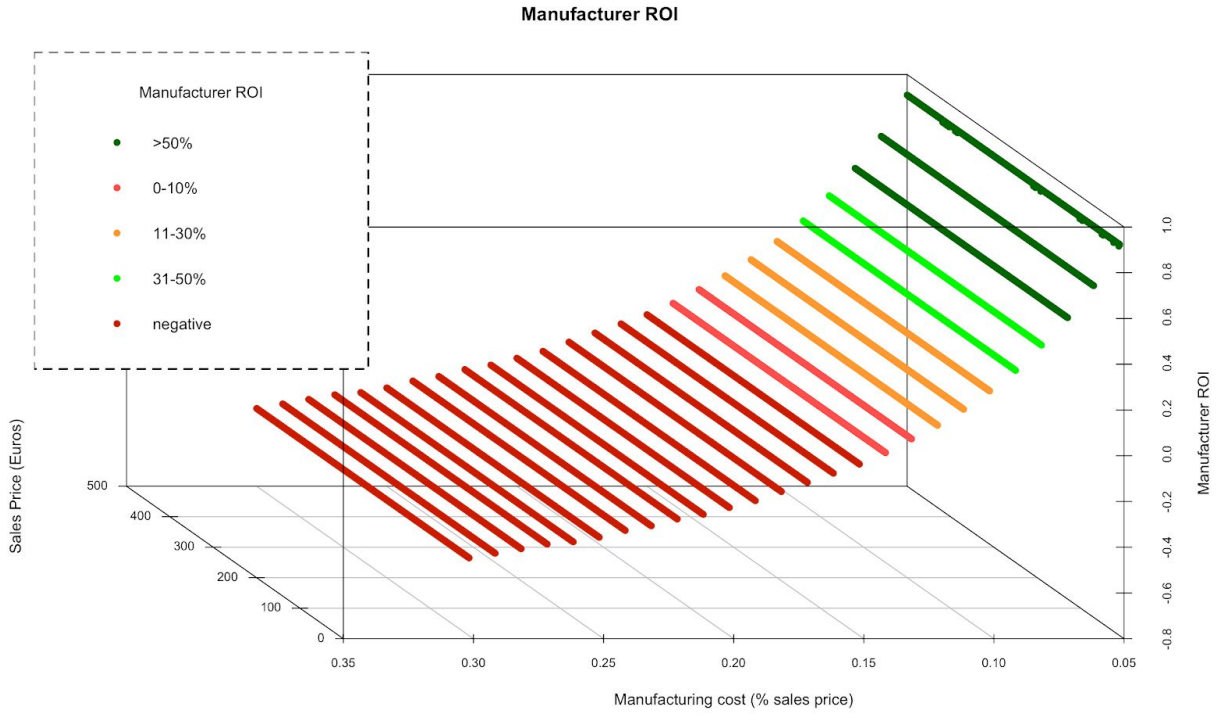


Figure A4-24: Manufacturer Return on Investment PESSIMISTIC scenario, 5% manufacturer marketing

Appendix 5: Shoe and Handbag Survey

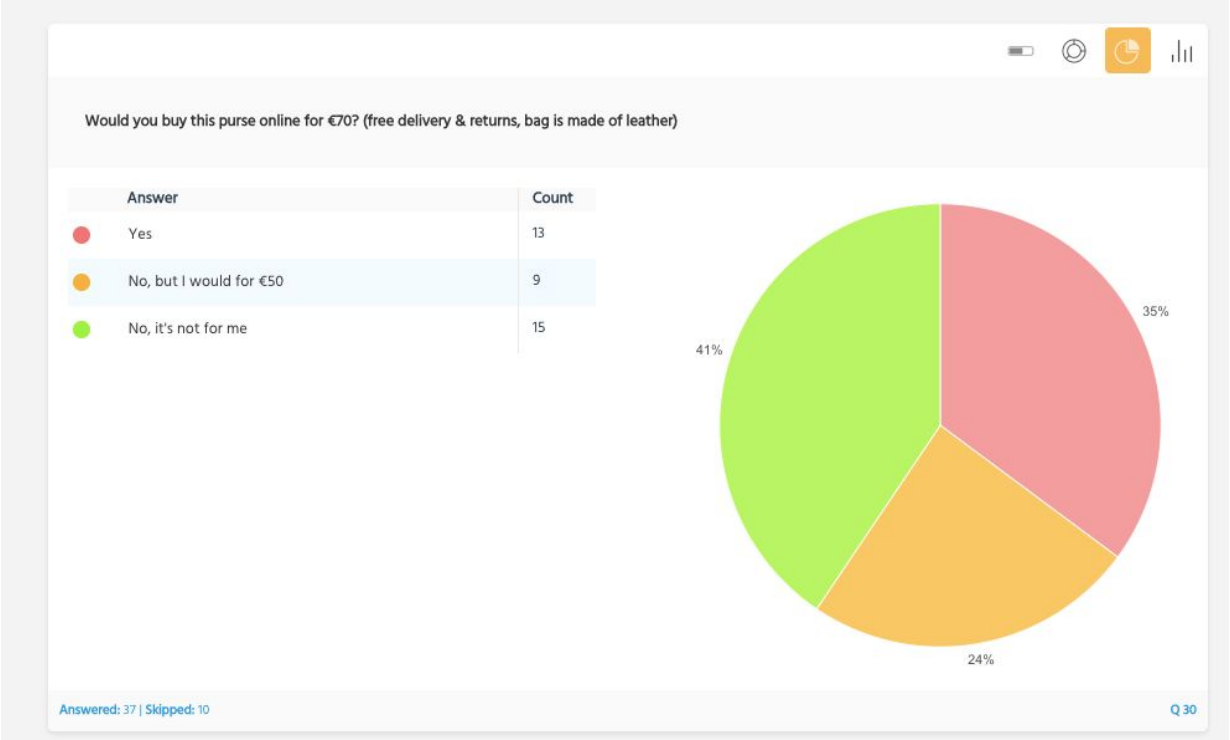
In order to determine initial demand for shoes and handbags and validate an initial price point a survey was conducted. The survey consisted of 30 women living in The Netherlands, Belgium, France and Switzerland. All women in the survey were highly educated (master's degree and above), with ages ranging from 25-45.

The survey consisted of 30 questions, with each question asking for a specific model if they would be willing to buy the product at a specific price point, at a lower price point or not at all. In the survey we tested 24 different shoe styles and 6 different handbag styles. The results can be found below.

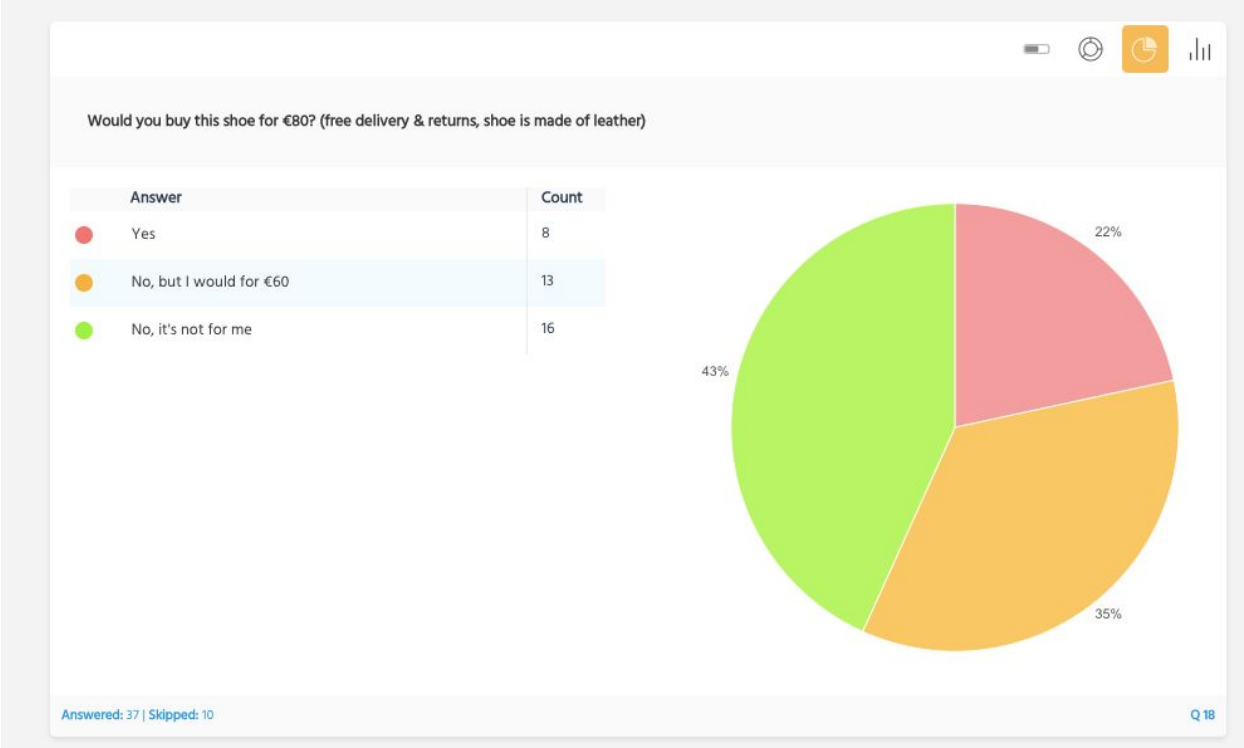
From the survey it's possible to derive two interesting insights. First that the amount of interest varies a lot between shoe types, which suggests that there is an inventory overstock risk if the amount produced and imported is not adjusted based on initial demand signals, and second that the interest for handbags was a lot higher than for shoes. This is especially interesting since handbags do not come in different sizes, which further reduces the inventory risk.

Below is the survey results for each product type:

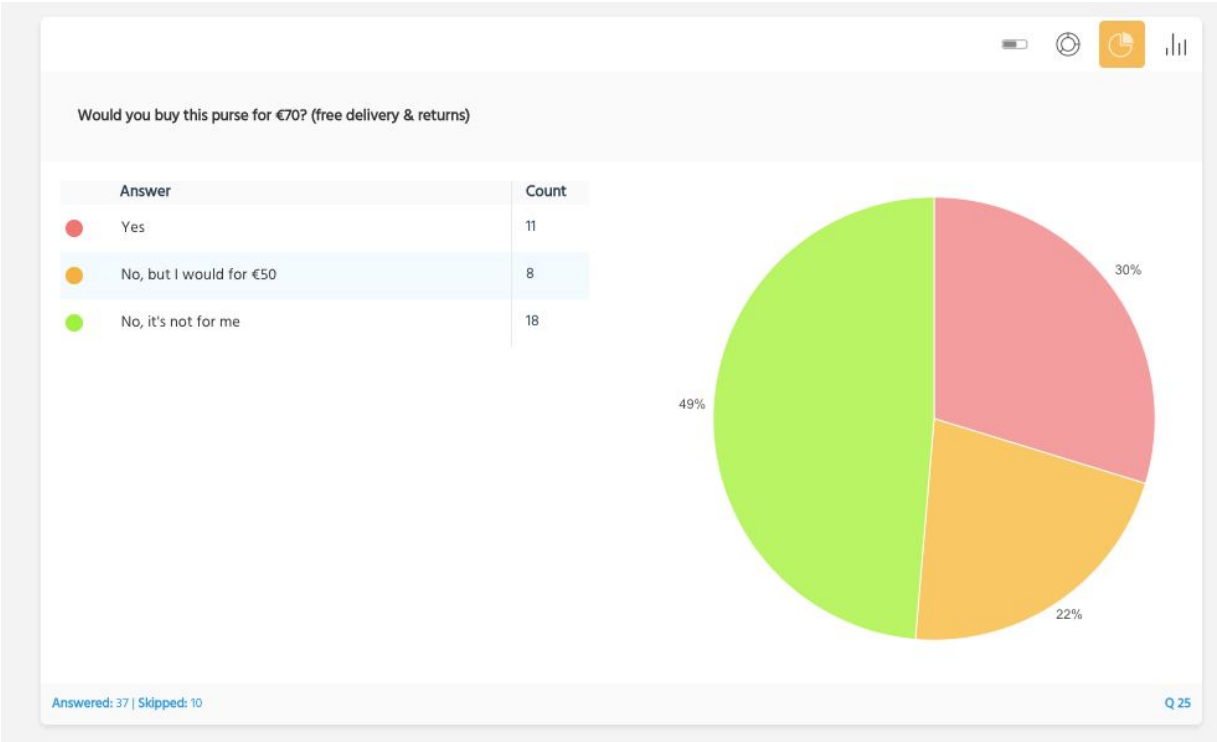
61% would buy


Would you buy this purse online for €70? (free delivery & returns, bag is made of leather)
Answer
Count
Yes
13
No, but I would for €50
9
No, it's not for me
15
35%
41%
24%
Answered: 37 | Skipped: 10
Q 30

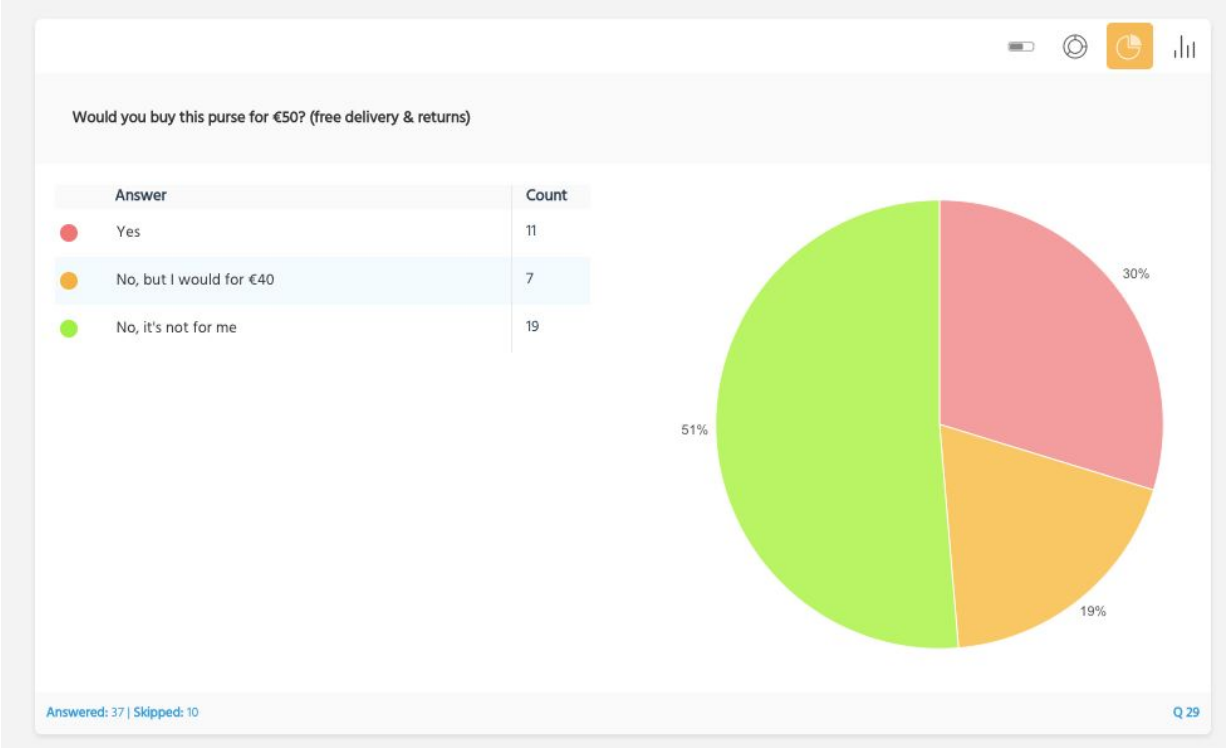
59% would buy


Would you buy this shoe for €80? (free delivery & returns, shoe is made of leather)
Answer
Count
Yes
8
No, but I would for €60
13
No, it's not for me
16
22%
43%
35%
Answered: 37 | Skipped: 10
Q 18

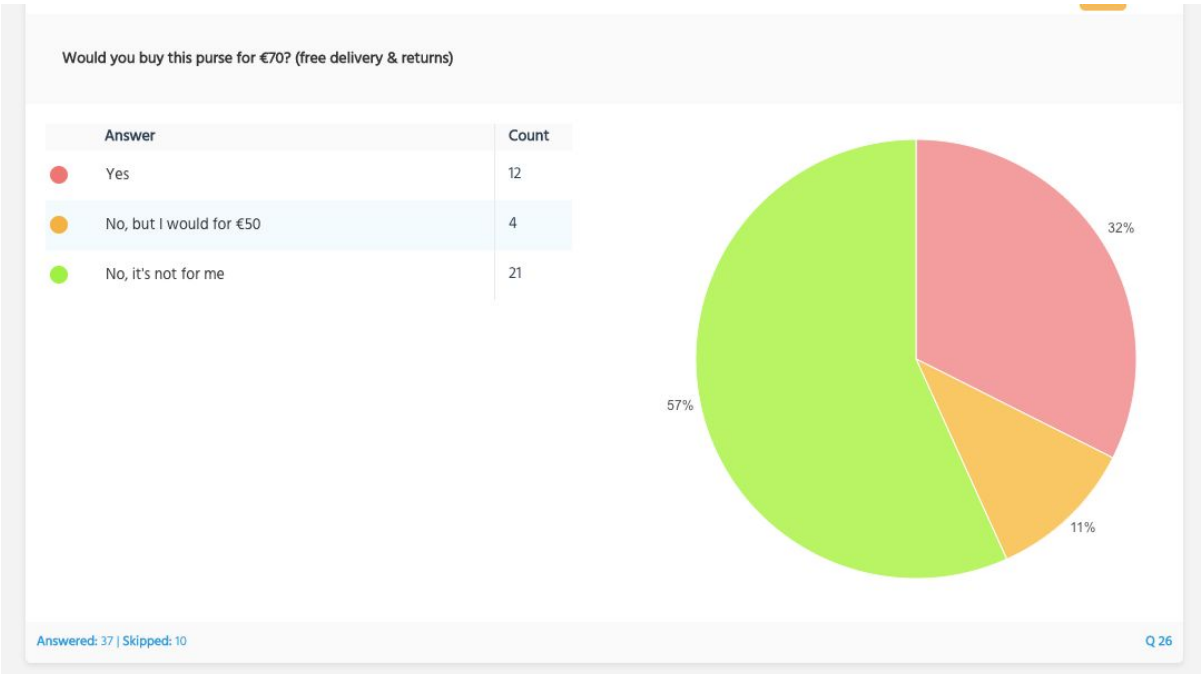
57% would buy


Would you buy this purse for €70? (free delivery & returns)
Answer
Count
Yes
11
No, but I would for €50
8
No, it's not for me
18
30%
49%
22%
Answered: 37 | Skipped: 10
Q 25

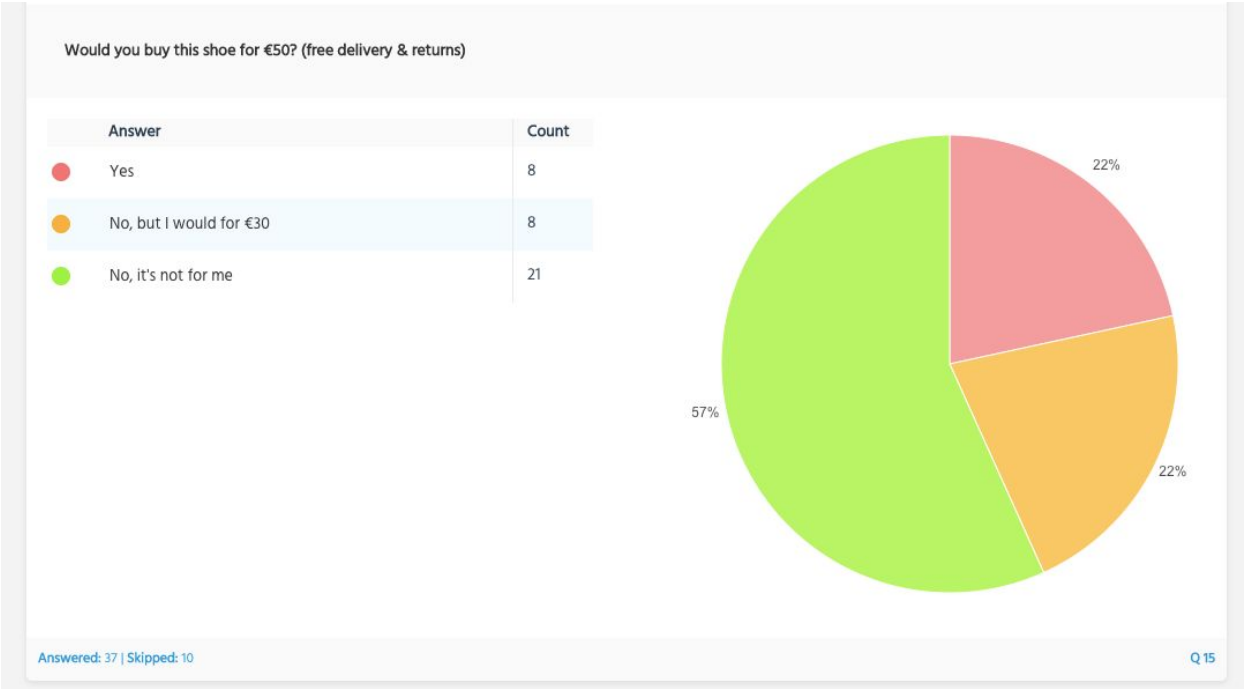
52% would buy


Would you buy this purse for €50? (free delivery & returns)
Answer
Count
Yes
11
No, but I would for €40
7
No, it's not for me
19
30%
51%
19%
Answered: 37 | Skipped: 10
Q 29

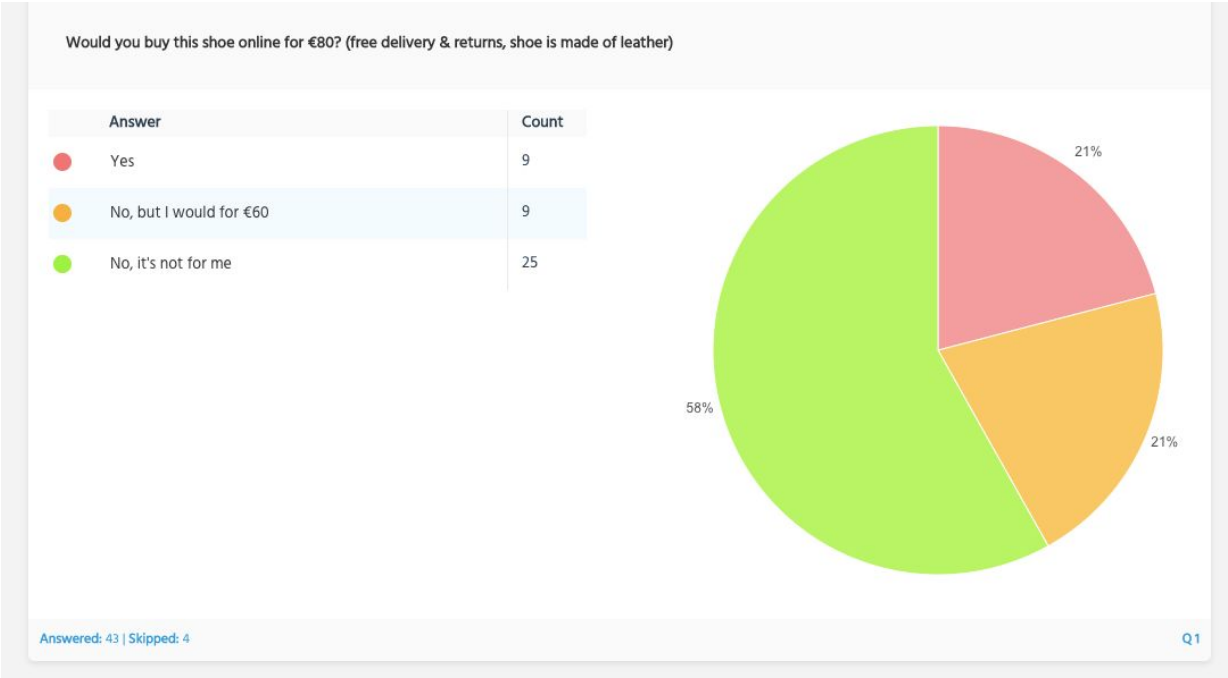
49% would buy


Would you buy this purse for €70? (free delivery & returns)
Answer
Count
Yes
12
No, but I would for €50
4
No, it's not for me
21
32%
57%
11%
Answered: 37 | Skipped: 10
Q 26

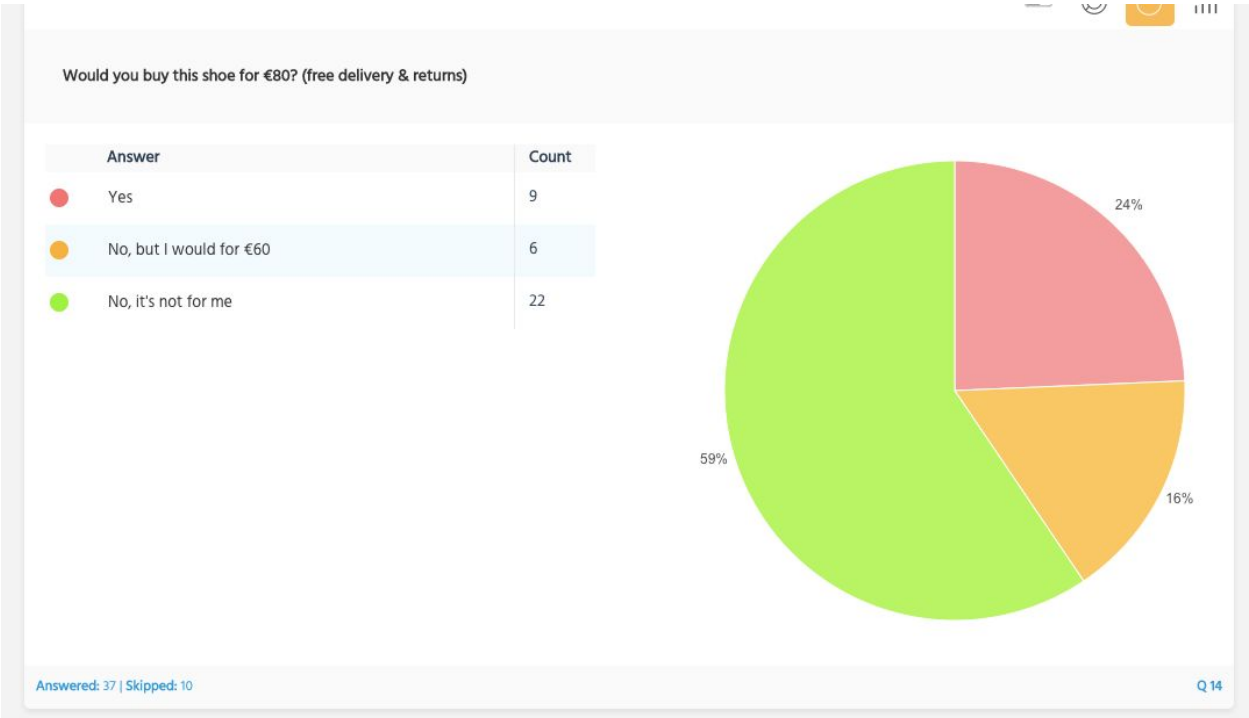
43% would buy


Would you buy this shoe for €50? (free delivery & returns)
Answer
Count
Yes
8
No, but I would for €30
8
No, it's not for me
21
22%
57%
22%
Answered: 37 | Skipped: 10
Q 15

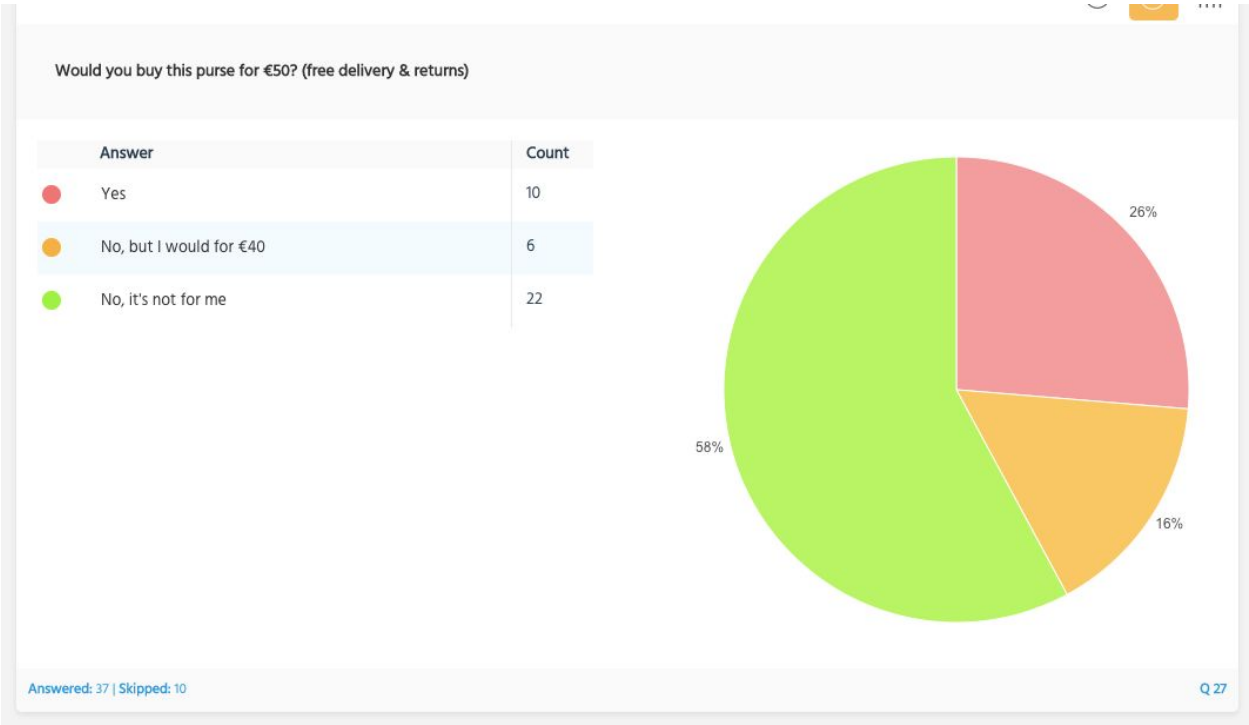
43% would buy


Would you buy this shoe online for €80? (free delivery & returns, shoe is made of leather)
Answer
Count
Yes
9
No, but I would for €60
9
No, it's not for me
25
21%
58%
21%
Answered: 43 | Skipped: 4
Q1

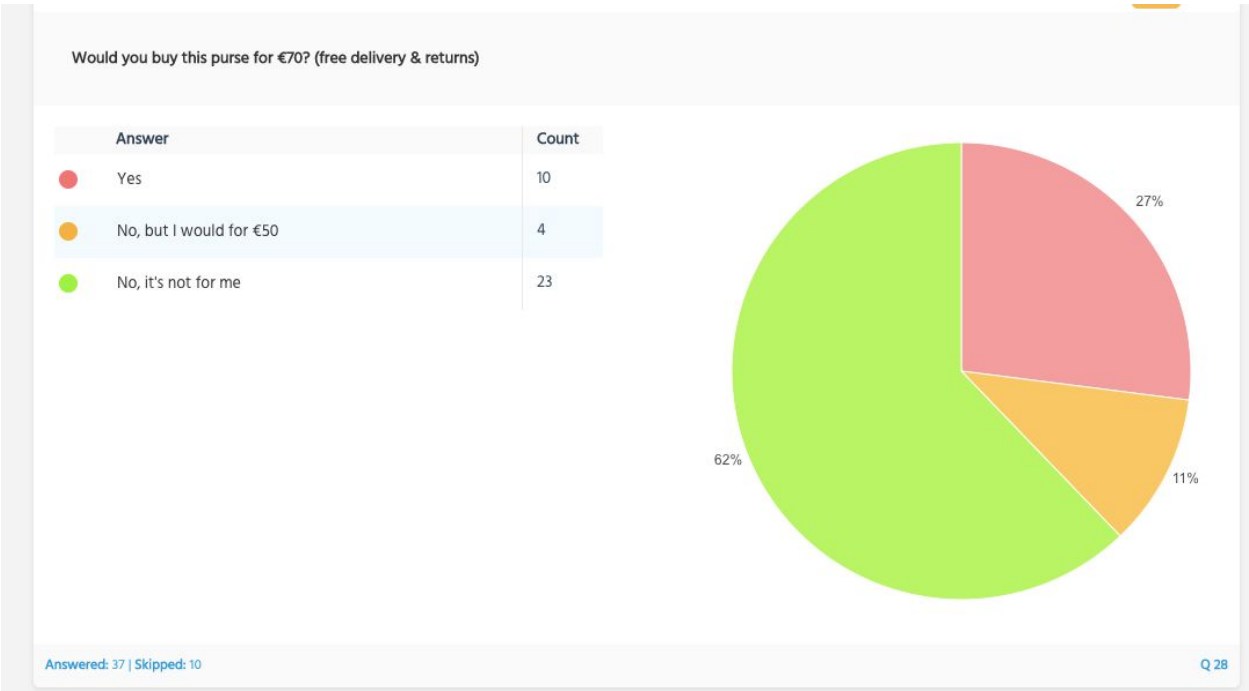
42% would buy


Would you buy this shoe for €80? (free delivery & returns)
Answer
Count
Yes
9
No, but I would for €60
6
No, it's not for me
22
24%
16%
59%
Answered: 37 | Skipped: 10
Q 14

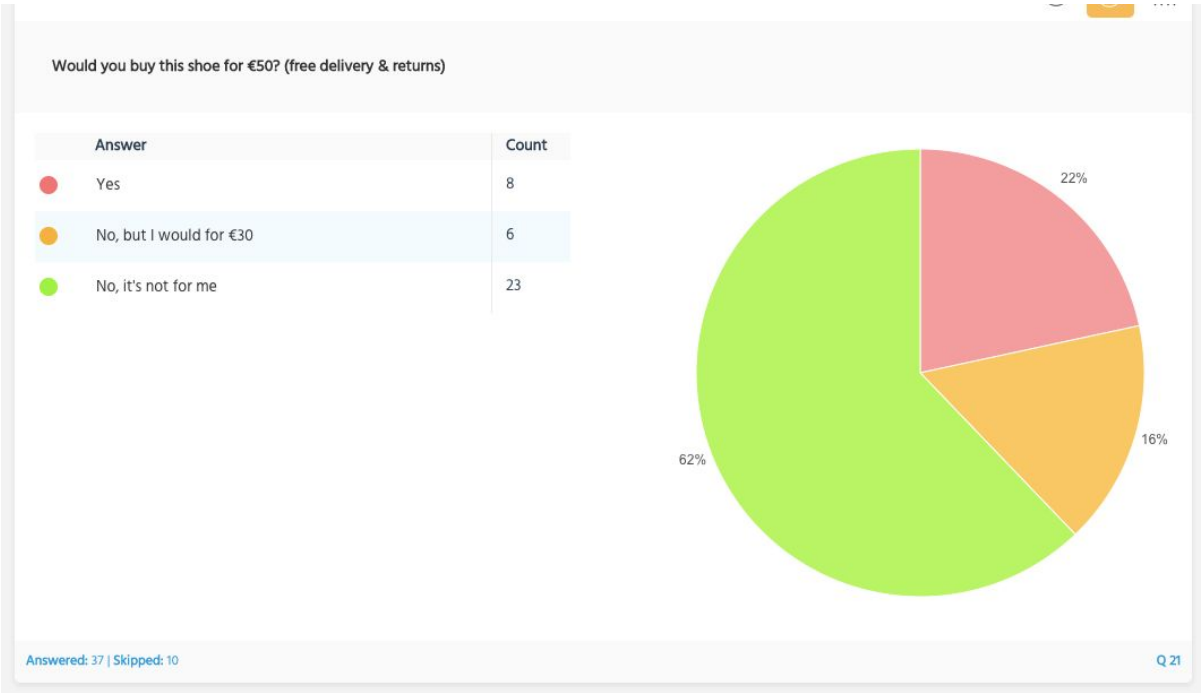
41% would buy


Would you buy this purse for €50? (free delivery & returns)
Answer
Count
Yes
10
No, but I would for €40
6
No, it's not for me
22
26%
58%
16%
Answered: 37 | Skipped: 10
Q 27

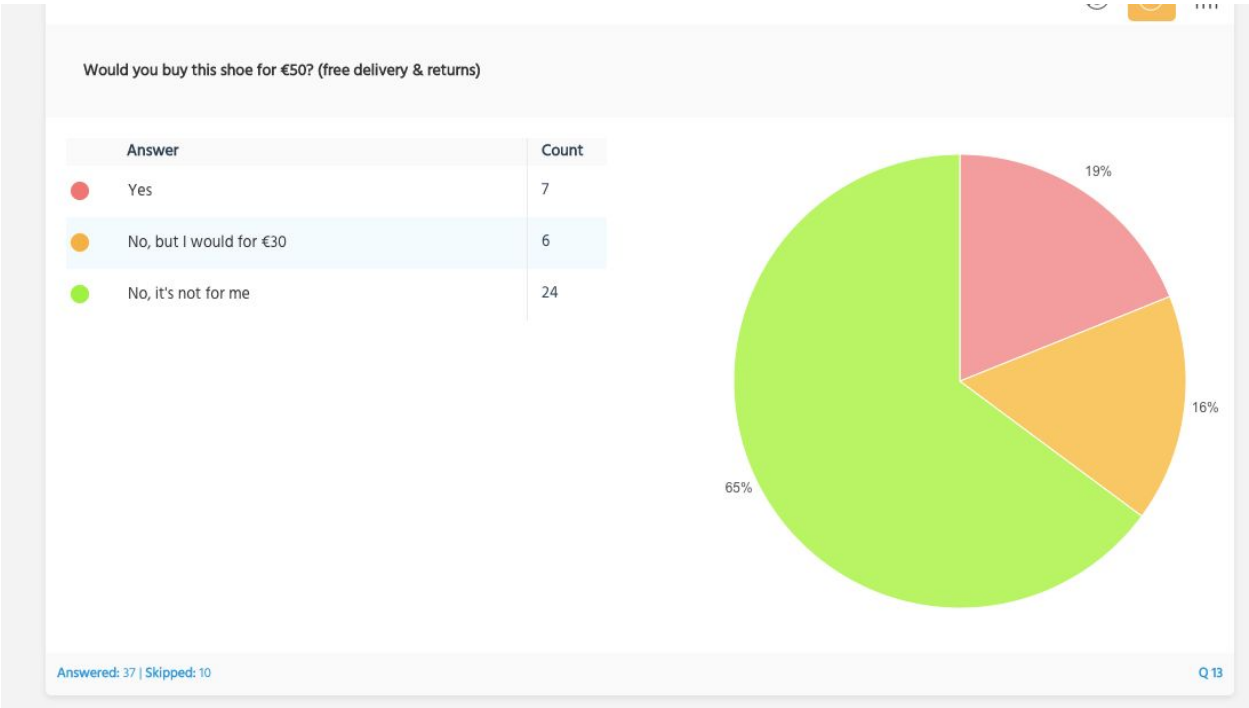
40% would buy


Would you buy this purse for €70? (free delivery & returns)
Answer
Count
Yes
10
No, but I would for €50
4
No, it's not for me
23
27%
62%
11%
Answered: 37 | Skipped: 10
Q 28

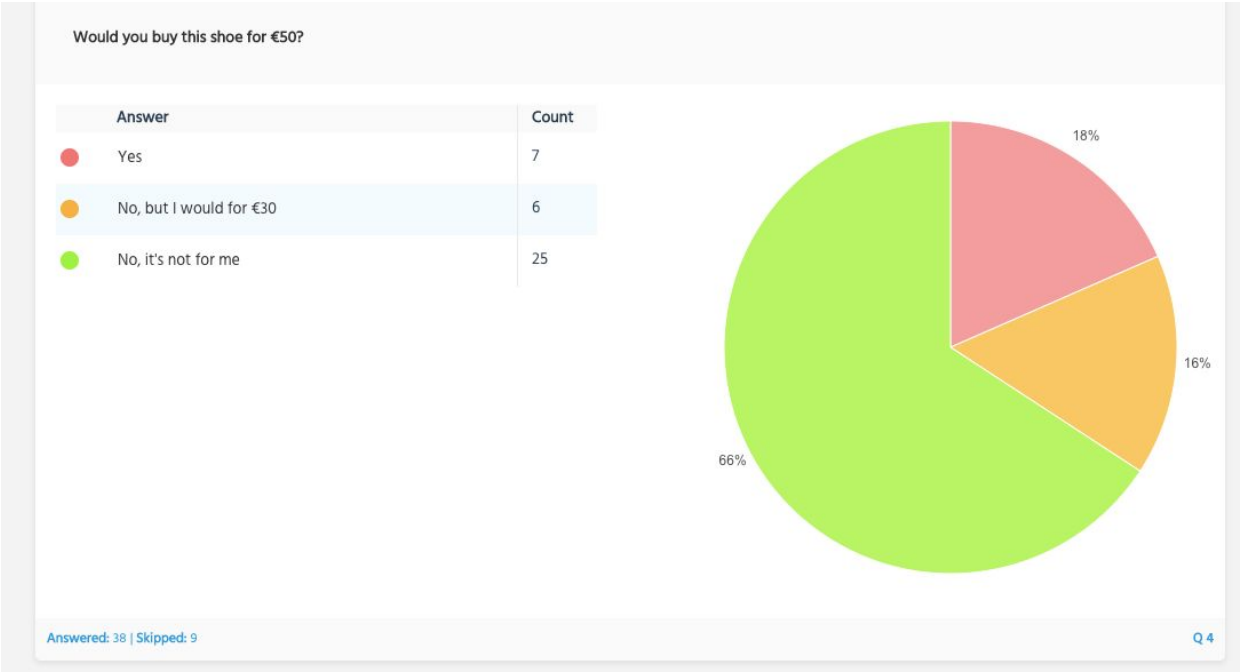
38% would buy


Would you buy this shoe for €50? (free delivery & returns)
Answer
Count
Yes
8
No, but I would for €30
6
No, it's not for me
23
22%
16%
62%
Answered: 37 | Skipped: 10
Q 21

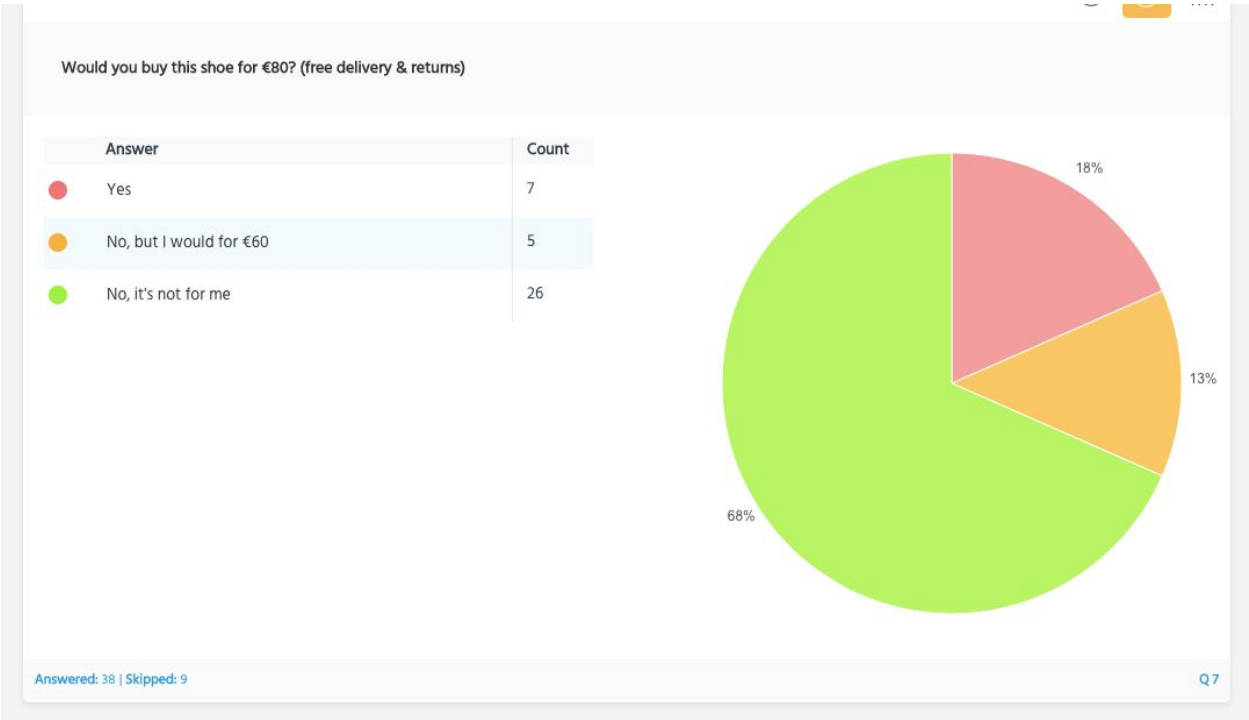
38% would buy


Would you buy this shoe for €50? (free delivery & returns)
Answer
Count
Yes
7
No, but I would for €30
6
No, it's not for me
24
19%
16%
65%
Answered: 37 | Skipped: 10
Q 13

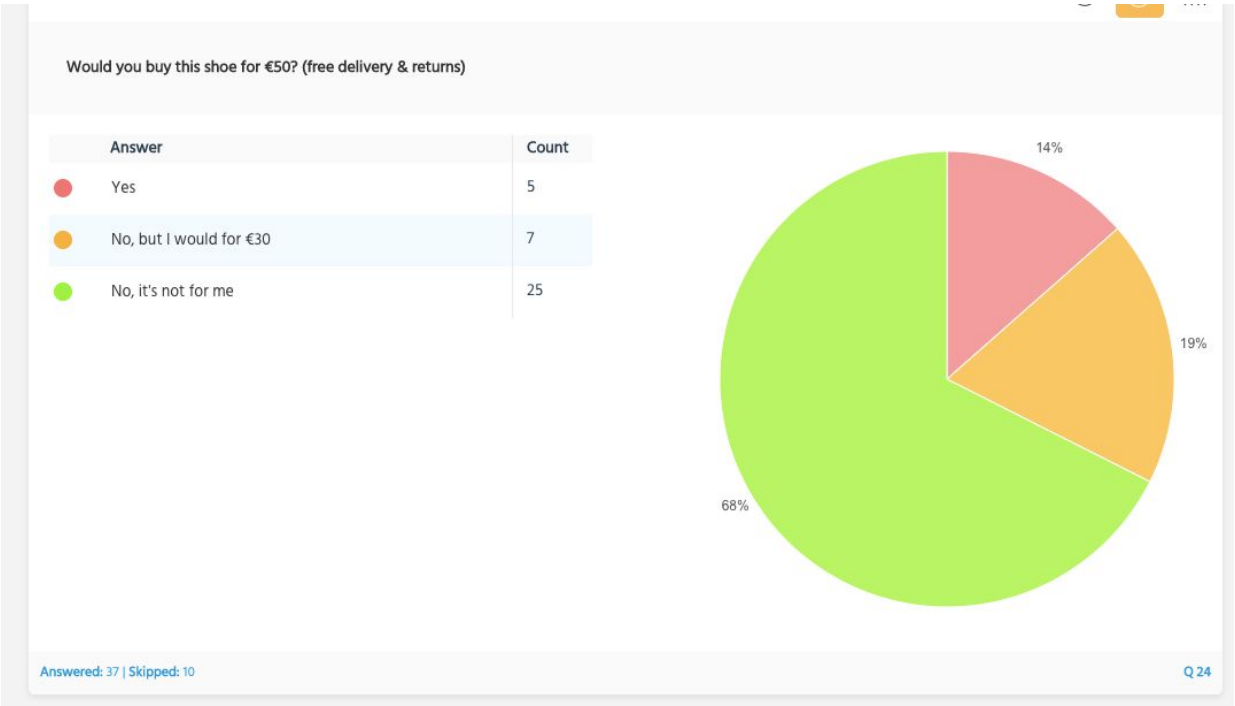
35% would buy


Would you buy this shoe for €50?
Answer
Count
Yes
7
No, but I would for €30
6
No, it's not for me
25
18%
16%
66%
Answered: 38 | Skipped: 9
Q 4

34% would buy


Would you buy this shoe for €80? (free delivery & returns)
Answer
Count
Yes
7
No, but I would for €60
5
No, it's not for me
26
18%
13%
68%
Answered: 38 | Skipped: 9
Q7

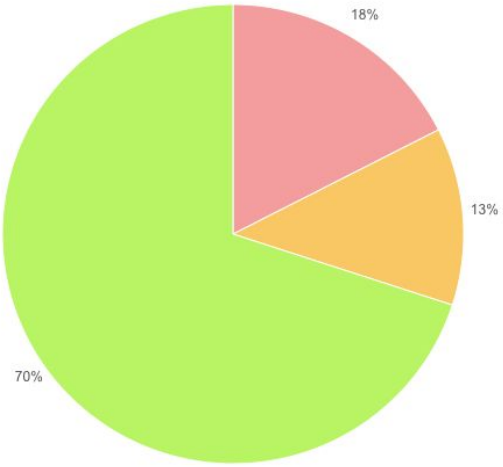
32% would buy


Would you buy this shoe for €50? (free delivery & returns)
Answer
Count
Yes
5
No, but I would for €30
7
No, it's not for me
25
14%
19%
68%
Answered: 37 | Skipped: 10
Q 24

32% would buy

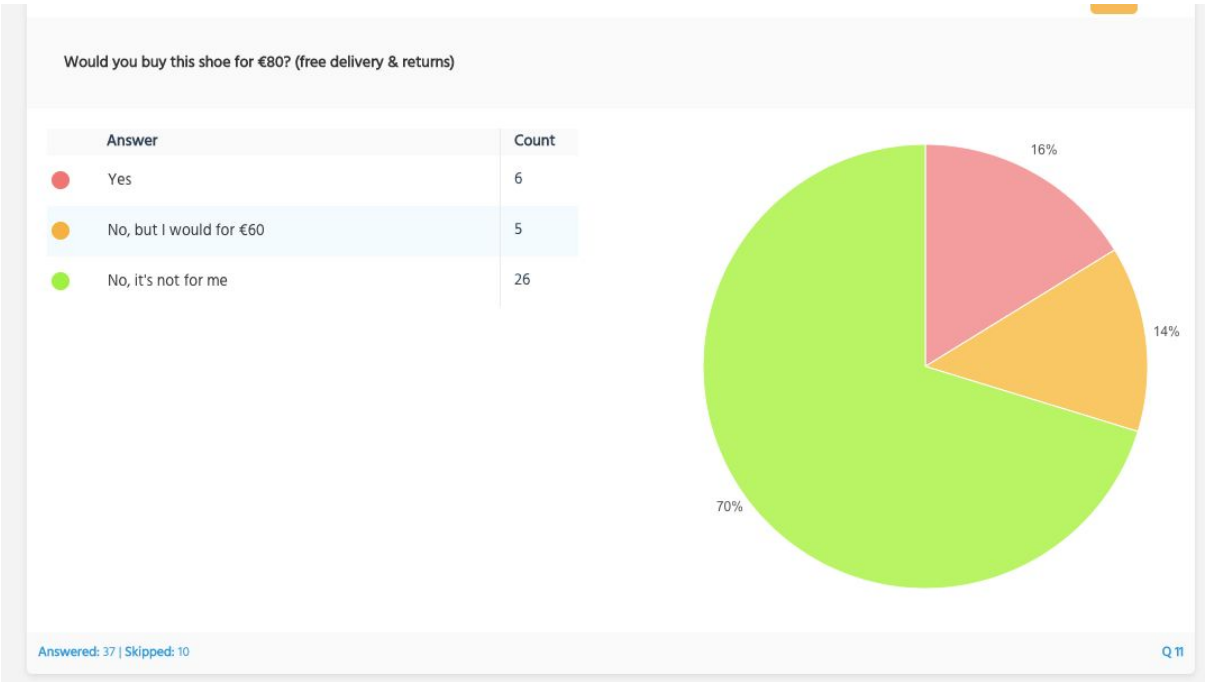
Would you buy this shoe online for €50? (free delivery & returns)

Answer	Count
Yes	7
No, but I would for €30	5
No, it's not for me	28

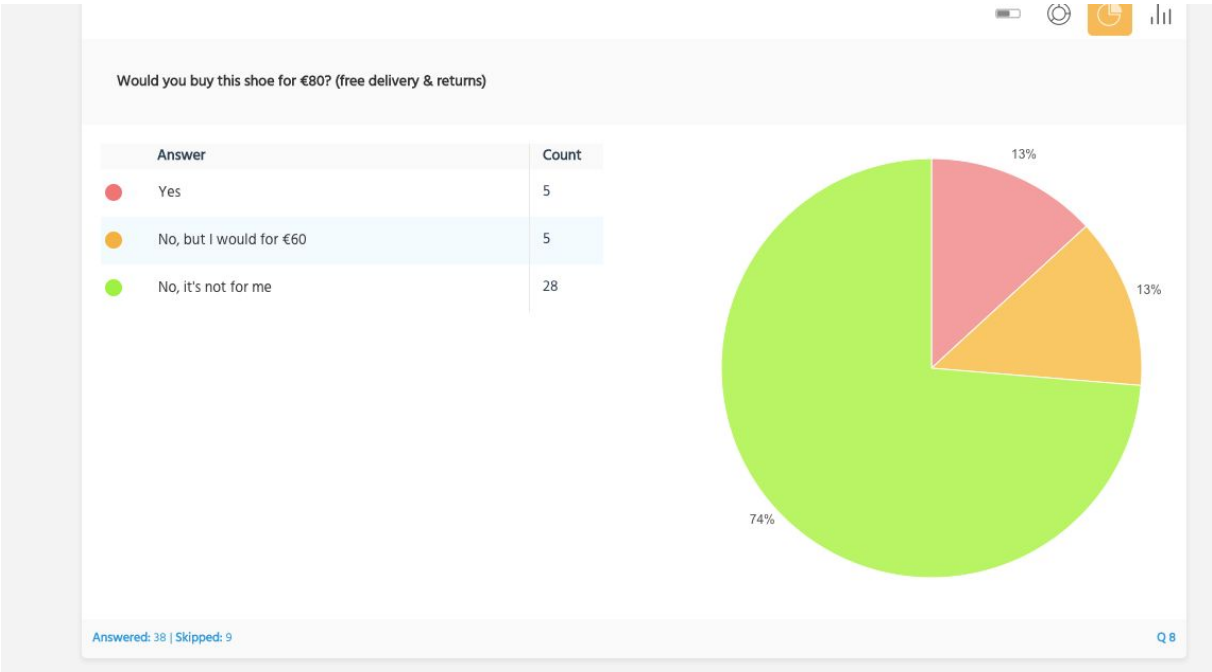


Answered: 40 | Skipped: 7 Q 3

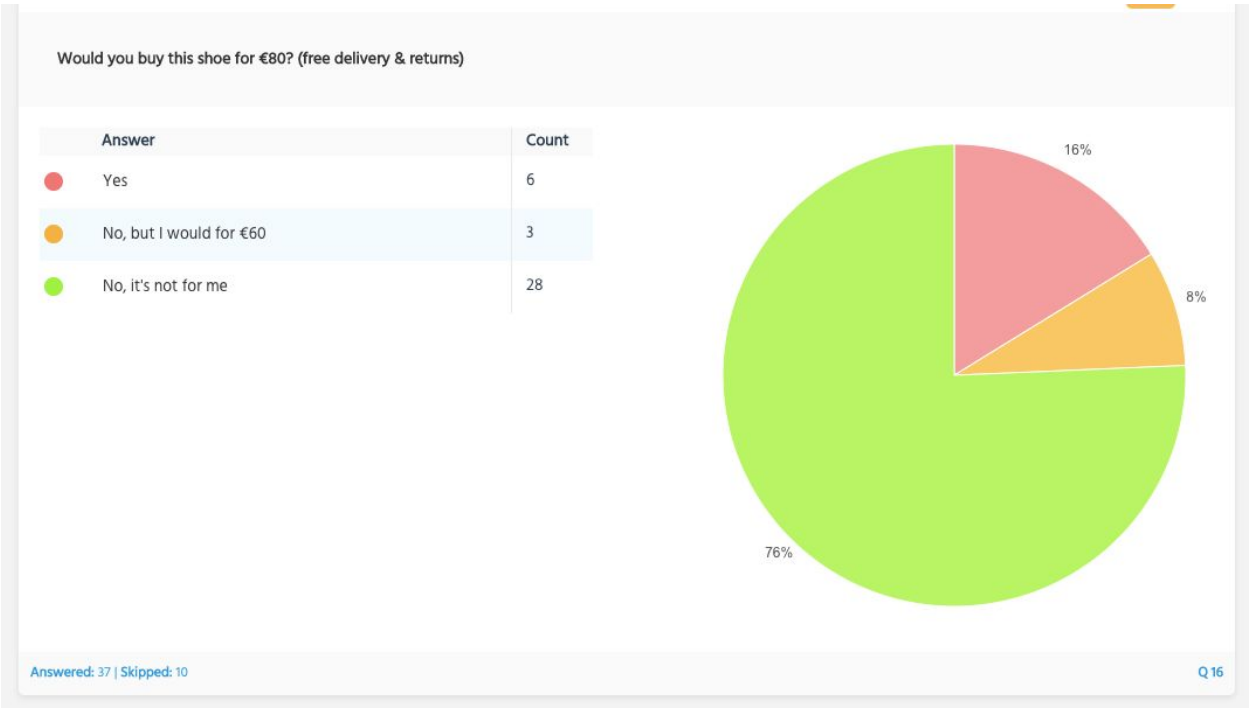
31% would buy


Would you buy this shoe for €80? (free delivery & returns)
Answer
Count
Yes
6
No, but I would for €60
5
No, it's not for me
26
16%
14%
70%
Answered: 37 | Skipped: 10
Q 11

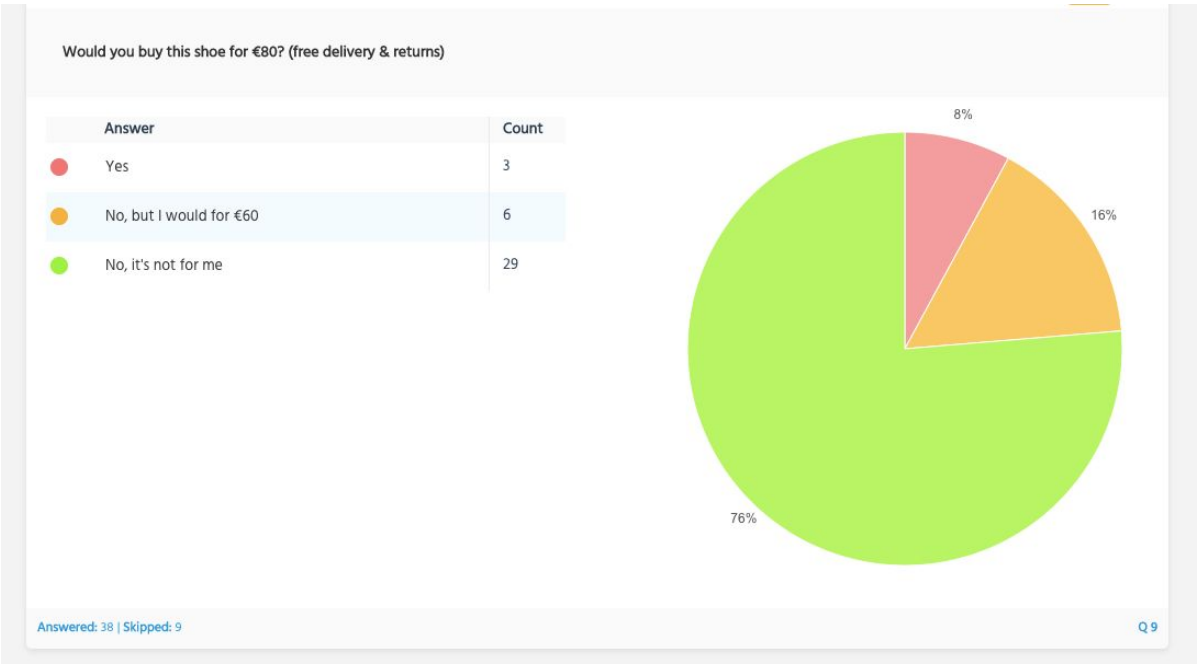
30% would buy


Would you buy this shoe for €80? (free delivery & returns)
Answer
Count
Yes
5
No, but I would for €60
5
No, it's not for me
28
13%
13%
74%
Answered: 38 | Skipped: 9
Q 8

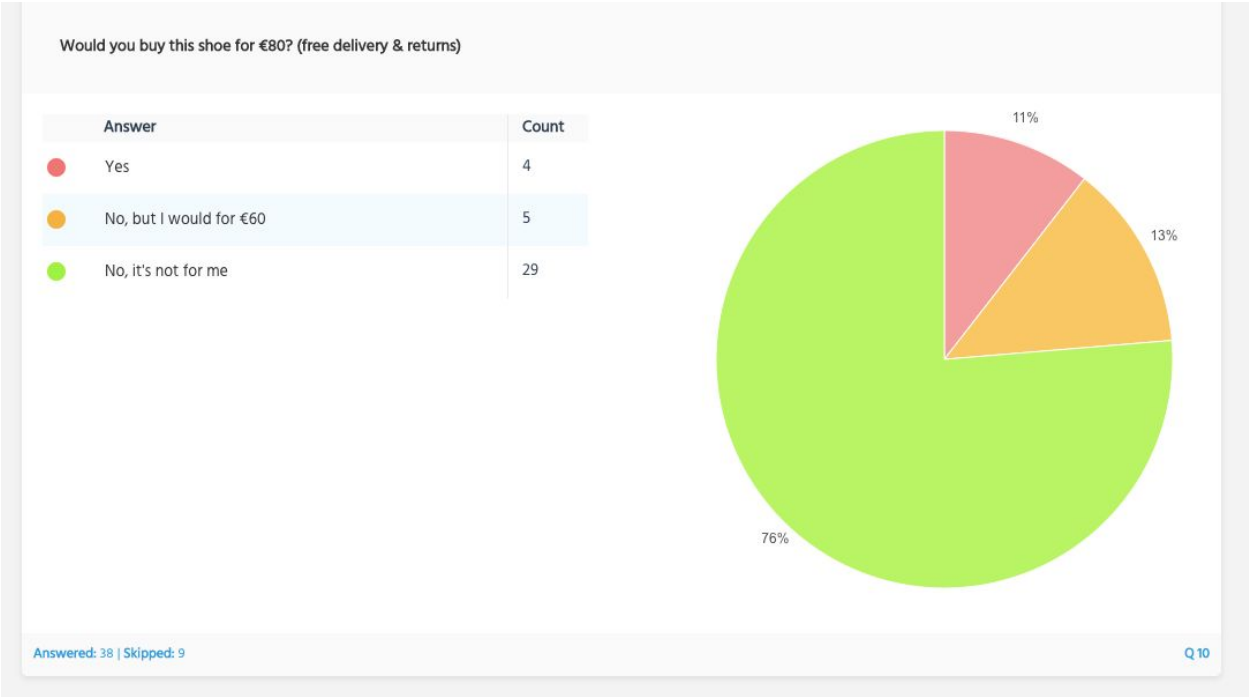
26% would buy


Would you buy this shoe for €80? (free delivery & returns)
Answer
Count
Yes
6
No, but I would for €60
3
No, it's not for me
28
16%
8%
76%
Answered: 37 | Skipped: 10
Q 16

24% would buy


Would you buy this shoe for €80? (free delivery & returns)
Answer
Count
Yes
3
No, but I would for €60
6
No, it's not for me
29
8%
16%
76%
Answered: 38 | Skipped: 9
Q 9

24% would buy


Would you buy this shoe for €80? (free delivery & returns)
Answer
Count
Yes
4
No, but I would for €60
5
No, it's not for me
29
11%
13%
76%
Answered: 38 | Skipped: 9
Q 10

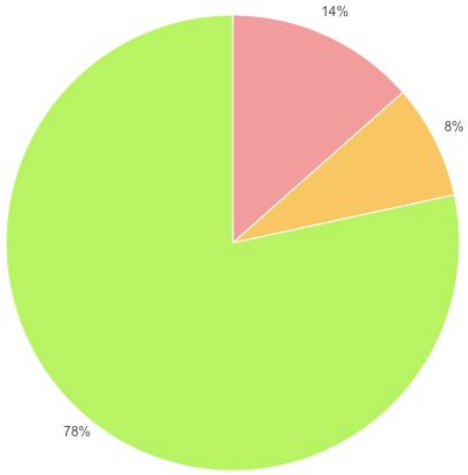
24% would buy


Would you buy this shoe online for €80? (free delivery & returns)
Answer
Count
Yes
8
No, but I would for €60
1
No, it's not for me
28
22%
3%
76%
Answered: 37 | Skipped: 10
Q 19

24% would buy

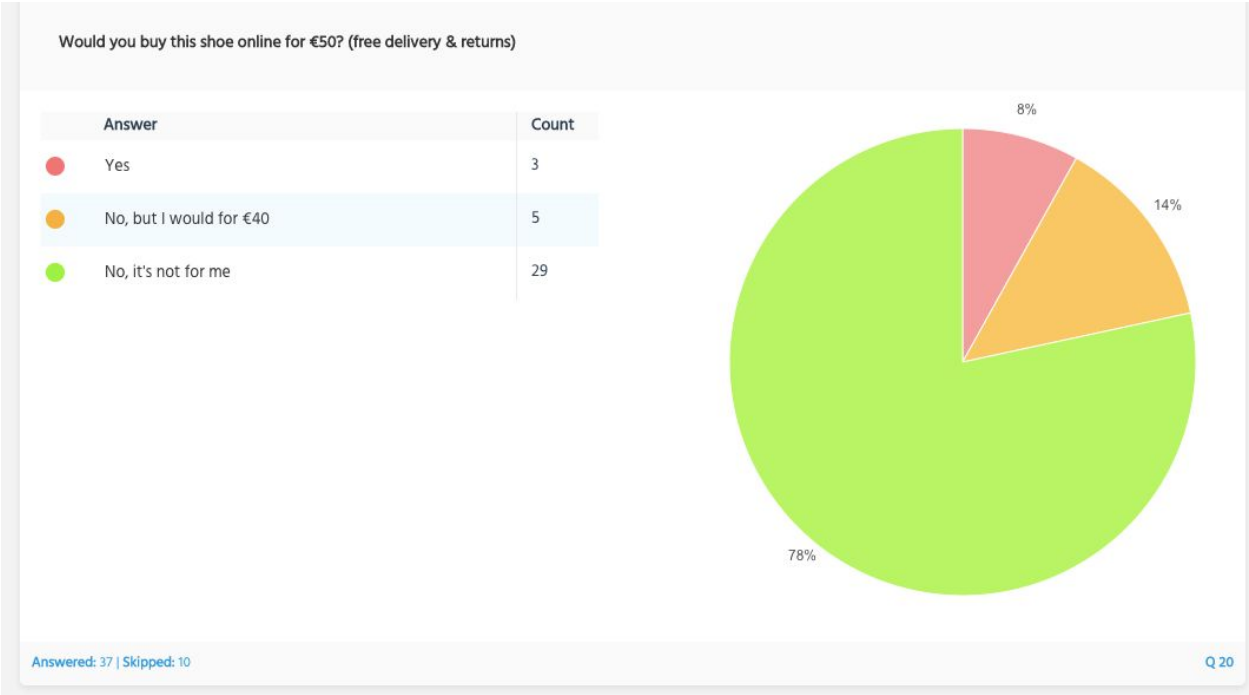
Would you buy this shoe for €80? (free delivery & returns)

Answer	Count
Yes	5
No, but I would for €60	3
No, it's not for me	29

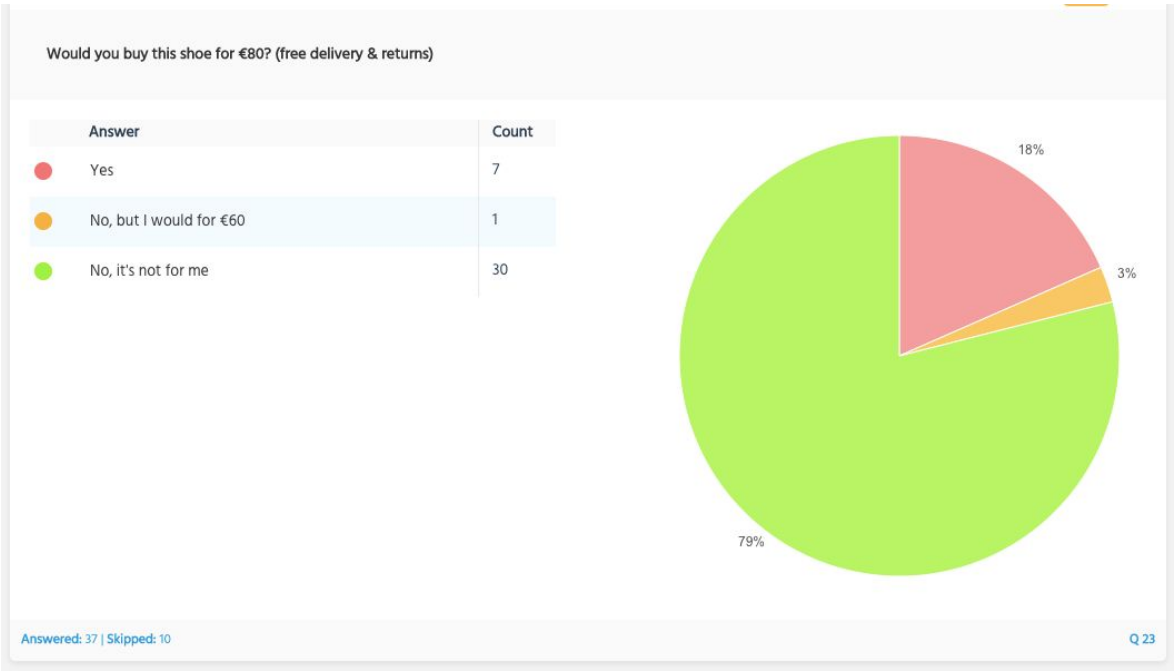


Answered: 37 | Skipped: 10 Q 22

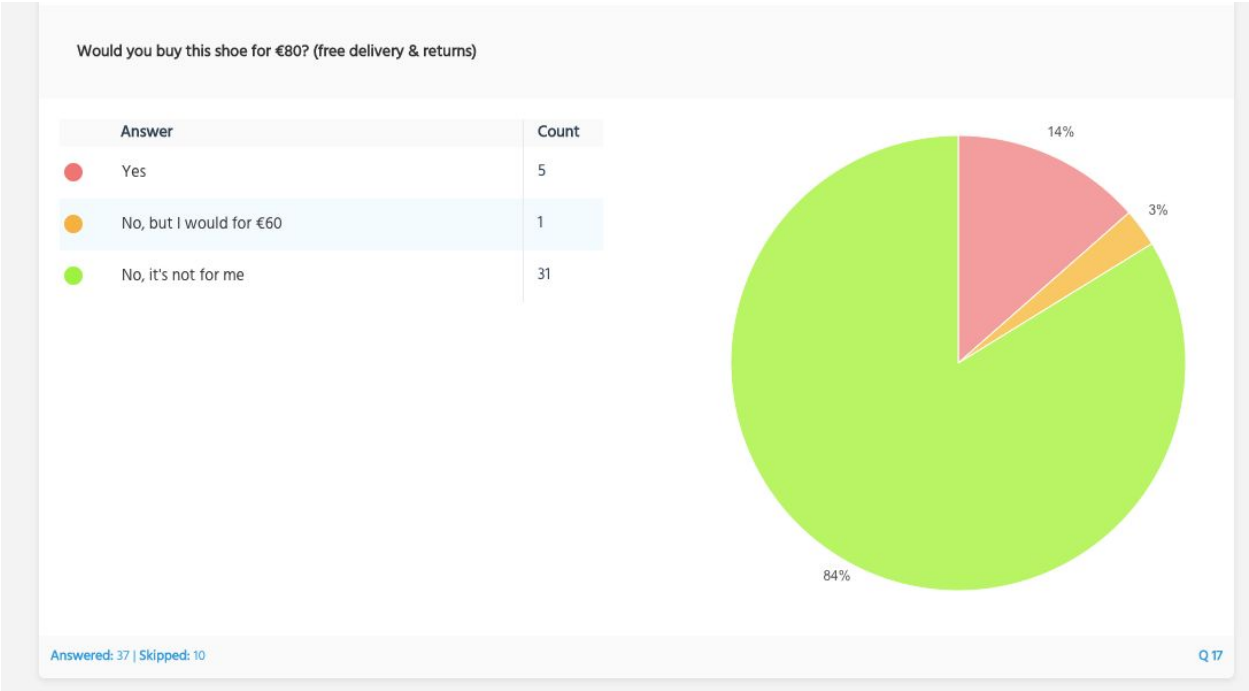
22% would buy


Would you buy this shoe online for €50? (free delivery & returns)
Answer
Count
Yes
3
No, but I would for €40
5
No, it's not for me
29
8%
14%
78%
Answered: 37 | Skipped: 10
Q 20

22% would buy


Would you buy this shoe for €80? (free delivery & returns)
Answer
Count
Yes
7
No, but I would for €60
1
No, it's not for me
30
18%
3%
79%
Answered: 37 | Skipped: 10
Q 23

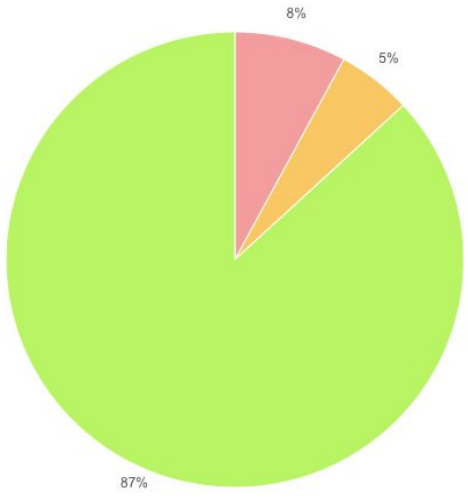
21% would buy


Would you buy this shoe for €80? (free delivery & returns)
Answer
Count
Yes
5
No, but I would for €60
1
No, it's not for me
31
14%
3%
84%
Answered: 37 | Skipped: 10
Q 17

16% would buy

Would you buy this shoe for €80? (free delivery & returns)

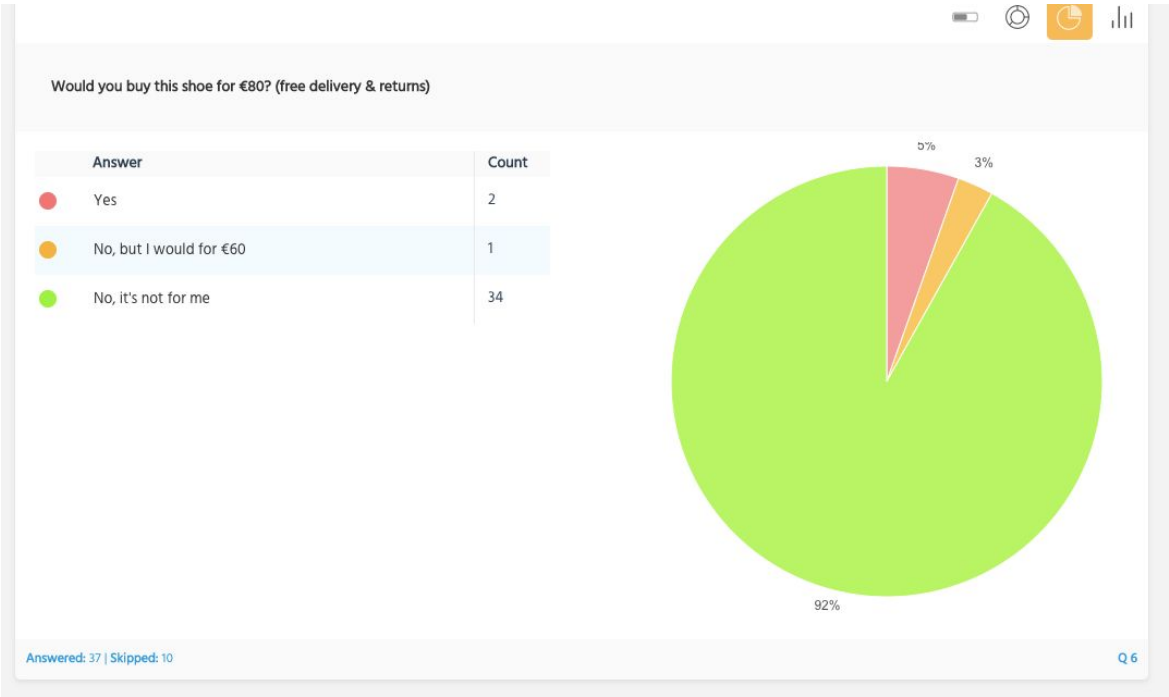
Answer	Count
Yes	3
No, but I would for €60	2
No, it's not for me	33



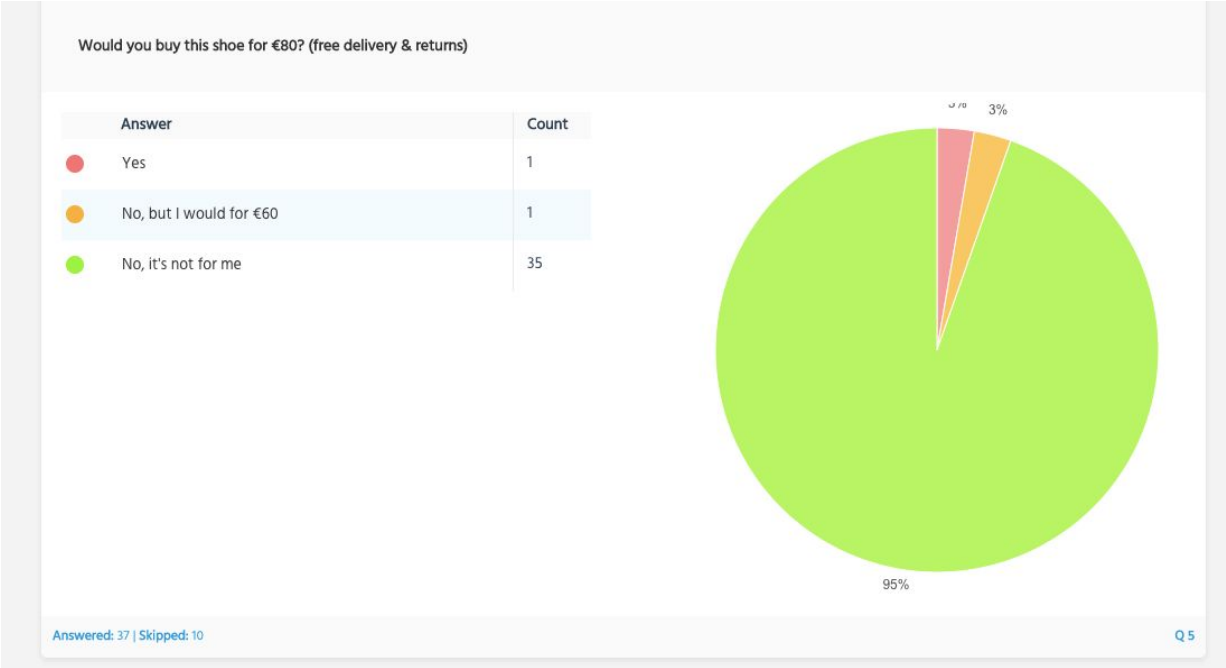
Answered: 38 | Skipped: 9

Q 12

13% would buy


Would you buy this shoe for €80? (free delivery & returns)
Answer
Count
Yes
2
No, but I would for €60
1
No, it's not for me
34
5%
3%
92%
Answered: 37 | Skipped: 10
Q 6

8% would buy

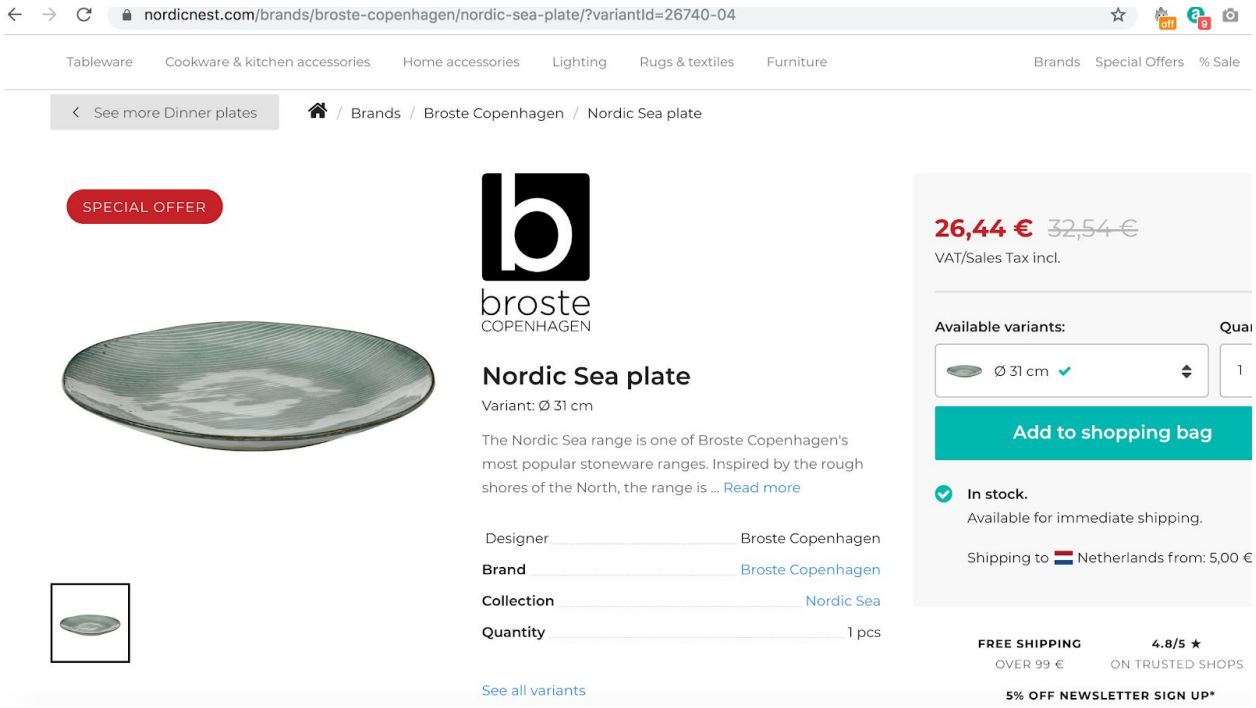

Would you buy this shoe for €80? (free delivery & returns)
Answer
Count
Yes
1
No, but I would for €60
1
No, it's not for me
35
3%
95%
Answered: 37 | Skipped: 10
Q 5

5% would buy

Appendix 6: Artisanal Plates online benchmark

In order to determine the initial price and demand for artisanal plates in the EU. This proved to be a difficult and inexact analysis, since there were not a lot of products sold in the EU similar to the artisanal plates described in Appendix 1.

The procedure for this benchmark was to research on the main EU websites for similar looking plates and register their prices.



fonq.nl/product/serax-pure-rond-bord-34-cm/113110/

fonQ

Zoek naar stoelen, verlichting, vloerkleden & meer...

Account

‹ **Terug naar borden** | Koken & tafelen › Servies › Borden › Serax Pure Rond Bord Ø 34 cm

Serax Pure Rond Bord Ø 34 cm

Serax (7)

~~€ 49,10~~ (adviesprijs)

€ 46,50 -5%

Je bespaart: € 2,60

Verkoop door fonQ

Maat

Large

Kleur

Grijs

etsy.com/listing/678531284/large-black-plate-handmade-ceramic-plate

KariCeramics ★★★★★ (219)

Large black plate | handmade ceramic plate | stoneware plates | organic dinnerware | rustic plates | tableware

€74.80

VAT included (where applicable)

Free shipping

Primary color

Select a color

Quantity

1

Add to cart

Other people want this. 14 people have this in their carts right now.

Item details

< See more Dinner plates

Brands / Broste Copenhagen / Nordic sea plate 4-pack

SPECIAL OFFER

broste COPENHAGEN

Nordic sea plate 4-pack

Variant: Ø 31 cm

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