Business Process Analysis of Exporting and Importing Few Specific Products

Import of polymers of ethylene in primary forms

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Abstract

This study aims to comprehensively assess both the formal and informal procedures associated with the import process of a specific set of products. In this analysis, ECES has employed the Business Process Analysis (BPA) Model issued by the UN Centre for Trade Facilitation and Electronic Business (UN/CEFACT). Notably, this marks the first time in Egypt that a globally standardized modeling language has been used, enabling a comparative evaluation of Egypt's import processes on a global scale. Specifically, the study delves into the import process of polymers of ethylene, in primary forms, focusing on products categorized under HS Code 3901. This analysis covers document requirements, the time required to complete various procedures, and the involved entities. To gather these insights, ECES conducted interviews with different stakeholders for each specific product and reviewed pertinent regulations and studies. International experiences were also studied to benchmark Egypt's trade process against global standards and extract valuable lessons for enhancing the Egyptian trade process. The study comprises two main parts. Part I examines the current state of the detailed trade process pertaining to the reviewed products, labeled as the "As Is" situation. Part II presents scenarios for improving this process, the "To Be" scenario, along with recommended corrective actions based on stakeholders' input, international best practices, and ECES' analysis.

ملخص

تهدف هذه الدراسة إلى تحليل جميع الإجراءات الرسمية وغير الرسمية المتعلقة باستيراد بعض المنتجات المحددة، بما في ذلك المستندات المطلوبة ذات الصلة، والمدة التي تستغرقها الإجراءات (رسميا وفعليا)، والأطراف المعنية؛ حيث طبق المركز في دراسته للمنظومة الحالية نموذج توثيق الأعمال التجارية (BPA Model) الصادر عن منظمة الأمم المتحدة لتيسير التجارة (UN/CEFACT)، مستخدما، لأول مرة في مصر، لغة نمذجة موحدة عالميا بما يسمح بمقارنة الوضع في مصر مع باقي دول العالم. وتحديدا، تختص هذه الدراسة بتحليل إجراءات استيراد بوليميرات الإيثيلين بصورتها الأولية بالتركيز على منتجات رمز النظام المنسق HS Code 3901، بما في ذلك المستندات المطلوبة ذات الصلة، والمدة التي تستغرقها الإجراءات (رسميا وفعليا)، والأطراف المعنية؛ حيث يعتمد التحليل على مقابلات مع مختلف أصحاب المصلحة/ الأطراف المعنية بكل منتج، بالإضافة إلى مراجعة اللوائح والدراسات المختلفة ذات الصلة، ودراسة العديد من الخبرات الدولية من أجل مقارنة العمليات والإجراءات التجارية المتبعة في هذه الدول، مع تلك المتبعة في مصر، والاستفادة منها في تحسين الإجراءات ذات الصلة في مصر. وتتكون الدراسة من جزئين رئيسيين؛ حيث يستعرض الجزء الأول الوضع الحالي للإجراءات والعمليات التجارية المتعلقة بالمنتجات محل الدراسة، بينما يطرح الجزء الثاني بعض السيناريوهات المقترحة لتحسين الإجراءات، مع اقتراح حلول لها بناء على آراء الأطراف المعنية، وفي ضوء التجارب الدولية وتحليل الخبراء في المركز.

Import of Polymers of Ethylene, in Primary Forms
(HS Code 3901)

Part I: As Is Situation

Introduction

This study focuses on analyzing trade processes of importing polymers of ethylene, in primary forms, using Business Process Analysis (BPA) approach. The analysis is divided into two main parts. Part I analyzes the "As Is" situation and consists of four sections: 1) Overall description of the manufacture of chemical and chemical products, including industry structure; 2) the narrative for the production and trade processes in polymers of ethylene, in primary forms sector (HS Code 3901); 3) detailed documentation of import processes associated with the specific product of focus (HS Code: 3901); and 4) time procedure chart of polymers of ethylene imports to Egypt. Part II offers proposed scenarios for improving the process ("To Be" Scenario) and includes the methodology of preparing them.

1. Sectoral description: Manufacture of chemical and chemical products industry

The manufacture of chemicals and chemical products industry[1] is considered a strategic industry as it has strong backward and forward linkages with different industries. It includes a variety of different industries: Organic and non-organic chemicals, fertilizers, pharmaceutical products, tanning extracts, rubbers, and plastics and their products.

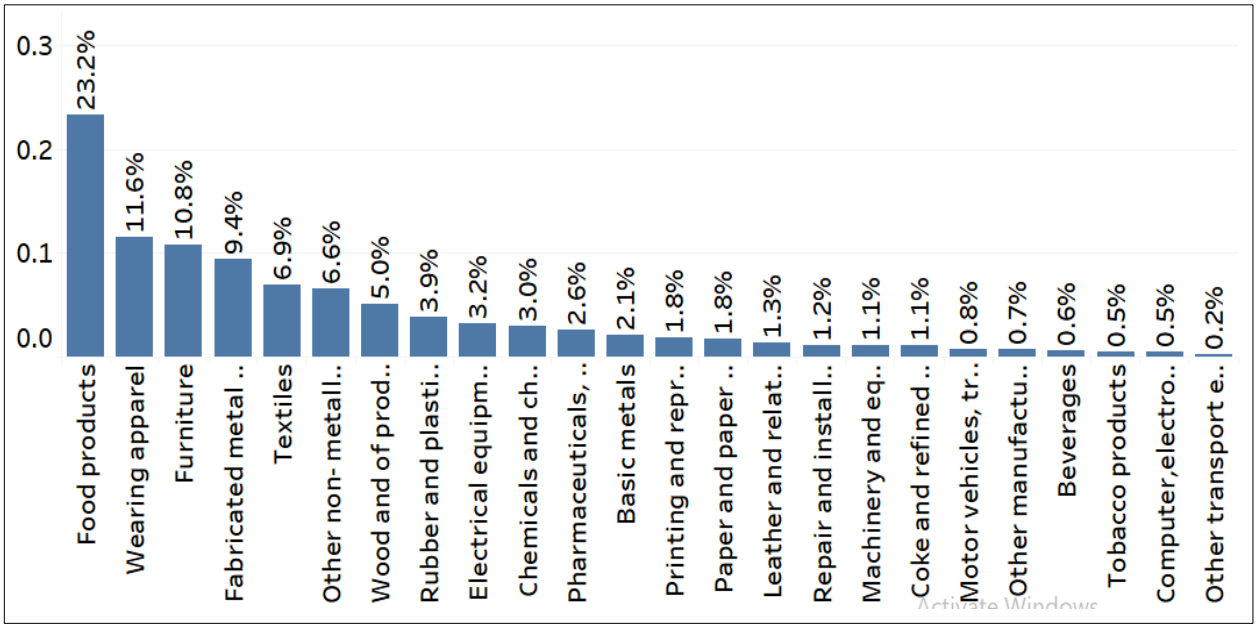
The description starts with a detailed overview of chemical industry (ISIC 20) as a whole and then proceeds with specific information about the manufacture of basic chemicals, fertilizers and nitrogen compounds, plastics, and synthetic rubber in primary forms (ISIC 201), **which include polymers of ethylene, in primary forms (HS Code 3901)**. This description includes the sector's latest available enterprise and employment distributions in all Egyptian governorates and what they imply, then the sector's trade performance, and major challenges faced, particularly following the COVID-19 pandemic.

[1] Chemical industry includes all HS codes from 28 until 40 according to the 2-digit Harmonized System (HS), while its code is 20 according to the 2-digit ISIC classification. The polymers of ethylene belong to basic chemicals, fertilizers and nitrogen compounds, plastics and synthetic rubber in primary forms (ISIC 201); however, it is recorded as HS code 3901 under the plastics industry and its products (HS code 39).

1A. The chemical industry: Enterprise and employment distributions in all Egyptian governorates

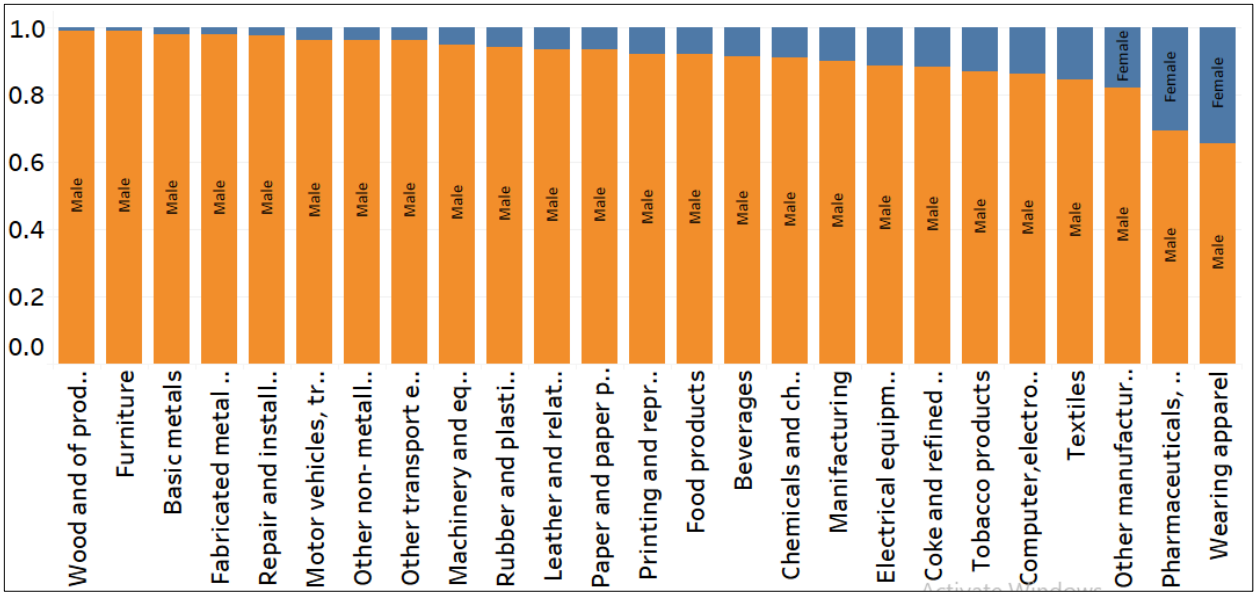
The chemical industry contributes three percent to total employment in the manufacturing sector. Males dominate the motor vehicle industry as shown in Figures 1.1 and 1.2.

Figure 1.1. Ranking of manufacturing industries by % employment (2019)



Source: ECES analysis of CAPMAS' latest statistics on manufacturing industries (2019).

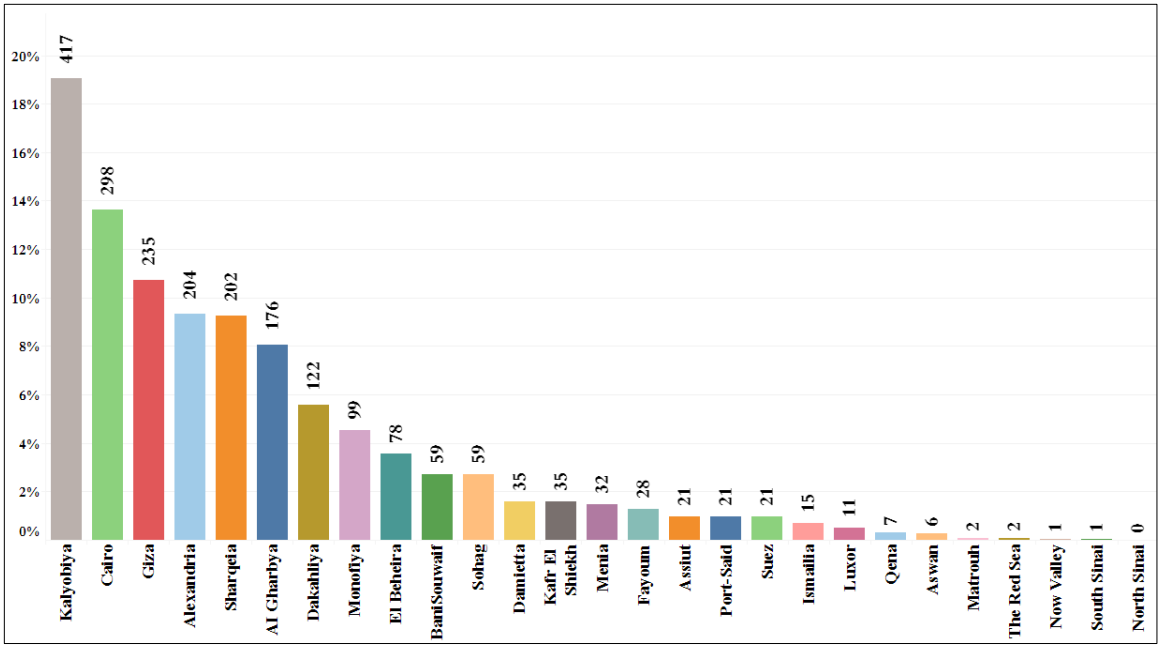
Figure 1.2. Distribution of manufacturing industries employment by gender (females in blue)



Source: ECES analysis of CAPMAS' latest statistics on manufacturing industries (2019).

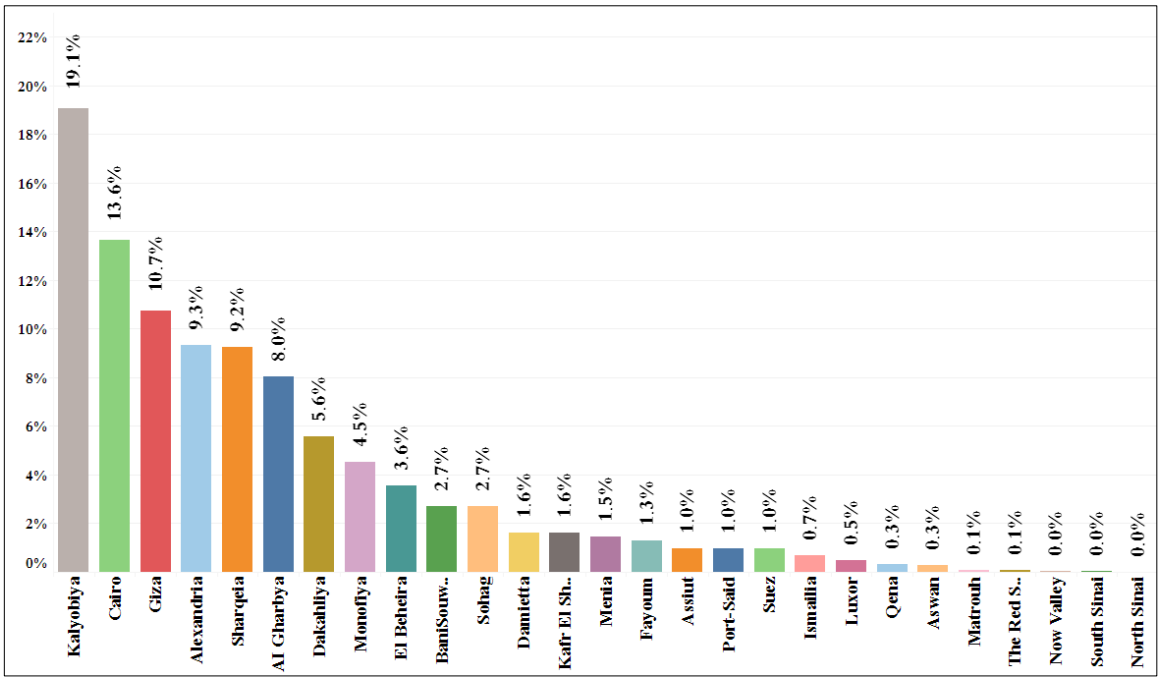
Figures 1.3, 1.4, 1.5 and 1.6 present the distribution of manufacturing chemical and chemical products enterprises and employment in all Egyptian governorates in terms of the number of establishments and workers in each governorate, as well as percentage distribution of both variables. The total number of establishments in all 27 governorates is 2187, with a total employment of 101 thousand. All figures clearly show that chemical industries are highly concentrated in lower Egypt, particularly Greater Cairo, Alexandria, Sharqia and Gharbia, accounting for 70 percent of total enterprises and more than 73 percent of total employment.

Figure 1.3. Total number of manufacturing enterprises of manufacturing chemical and chemical products per governorate



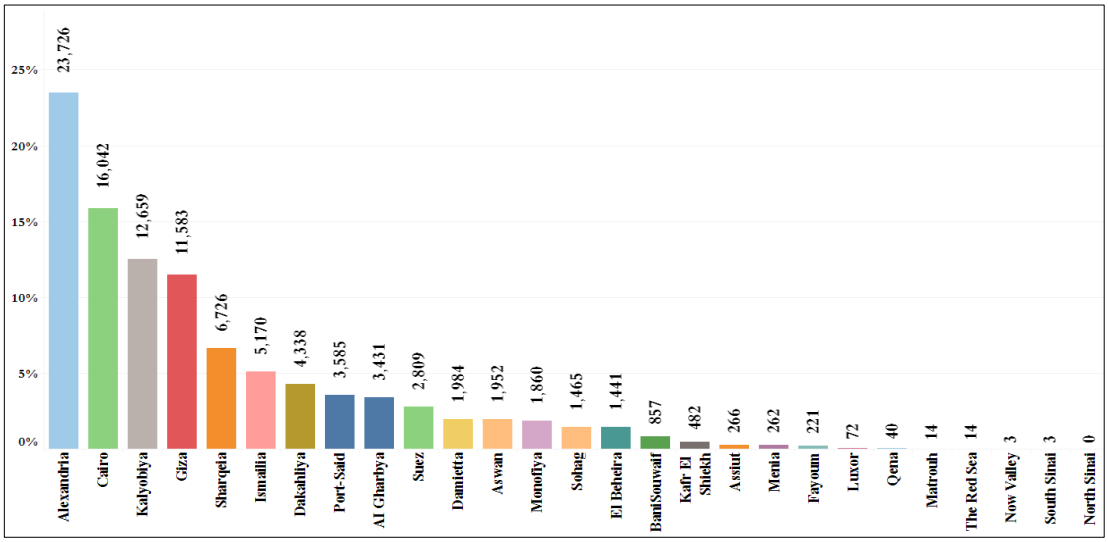
Source: ECES analysis of CAPMAS' latest statistics on manufacturing industries (2019).

Figure 1.4. Percentage distribution of manufacturing enterprises of manufacturing chemical and chemical products per governorate



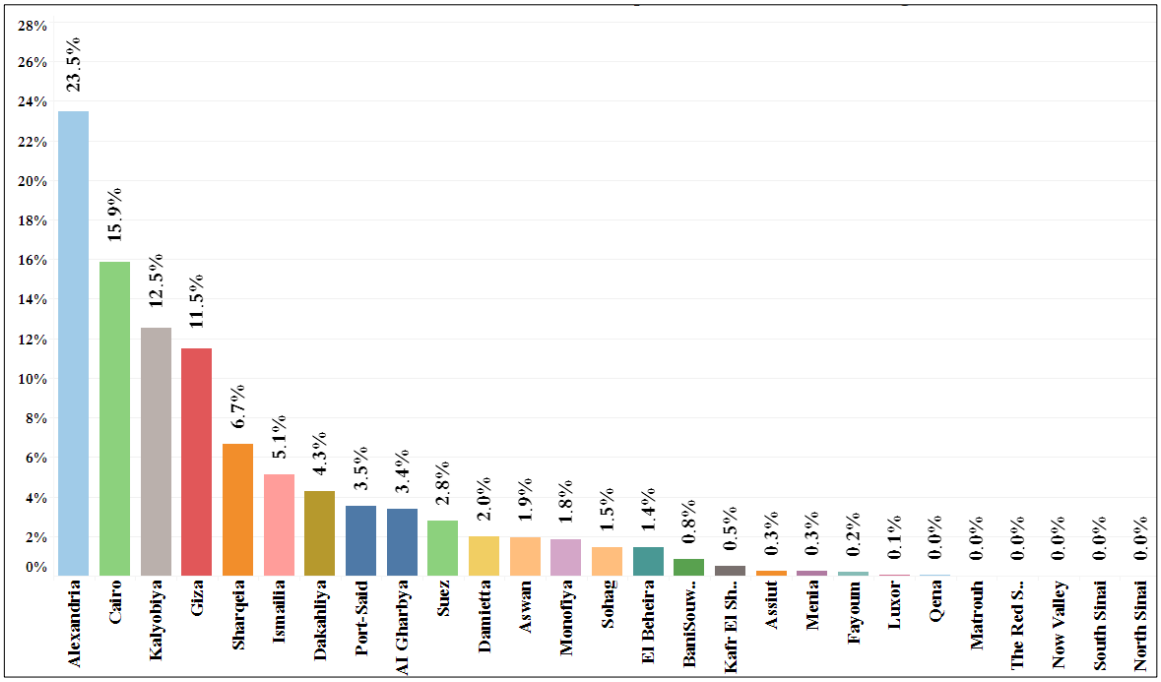
Source: ECES analysis of CAPMAS' latest statistics on manufacturing industries (2019).

Figure 1.5. Total number of employees in manufacturing enterprises of chemical and chemical products per governorate



Source: ECES analysis of CAPMAS' latest statistics on manufacturing industries (2019).

Figure 1.6. Percentage distribution of manufacturing enterprises of chemical and chemical products employees per governorate



Source: ECES analysis of CAPMAS' latest statistics on manufacturing industries (2019).

Table 1.1 and subsequent pie charts below divide governorates into four groups as per the level of concentration of enterprises and employment. Group A governorates account for 33 percent of total enterprises and 28 percent of total employment. The Group consists of two governorates representing a third of enterprises and employment, which are Kalyubia and Cairo. Group B has a higher concentration of manufacturing chemical industries enterprises and employment, accounting for almost 43 percent of all enterprises and almost have total employment. It includes Giza, Alexandria, Sharqia, Al-Gharbya, and Dakahlyia.

Group C, with an even lower concentration of 22 percent of total enterprises and 15 percent of total employment, is mostly located around Monofiya, El Beheira, Bani Souwaif, Sohag, Damietta, Kafr El Shiekh, Menia, Fayoum, Assiut, Port-Said, and Suez. Group D is mostly located in Upper Egypt, and has the lowest number of enterprises and employment.

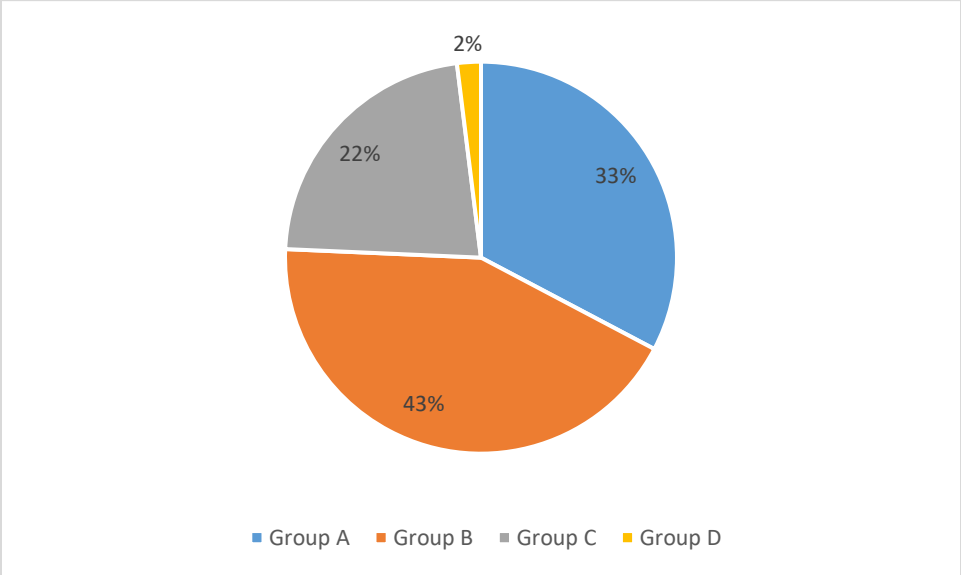
Groups A, B and C combined account for 98 percent of total enterprises and 93 percent of total employment. Group D accounts for no more than two percent of total enterprises, and 7 percent of total employment, mostly comprising Upper Egypt and border governorates.

Table 1.1. Chemical industry: Distribution of enterprises and employment per groups of governorates

Governorate Groups	Establishments' Dispersion	Workers' Dispersion
Group A: Kalyubia, Cairo	33%	28%
Group B: Giza, Alexandria, Sharqia, Al-Gharbya, Dakahlyia	43%	49%
Group C: Monufia, El Beheira, Bani Souwaif, Sohag, Damietta, Kafr El Sheikh, Menia, Fayoum Assiut, Port-Said, Suez	22%	15%
Group D: Ismailia, Luxor, Qena, Aswan, Matrouh, the Red Sea	2%	7%

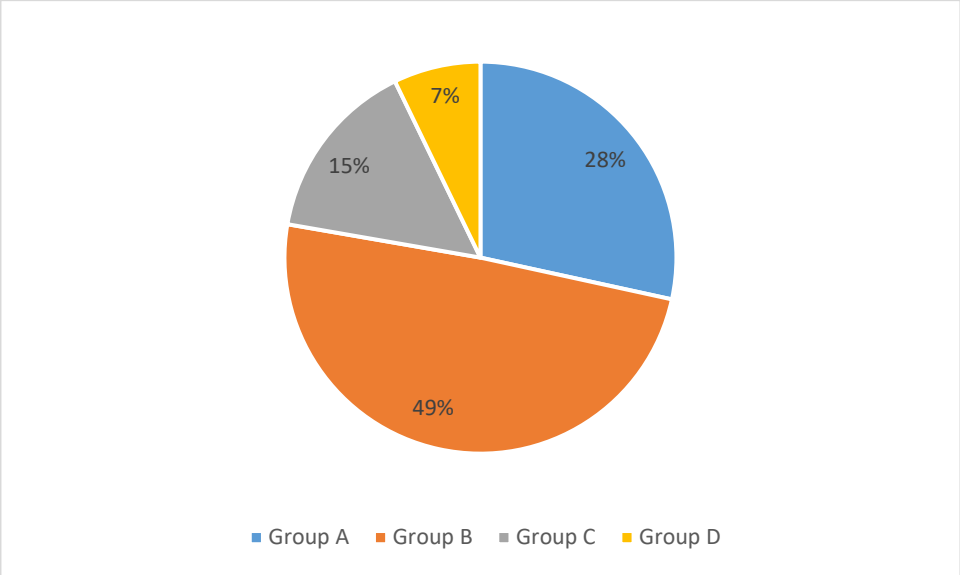
Source: ECES analysis of CAPMAS' latest statistics on manufacturing industries (2019).

Figure 1.7. Total manufacturing enterprises of chemical and chemical products: Establishments' dispersion



Source: ECES analysis of CAPMAS' latest statistics on manufacturing industries (2019).

Figure 1.8. Total manufacturing enterprises of chemical and chemical products: Workers' dispersion

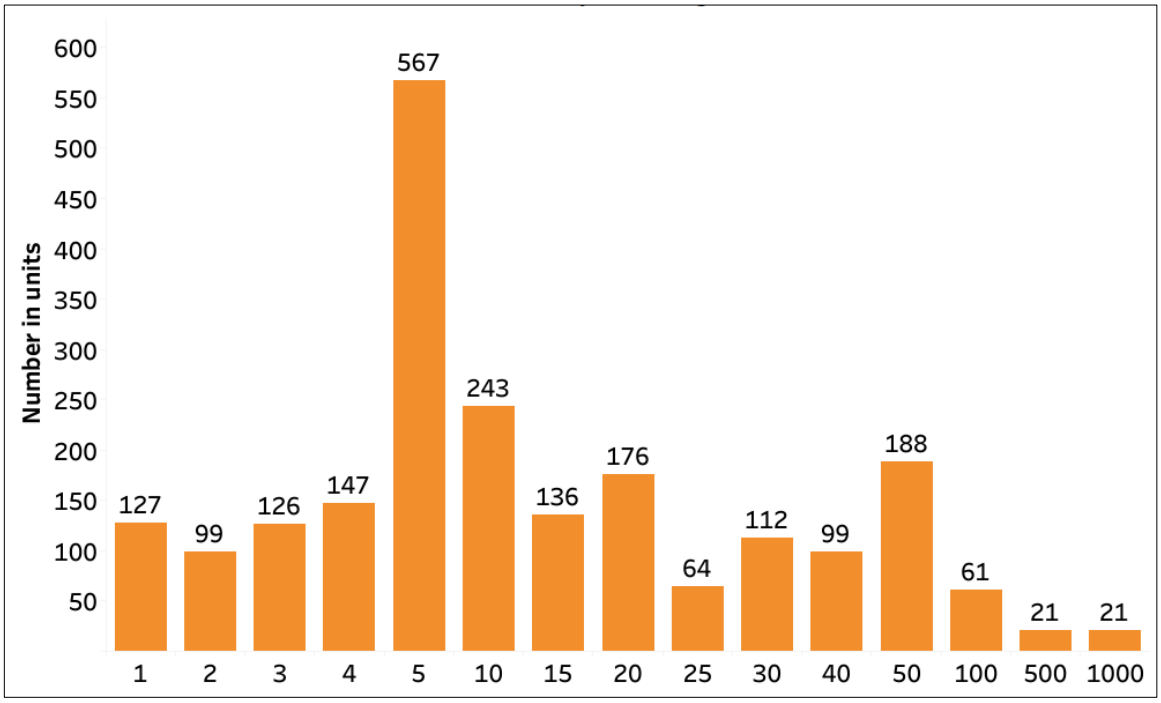


Source: ECES analysis of CAPMAS' latest statistics on manufacturing industries (2019).

The size structure of enterprises measured by the number of workers

Figure 1.9 presents the distribution of enterprises by size, while Figure 1.10 shows the same distribution in percentage. The predominance of micro enterprises in the chemical industry is obvious, as employment in micro enterprises accounts for 60 percent of the total, with an average < = 10 workers, and around 35 percent of enterprises employing more than 10 workers and lower than 50 workers.

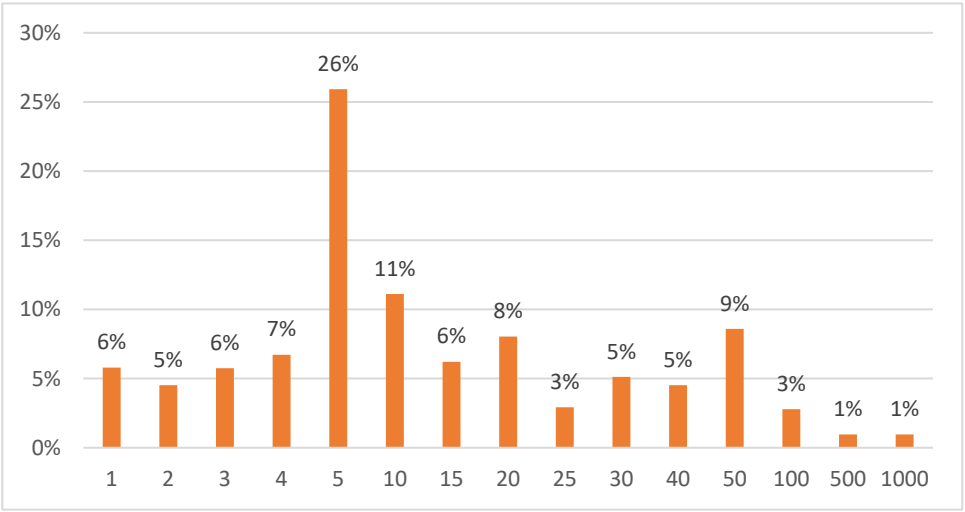
Figure 1.9. Distribution of sector's enterprises by size



Source: ECES analysis of CAPMAS' latest statistics on manufacturing industries (2019).

Figure 1.10. Percentage distribution of the sector's enterprises by size

(*Measured in terms of percentage of workers*)



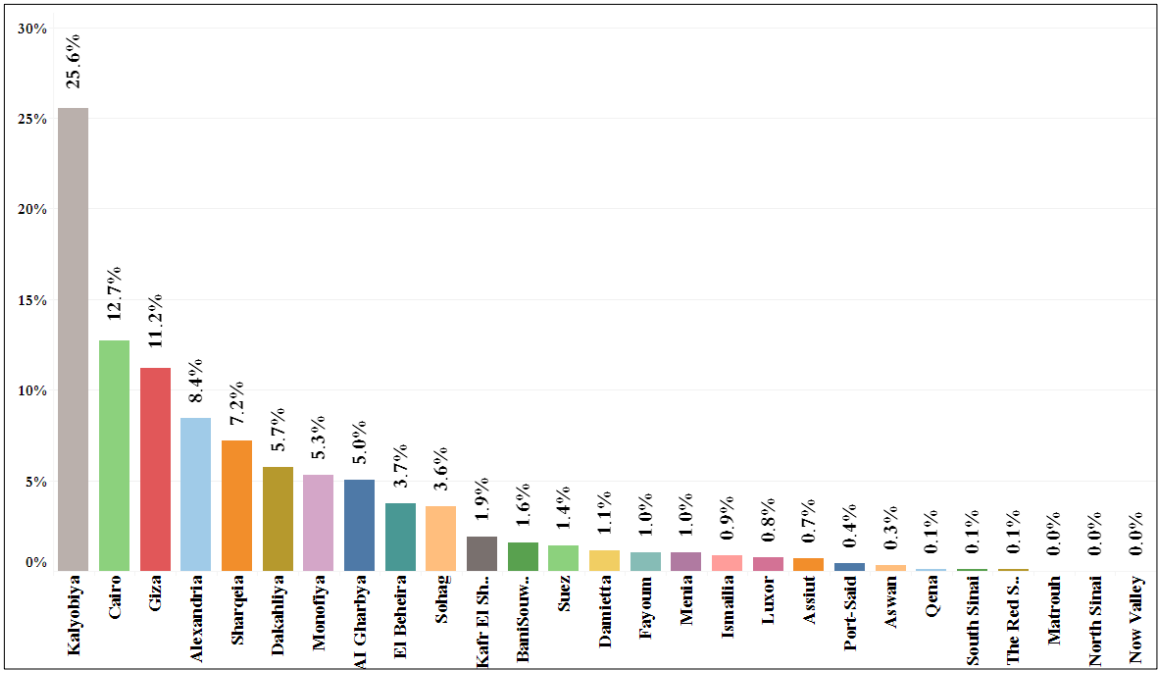
Source: ECES analysis of CAPMAS' latest statistics on manufacturing industries (2019).

1B. The Manufacture of basic chemicals, fertilizers, and nitrogen compounds, plastics, and rubber in primary forms subsector: Enterprise and employment distributions in all Egyptian governorates

Figures 1.11, 1.12, 1.13, and 1.14 show the distribution of basic chemicals, plastics in primary forms subsector enterprises and employment in all Egyptian governorates, in terms of number of establishments and number of workers in each governorate as well as percentage distribution of both variables. The total number of establishments in all 27 governorates is 1150 enterprises, with a total employment of 65 thousand workers.

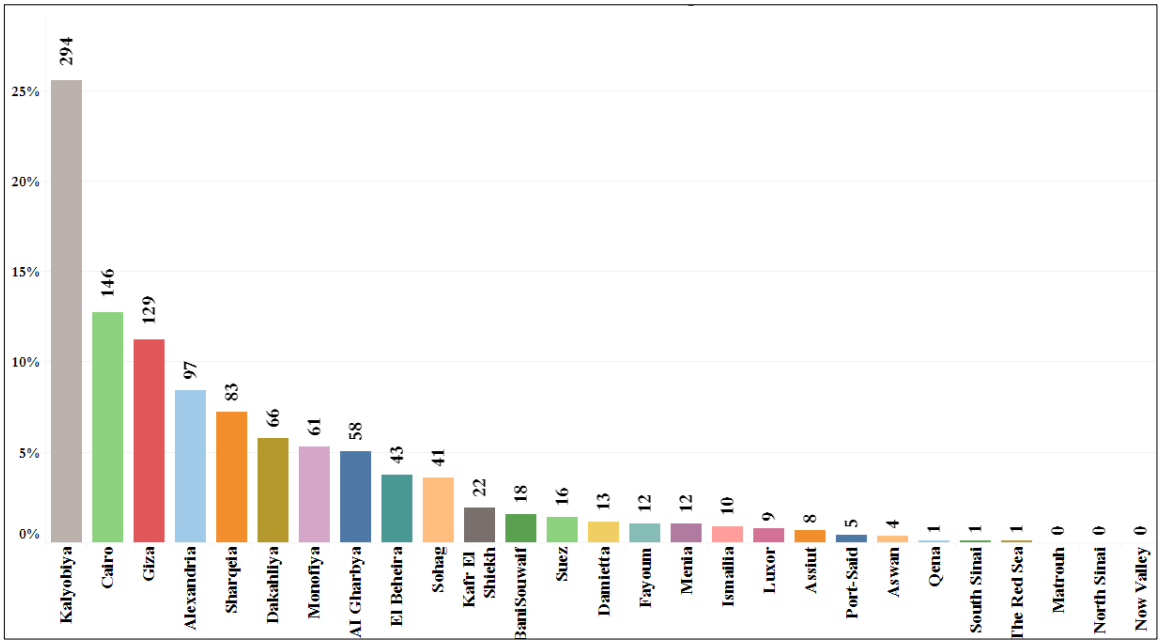
All figures clearly indicate that basic chemicals and plastics in primary forms subsector is concentrated in lower Egypt, averaging 85 percent of total enterprises and 81 percent of total employment. Greater Cairo alone accounts for around half of total enterprises and 43 percent of total employment, followed by Alexandria, which accounts for 8.4 percent of total enterprises and 24 percent of total employment.

Figure 1.11. Percentage distribution of enterprises operating in the manufacture of basic chemicals, plastics, and synthetic rubber in primary forms subsector per governorate



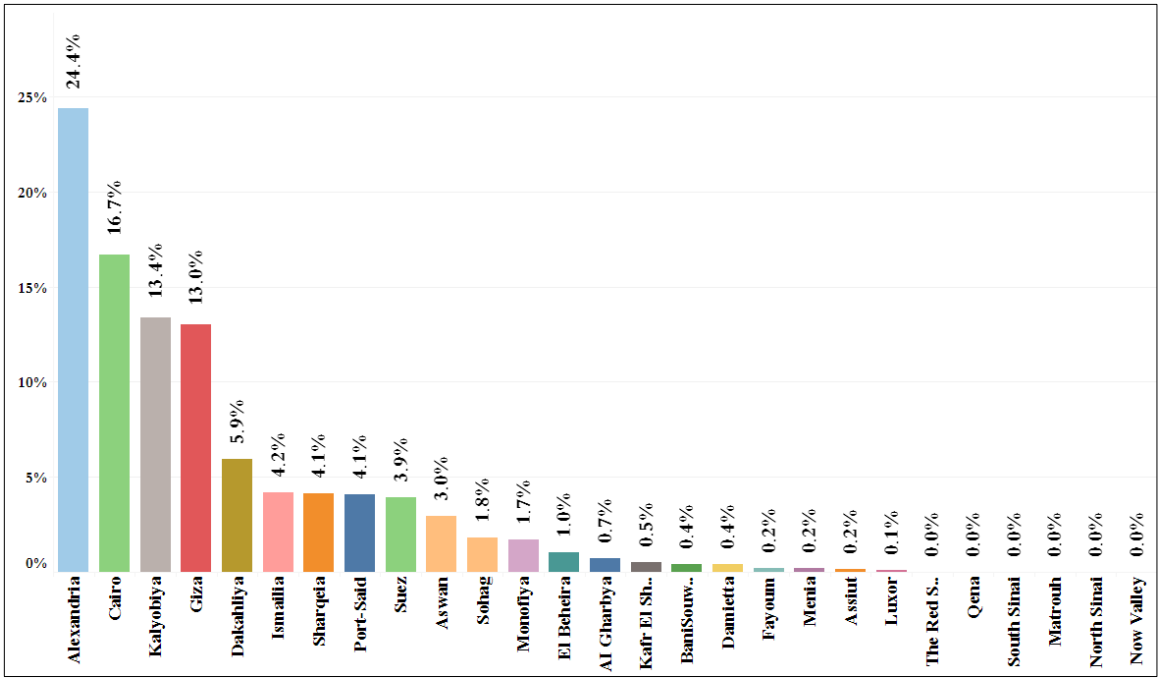
Source: ECES analysis of CAPMAS' latest statistics on manufacturing industries (2019).

Figure 1.12. Total number of enterprises operating in basic chemicals, plastics, and synthetic rubber in primary forms subsector



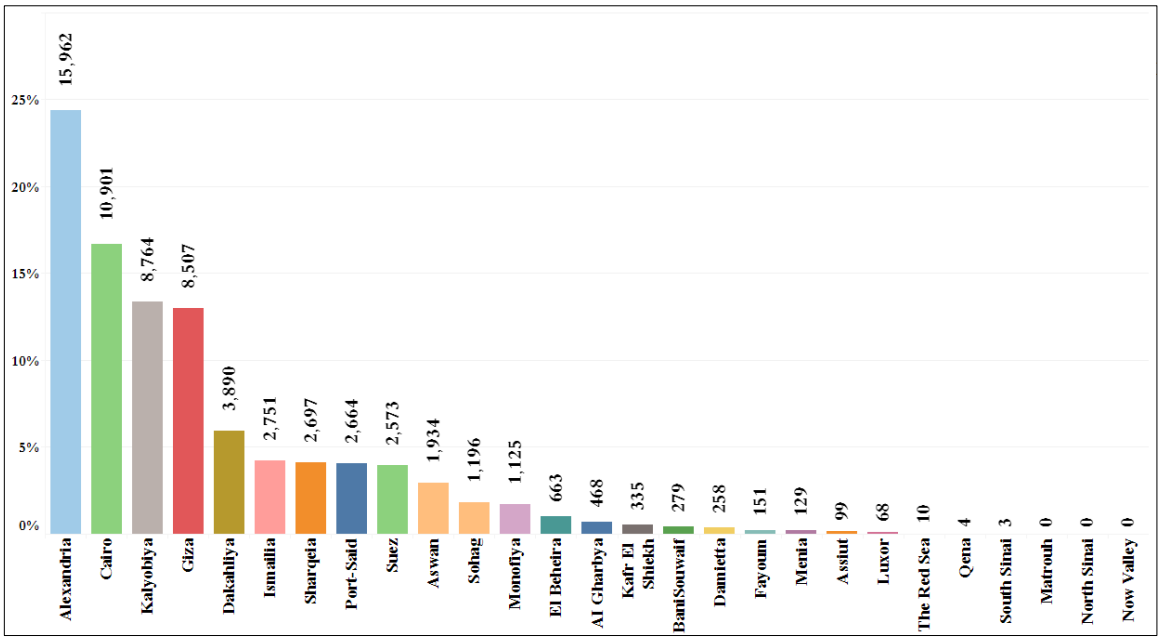
Source: ECES analysis of CAPMAS' latest statistics on manufacturing industries (2019).

Figure 1.13. Percentage distribution of workers in the basic chemicals, plastics, and synthetic rubber in primary forms subsector per governorate



Source: ECES analysis of CAPMAS' latest statistics on manufacturing industries (2019).

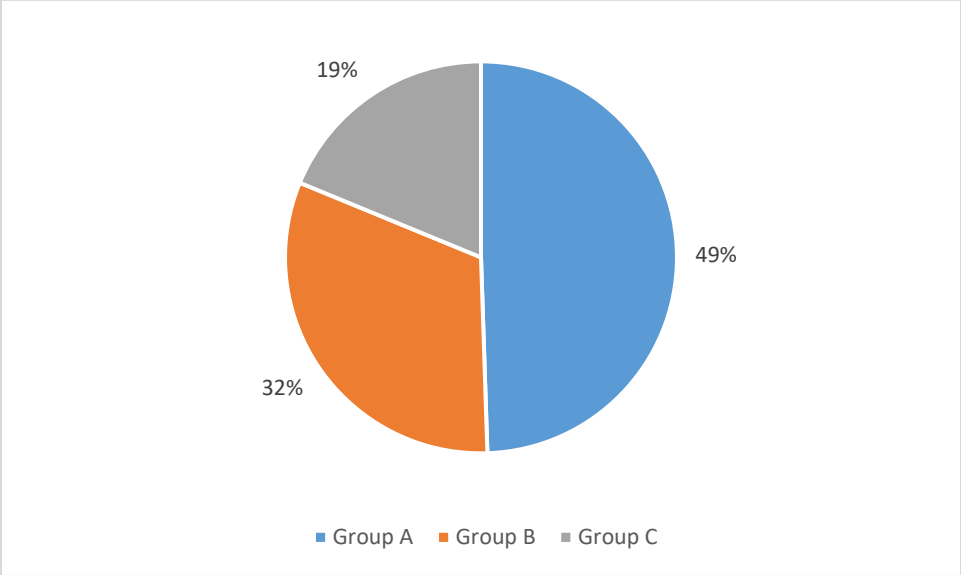
Figure 1.14. Total number of workers in basic chemicals, plastics, and synthetic rubber in primary forms subsector per governorate



Source: ECES analysis of CAPMAS' latest statistics on manufacturing industries (2019).

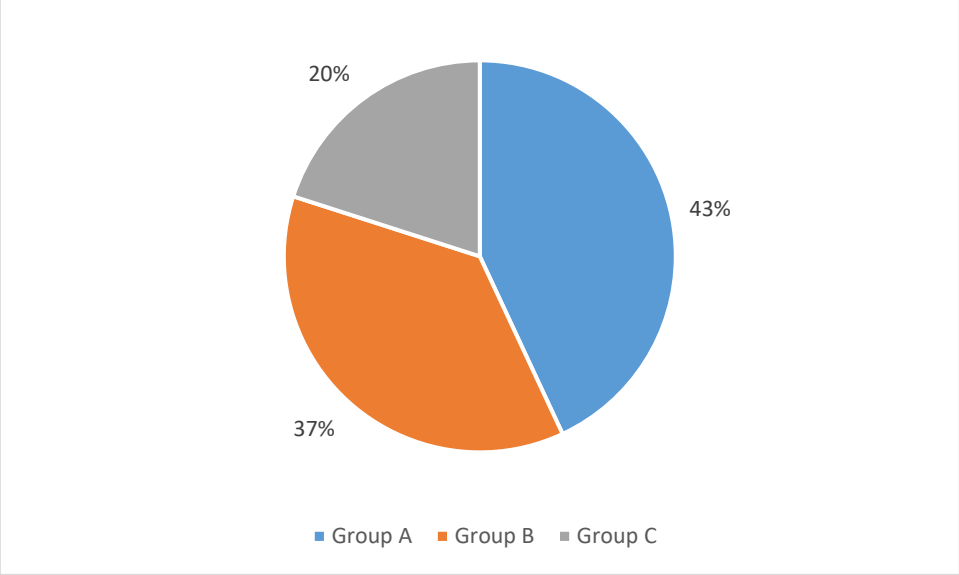
The pie charts below divide governorates into three groups as per the level of concentration of enterprises and employment in the basic chemicals, plastics, and synthetic rubber in primary forms subsector. Group A governorates account for 49 percent of total enterprises and 43 percent of total employment. The Group consists of Qalyubia, Giza, and Cairo. Group B accounts for a lower concentration of 32 percent of enterprises but 37 percent of employment. This Group includes 5 governorates: Alexandria, Sharqia, Al-Gharbya, Dakahlyia and Monufia. Group C has an even lower concentration of 19 percent of total enterprises and 20 percent of total employment. It includes 16 governorates located in both upper and lower Egypt.

Figure 1.15. Basic chemicals, plastics, and synthetic rubber in primary forms subsector: Establishments' dispersion



Source: ECES analysis of CAPMAS' latest statistics on manufacturing industries (2019).

Figure 1.16. Basic chemicals, plastics, and synthetic rubber in primary forms subsector: Workers' dispersion



Source: ECES's analysis of CAPMAS' latest statistics on manufacturing industries (2019).

1C. Trade performance of the Plastics[2] sector, with a focus on polymers of ethylene, in primary forms (HS 3901)

According to Table 1.2, the value of Egyptian imports of plastics (code 39) recorded almost $4 billion in 2021, which represents five percent of Egypt's total non-oil imports and seven percent of total manufacturing imports. Saudi Arabia and China are considered Egypt's main suppliers of imports of plastics, with 26 and 13 percent of total Egyptian imports. Egyptian exports of plastics (code 39), however, recorded $2.6 billion, representing 6.5 percent of total exports and 12 percent of total Egyptian manufacturing exports. Egypt exports mainly to Turkey, Belgium, and Italy with 16 percent, 7 percent, and 7 percent, respectively.

Table 1.2. Plastics sector: Trade profile in 2021

HS code	Imported value in 2021 (in USD 000)	Share in Egypt's total imports in 2021 (%)	Share in Egypt's manufacturing imports in 2021 (%)	Exported value in 2021 (in USD 000)	Share in Egypt's total exports in 2021 (%)	Share in Egypt's manufacturing exports in 2021 (%)
39	**3,921,143**	5.31	7.91	**2,640,021**	6.5	11.9

Source: Calculated based on trade map data (2021).

Table 1.3 shows the specific trade performance of all products under the HS code 39 category. Concerning the specific product of interest in this study, i.e., *polymers of ethylene, in primary forms* (HS Code 3901), the table clearly shows how important it is, as it alone accounts for 25 percent of total imports from the HS code 39 category and more than 20 percent of total exports.

The value of Egypt's imports of polymers of ethylene, in primary forms (HS code 3901) was almost one billion USD in 2021. Egypt's most important suppliers are Saudi Arabia and United Arab Emirates with 47 and 22 percent of total Egyptian imports of the code (3901). As for exports, the value of Egypt's polymers of ethylene, in primary forms (HS

[2] HS Code for plastics and its products is 39 according to the 2-digit Harmonized System (HS) and HS Code for polymers of ethylene, in primary forms is 3901 according to the 4-digit Harmonized System classification.

code 3901) is $545.6 million in 2021(almost half the imports). The most important countries to which Egypt exports include Belgium (24 percent), Spain (12 percent), UK (9 percent), and Italy (7.5 percent).

Table 1.3. Trade performance of HS Code 39 in plastics sector and positioning of HS Code 3901 (2021)

Code	Product label	Imported value in 2021 (in USD 000)	Share (%) of total product (39) imports	Exported value in 2021 in thousand US dollars	Share (%) of total product (39) exports	Trade balance in 2021 (in USD 000)
3901	Polymers of ethylene, in primary forms	972803	24.809	545673	20.669	-427,130
'3902	Polymers of propylene or of other olefins, in primary forms	707060	18.032	527738	19.990	-179,322
'3903	Polymers of styrene, in primary forms	249539	6.364	22965	0.870	-226,574
'3904	Polymers of vinyl chloride or of other halogenated olefins, in primary forms	353648	9.019	219692	8.322	-133,956
'3905	Polymers of vinyl acetate or of other vinyl esters, in primary forms; other vinyl polymers, ...	41009	1.046	22933	0.869	-18,076
'3906	Acrylic polymers, in primary forms	146080	3.725	20333	0.770	-125,747
'3907	Polyacetals, other polyethers and epoxide resins, in primary forms; polycarbonates, alkyd resins, ...	273123	6.958	355860	13.478	82,994
'3908	Polyamides, in primary forms	15978	0.407	55	0.002	-15,923
'3909	Amino-resins, phenolic resins, and polyurethanes, in primary forms	105863	2.700	40168	1.522	-65,695
'3910	Silicones in primary forms	27512	0.702	2969	0.112	-24,543
'3911	Petroleum resins, coumarone-indene resins, polyterpenes, polysulphides, polysulphones and other ...	36195	0.923	143	0.005	-36,052

Code	Product label	Imported value in 2021 (in USD 000)	Share (%) of total product (39) imports	Exported value in 2021 in thousand US dollars	Share (%) of total product (39) exports	Trade balance in 2021 (in USD 000)
'3912	Cellulose and its chemical derivatives, n.e.s., in primary forms	70918	1.809	397	0.015	-70,521
'3913	Natural polymers, e.g., alginic acid, and modified natural polymers, e.g., hardened proteins, **...**	5061	0.129	345	0.013	-4,716
'3914	Ion-exchangers based on polymers of heading 3901 to 3913, in primary forms	3022	0.077	88	0.003	-2,934
'3915	Waste, parings, and scrap, of plastics	5246	0.134	0	0.000	-5,246
'3916	Monofilament of which any cross-sectional dimension > 1 mm, rods, sticks and profile shapes, **...**	16221	0.414	1784	0.068	-14,437
'3917	Tubes, pipes and hoses, and fittings therefor, e.g., joints, elbows, flanges, of plastics	145860	3.720	128904	4.883	-16,956
'3918	Floor coverings of plastics, whether or not self-adhesive, in rolls or in the form of tiles; **...**	10684	0.272	3492	0.132	-7,192
'3919	Self-adhesive plates, sheets, film, foil, tape, strips and other flat shapes, of plastics, whether **...**	92251	2.353	7373	0.279	-84,878
'3920	Plates, sheets, film, foil, and strip, of non-cellular plastics, not reinforced, laminated, **...**	175261	4.470	410076	15.533	234,815
'3921	Plates, sheets, film, foil and strips, of plastics, reinforced, laminated, supported or similarly **...**	191891	4.894	40988	1.553	-150,903
'3922	Baths, shower-baths, sinks, washbasins, bidets, lavatory pans, seats and covers, flushing cisterns **...**	11198	0.286	86734	3.285	75,536

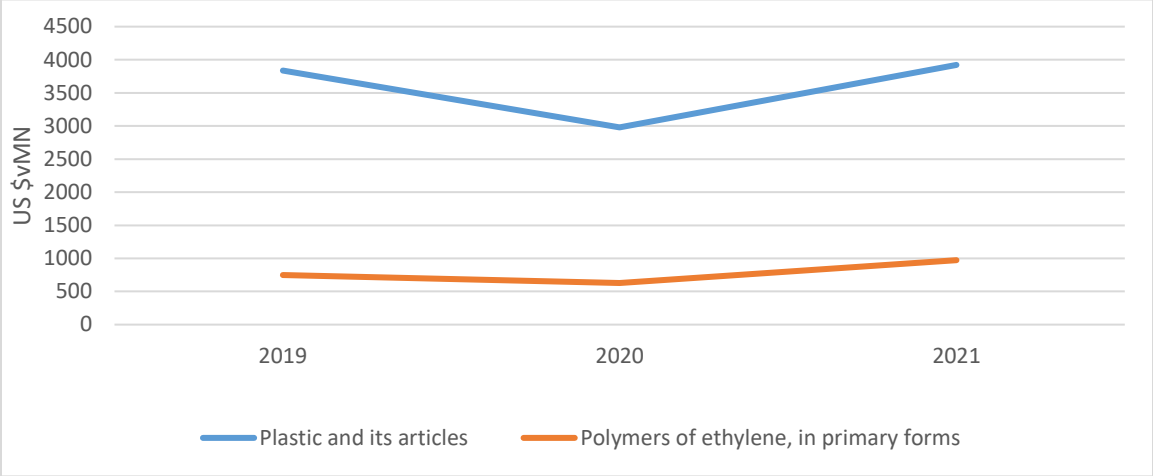
Code	Product label	Imported value in 2021 (in USD 000)	Share (%) of total product (39) imports	Exported value in 2021 in thousand US dollars	Share (%) of total product (39) exports	Trade balance in 2021 (in USD 000)
'3923	Articles for the conveyance or packaging of goods, of plastics; stoppers, lids, caps and other ...	75057	1.914	126874	4.806	51,817
'3924	Tableware, kitchenware, other household articles and toilet articles, of plastics (excluding ...	26566	0.678	18655	0.707	-7,911
'3925	Builders' ware of plastics, n.e.s.	32312	0.824	2052	0.078	-30,260
'3926	Articles of plastics and articles of other materials of heading 3901 to 3914, n.e.s.	131082	3.343	54163	2.037	-77,312
Total HS code 39		**3,921,143**		**2,640,021**		**-1,281,122**

Source: Calculated based on trade map data (2021).

1D. Trade performance of the plastic sector, with a focus on polymers of ethylene, in primary forms (HS 3901) subsector during COVID-19

Trade performance of plastics shows decline in Egyptian imports estimated at 22 percent in 2020, while imports of polymers of ethylene, in primary forms, witnessed a lower decline in 2020 (16 percent in its value compared with 2019). The value of imports from both Codes 39 and 3901 is being recovered in 2021. The imports of polymers of ethylene grew by 55 percent in 2021 compared with 32 percent growth in the plastics sector as whole.

Figure 1.17. Egypt's imports of the plastics sector, with a focus on polymers of ethylene, in primary forms: 2019 - 2021



Source: Calculated based on trade map data (2021).

2. The narrative analysis for polymers of ethylene, in primary forms (HS 3901) subsector (HS Code 3901)

The plastics *industry in Egypt* is a growing and promising industry. Plastics is one of the areas in which Egypt has the strongest comparative advantage, as its RCA almost doubled between 2005 and 2015. It includes around 1273 factories, with a total market value of around $4 billion and 415 thousand employees, in addition to a large number of informal enterprises. Polymers of ethylene are considered a key raw material for the plastics industry in addition to polypropylene, PVC, … etc. Polyethylene includes a variety of items that differ according to the used production technology and the final product itself. Polyethylene is used in many applications, ranging from food packaging to automobile parts, plastic bags, containers, and films, disposable diapers, beverage cans cables, hoses, pipelines for the oil and gas industry, and piping for the nuclear industry.

Egypt consumes approximately three million tons of plastic materials annually. This demand is expected to grow at 10 percent annually for the next 5 years at least.

Several specific observations need to be pointed out in relation to the production and trade processes of HS Code 3901 in the case of Egypt:

Observation #1

Despite of the fact that polyethylene is a major raw material for the plastic industry, there are only two main local public producers in the country. They provide the market with around 500 thousand tons, representing 16 percent of market needs of plastics raw material. While the majority of raw material (more than two thirds of polyethylene) are imported and small amounts come from recycling.

Observation #2

The two local companies are public in nature specifically SIDPEC & ETHYDCO, affiliated with the Egyptian Ministry of Petroleum. Their total production regularly supplies small plastic factories (e.g., Merghem 1&2) with their needs as per the protocol assigned between two related ministries (Ministry of Trade and Industry and Ministry of Petroleum). These arrangements have been in place for years.

Since the increase of world prices for raw material due to global disturbances in the relevant supply chain, small plastic factories face significant problems in getting access to raw material at affordable prices, including polyethylene. The problem has been aggravated by the recent CBE's infamous trade related decree issued in March 2022.

The two public companies stopped supplying small plastic factories with their needs due to shortage of production. Small plastic factories cannot import directly as their needs are small, fragmented, and they do not have enough liquidity to import directly.

Observation #3

Scarcity of raw material and its high prices resulted automatically in problems of producing plastics products and exporting them. Many Egyptian exporters lost their existing markets, especially in Africa, as they cannot compete with others, particularly quickly emerging producers from Saudi Arabia.

Observation #4

Regarding imported polyethylene, Egyptian Customs do not apply a risk assessment system as they inspect 100% of each shipment, even if it comes from the same supplier and imported by the same Egyptian importer. Though the same observation applies for all the other imported products, it causes a serious problem when related to an intermediate product like polyethylene as it slows down the production, exports of all plastic products.

Observation #5

As in case of iron and steel products, importation of polymers of ethylene faces price re-evaluation by customs employees. The theoretical objective of such revision is to make sure that prices are realistic and consistent with changes in international prices, especially that invoices from China more often than not come at lower values than actual prices. The revaluation is meant to correct this situation and prevent under estimation of invoices. Realistically, the revaluation process is implemented wrongly as it is neither based on any market studies, nor does it depend on reliable sources; the customs employees either depend on local prices or their own judgment, with focus only on increasing customs fees (the sole objective) of ministry of finance.

Observation #6

As in case of palm oil, customs valuation usually takes place in a port other than the arrival port. Port employees may have limited experience related to polyethylene, so they may record under a wrong code, resulting in the importer having to go through a more complicated process to negotiate the right code, hence a delay and subsequently penalties.

Observation #7

Any delay in the import process that keeps the product in ports is translated directly into payment to the port authority and shipping agent. Delay and inefficiency in port process leads to significant loss of foreign currency, not to mention exaggerating the financial burden on local producers.

Observation #8

As in the case of parts and accessories for motor vehicles, the Egyptian importer of polyethylene suffers from the long duration taken by reviewing entities, especially the General Security Authority (Al Amn El Am).

Observation #9

While the "Nafeza" (Window) system and the application of pre-registration of shipments pose a challenge to almost all sectors, the heterogeneous nature of raw materials involved in the plastics industry cause an even more serious problem because the importance of plastic exports.

3. Detailed documentation of import processes associated with the specific product of focus (HS Code: 3901)

Figure 3.1 and Table 3.1 present a list of 13 core business processes that are typically carried out when importing Polymers of Ethylene, (HS Code: 3901) into Egypt and a list of more than 11 organizations that an importer indirectly or directly deals with.

These core business processes are categorized into 3 process areas as per UN/CEFACT International Supply Chain Model:

- **Buy:** the conclusion of trade terms and the establishment of sales contract.
- **Ship:** the arrangement for cargo movement and the completion of necessary actions to meet regulatory requirements of both export and import countries.
- **Pay:** the claim for the payment, the payment for the purchased cargo and the local payment.

It should be noted that this documentation focuses only on inland enterprises big or small, as free zone enterprises are not subject to any of the processes discussed in this report

It should also be noted that the payment process is interlinked with the shipping process. In fact, concluding payment is required to be able to proceed with custom clearance and other subsequent business processes. Therefore, business processes regarding payment will be discussed at the beginning of the 'ship' process area. Also, any required prerequisites will be discussed separately before discussing the 'buy' process area.

Two important notes: 1) The presentation of core processes of importation is preceded by a short but detailed presentation of how Egyptian importers get an import license for an item. The reason why it is presented is the fact that it is a major precondition for importation that is often problematic to obtain. In such cases, it will delay the beginning of the whole import process.

2) The import process is very fluid at this point as it is subject to many changes to which importing enterprises are still adjusting. Depending on the problems they might face, certain changes to the system can be introduced. In this study, we accommodated the total process with its full details to date. New changes can still take place in the future. Up to the final delivery date of the study, we shall continue to include changes as they emerge.

Figure 3.1. Use case diagram of business processes in polymers of ethylene importation to Egypt

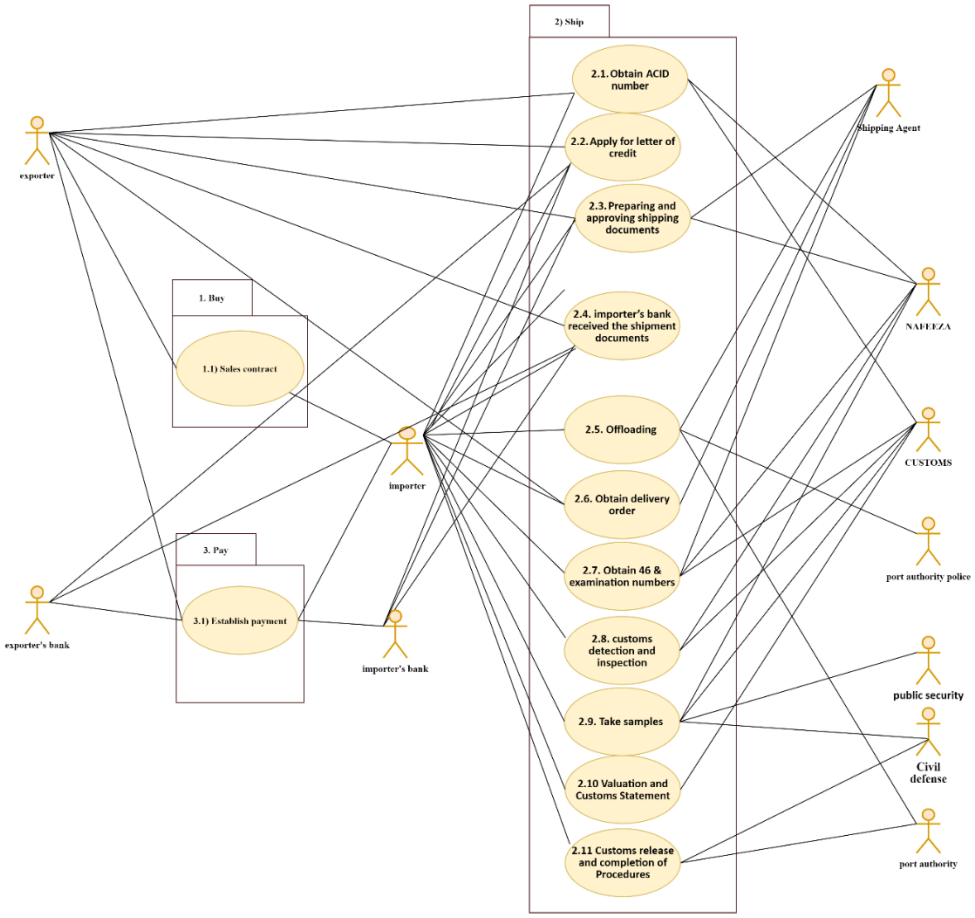


Table 3.1. Core business processes and stakeholders involved in polymers of ethylene import

Core Business Process \ Party	Importer	General security sector (ALAMN ALAM)	Port authority	MTS company (NAFEZA)	Shipping Agent	Customs	Port authority police	Exporter	Civil defense	Exporter' s Bank	Importer' s Bank
1. Buy											
1.1. Sales contract	X							X			
2. Ship											
2.1. Obtain ACID number	X			X		X		X			
2.2. Apply for letter of credit	X							X		X	X
2.3. Preparing and approving shipping documents	X			X	X			X			
2.4. importer's bank received the shipment documents,	X							X		X	X
2.5. Offloading	X		X		X		X				
2.6. Obtain delivery order	X				X			X			
2.7. Obtain 46 & examination numbers	X			X	X	X					
2.8. customs detection and inspection	X					X					
2.9. **Take samples***	X	X		X					X		
2.10 Valuation and customs statement	X					X					
2.11 Customs release and completion of procedures	X		X						X		
3. pay											
3.1 Conclude payment•	X							X		X	X

* Steps where sectoral relevance is seen the most.

• As mentioned before, the pay-process is considered completed. Since the money and document transfers are across two countries, payment is concluded in process 2.2 & 2.4

3A. Pre-import requirements

In the case of importing for trading, obtaining an import license. But in the case of importing for manufacturing, obtaining a production requirements card (needs card). The Export and Import Control Authority issues both the import license and the needs card.

1. Import license

It takes two days and is renewed every five years. It costs EGP 5000 (the total number of products is 21 according to the HS code). Adding a group of products costs EGP 1000 per group. Renewal fees are EGP 2000.

Documents required in accordance with the provisions of Law No. 7 of 2017 include:

a) Registration application form signed by the person concerned or the authorized representative in front of the competent employee or signed by the representative

b) Official copy of the company's contract or the company's articles of incorporation, and amendments made to it, as registered, publicized and recorded in the commercial register, indicating that 51 percent of the capital is owned by Egyptians - the import activity - the paid-up capital is not less than two million pounds.

c) Recent official copy of the commercial register.

d) Copy of the tax card and presenting the original for viewing, and a certified copy of the tax statement for the previous year showing that the annual turnover of the company is not less than 5 million pounds.

e) Original certificate of importing in the name of one of the general and limited partners or those responsible for imports as issued by the Foreign Trade Training Center at the Ministry of Industry and Trade.

f) Receipt of depositing the insurance value, amounting to EGP 50,000 (for individuals), and up to EGP 200,000 (for companies) in the treasury of the Authority, or a letter from the bank stating that the amount has been deposited in the Authority's account.

2. Production requirements card (needs card):

Issued by the Export and Import Control Authority (it takes one day and is renewed every five years). Issuance is free.

Documents required by law:

a. Registration application form signed by whoever has the right to administer

b. Industrial record/license if the project is industrial

c. Recent official copy of the commercial register

d. Copy of the ID card

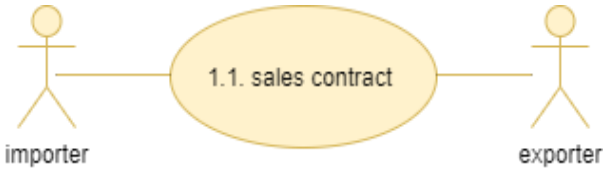
3. Letter to the General Investment Authority if the company is affiliated to it
4. Obtaining a customs procedures certificate (transaction number) from customs (costs EGP 50)
5. Establishing an account for the importing company on the Nafeza website with the registration of the person who has the right to sign electronically (E-token)
6. Subscribing to the electronic signature service and obtaining the right to use the electronic signature through one of the companies (Egypt Clearing House or SNS). The cost ranges from EGP 700 to EGP 1000.
7. Preparing a statement of foreign exporters in the importer's import operations (tax registration number - trade name of the exporter - trademark)
8. Register an account for the company exporting to Egypt on the CargoX platform
9. Registering an account for the accredited customs brokers to the Nafeza platform and obtaining the electronic signature

(Steps 7 through 9 can take a long time depending on how easy it is for the exporting company representative to push the paperwork approval in the Ministry of Trade and Industry)

3B. Process area 1: Buy

Core business process area 1.1: Conclude sales contract

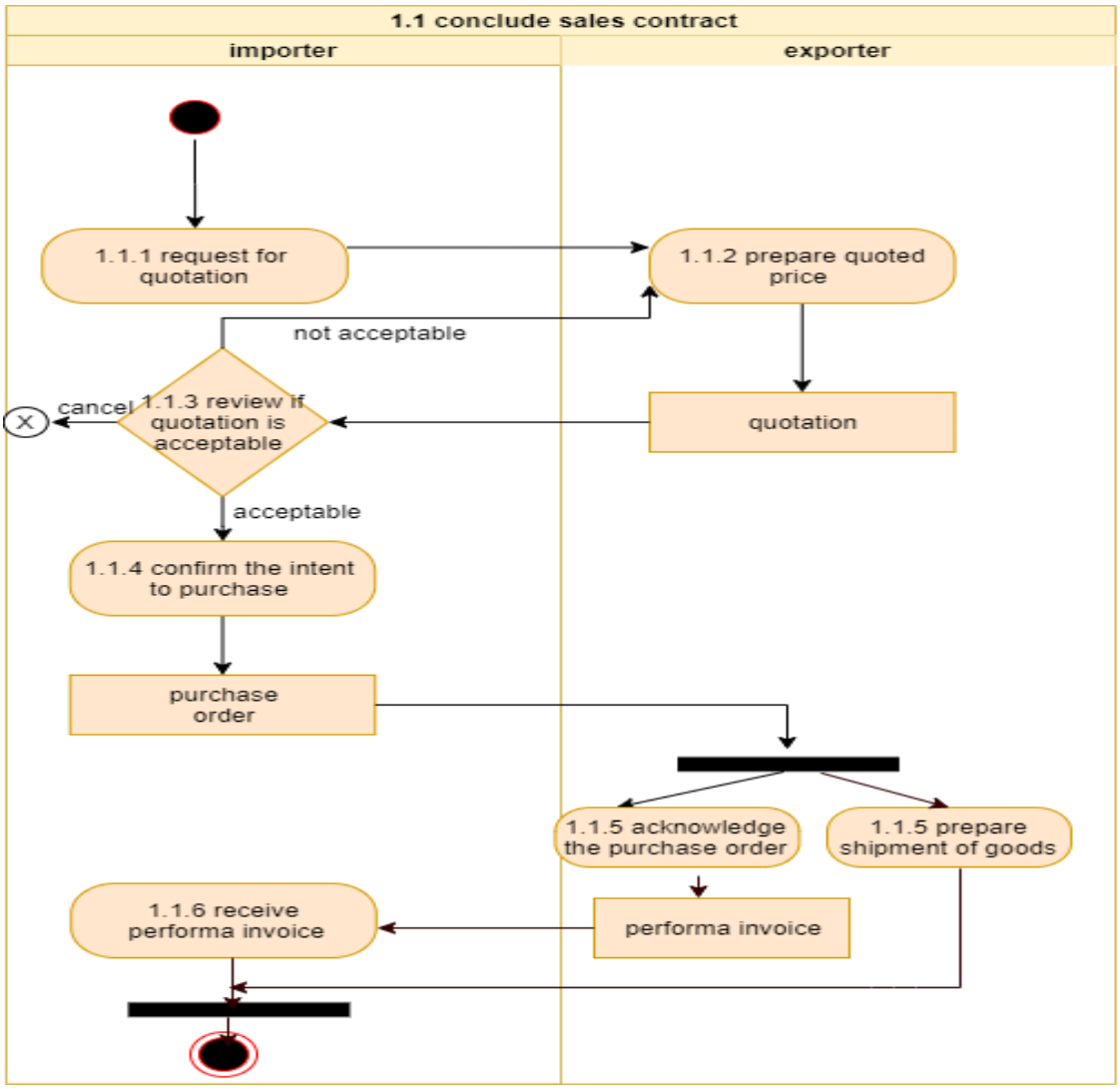
Figure 3.2. "Conclude sales contract" use case diagram



"Sales contract "is the first core business process under "Buy" process area. The use case diagram in Figure 3.2 suggests that this core business process requires the participation of:

- Egyptian importing enterprise
- Supplier (exporter)

Figure 3.3. “Conclude sales contract” activity diagram

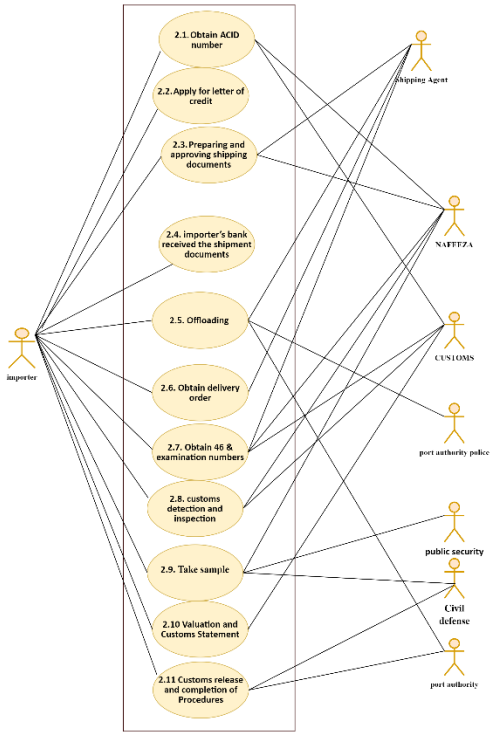


Name of process area	**1. Buy**
Name of business process	***1.1. Conclude sale contract***
Related laws, rules, and Regulations	• Law No. 118 of 1975 promulgating the Import and Export Law and its executive regulations issued by Ministerial Decision No. 770 of 2005 and their amendments.
Process participant	Egyptian importer Supplier
Input and criteria to enter/ begin the business process	• Importer has a list of potential sellers. • Importer already registered at GOEIC
Activities and associated documentary requirements	1.1.1 Egyptian importer requests a quotation from potential exporters. 1.1.2 Supplier prepares the quotation (price and sales terms). 1.1.3 Egyptian importer reviews the quotation and determines if the quoted price and sales terms are acceptable. If the quoted price and sales terms are not acceptable, importer negotiates with the exporter about revising the quoted price and/or sales terms. 1.1.4 If the quoted price and sales terms are acceptable, importer confirms the purchase of goods with a purchase order. 1.1.5 Supplier acknowledges the receipt of the purchase order and confirms that the shipment will be delivered according to the agreed price and sales terms by sending the importer a proforma invoice. In addition, the exporter prepares the delivery of goods. 1.1.6 Importer receives the proforma invoice.
Output criteria to exit the business process	• Supplier and importer agreed on the price and contract terms and have concluded the sales contract. • Based on the purchase order, the exporter starts to prepare for the export of goods
Average time required to complete this business process	2 days

3C. Process area 2: Ship

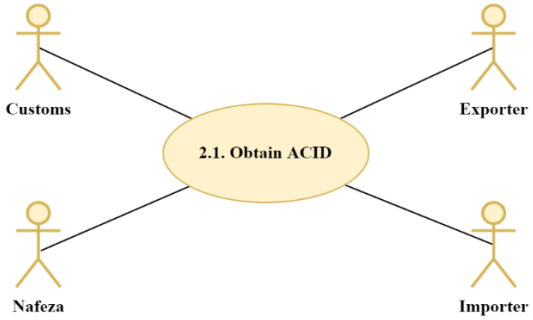
In the context of polymers of ethylene import to Egypt, ship process area consists of 11 core business processes. As shown in Figure 3.4, these core business processes deal with both transport and regulatory requirements. They involve the arrangement for cargo movement as well as the completion of customs formalities and necessary actions to meet import requirements imposed by government agencies from Egypt.

Figure 3.4. Use case diagram of core business processes in ship process area



Core business process area 2.1: Obtain ACID number

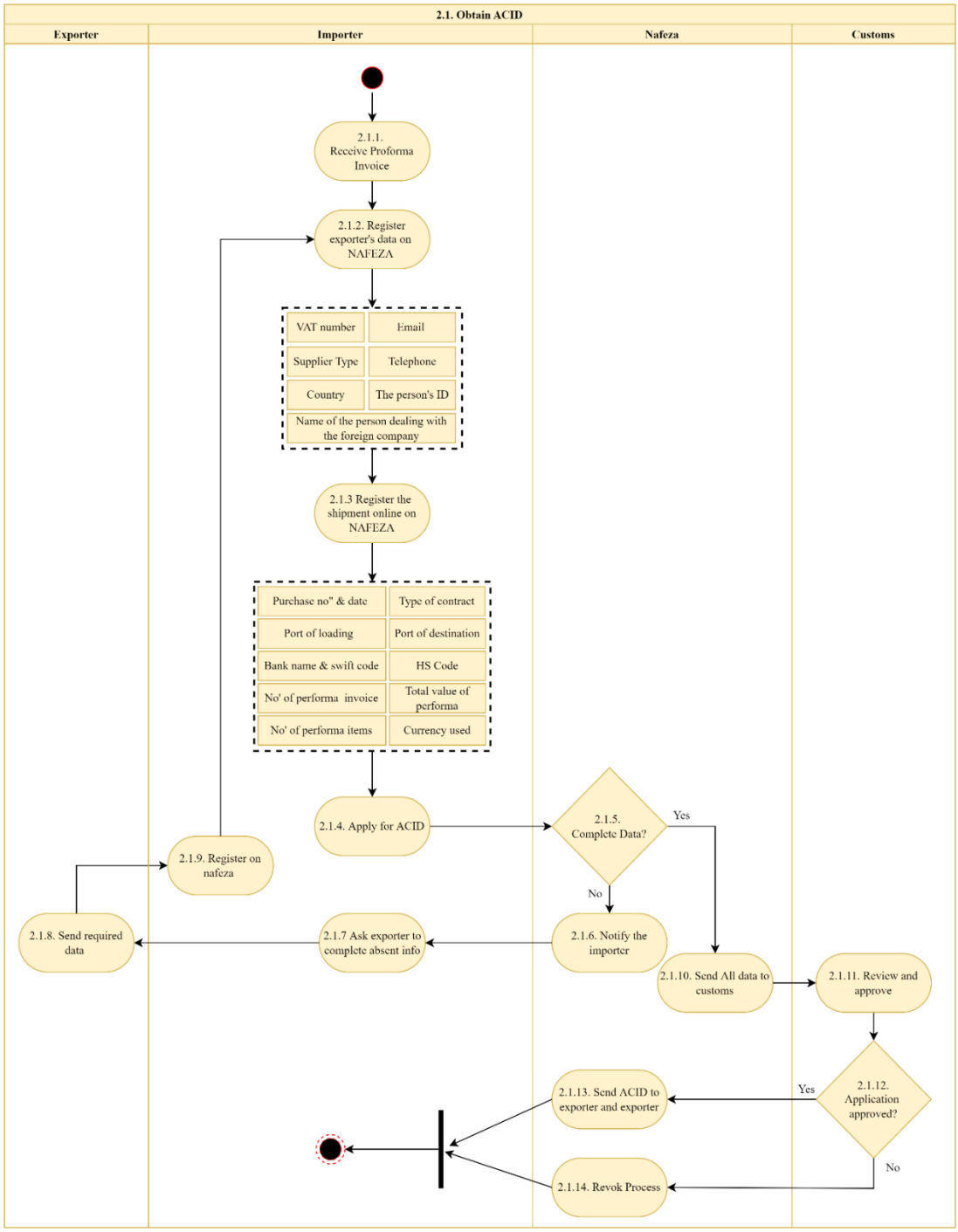
Figure 3.5. "Obtain ACID number" use case diagram



The use case diagram shown in Figure 3.5 suggests that "Obtain the ACID number" process requires the participation of:

- Egyptian importer
- Nafeza platform
- Supplier
- Customs

Figure 3.6. “Obtain the ACID number from Nafeza” activity diagram



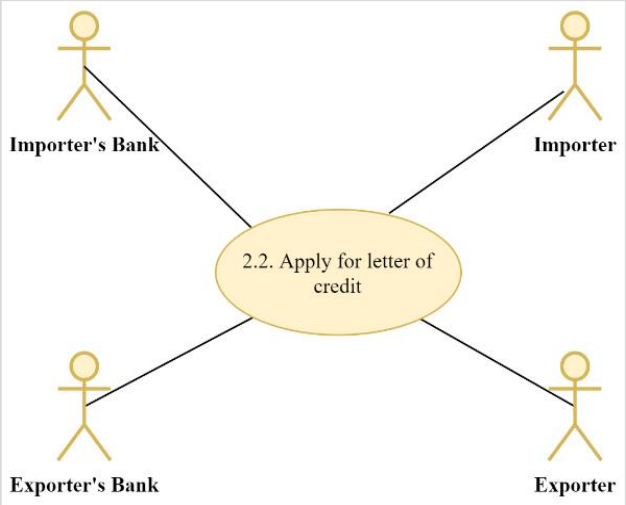
Name of process area	**2. Ship**
Name of business process	***2.1. Obtaining a preliminary tariff number for the shipment through NAFEZA system (ACID). It became obligatory since October 2021***
Related laws, rules, and regulations	• Customs Law No. 207 of 2020 and its executive regulations issued by Minister of Finance Decision No. 430 of 2021 and their amendments • Law No. 118 of 1975 promulgating the Import and Export Law and its executive regulations issued by Ministerial Decision No. 770 of 2005 and their amendments • Circular No. 31 of 2021 regarding the customs manual for import and export rules, issued in August 2021 • Ministry of Finance Decision No. 38 of 2021 regarding Advance Cargo Information system (ACI) • Decision of the Minister of Finance No. 328 of 2021 amending some provisions of decision No. 38 of 2021 • Ministry of Finance Decision No. 490 of 2021 • Decision of the Minister of Trade and Industry No. 992 of 2015 regarding the rules governing the registration of factories qualified to export their products to the Arab Republic of Egypt • Decision of the Minister of Trade and Industry No. 43 of 2016 regarding amending the rules governing the registration of factories qualified to export their products to the Arab Republic of Egypt • Decision of the Minister of Finance No. 40 of 2017 regarding implementation of the customs' single administrative document (SAD) • Law of the Central Bank, the Banking System and Money • Law No. 194 of 2020 promulgating the Central Bank and Banking System Law • Procedures Circular No. 11 of 2021 regarding the procedures followed under the ACI system • Decision No. 7 of 2022 regarding the approval of import documents (invoice - certificate of origin) submitted electronically or on paper.
Process participant	• Egyptian importer • Nafeza • customs

Input and criteria to enter/ begin the business process	• Importer already has an account on Nafeza • Importer is already licensed by GOEIC and has a valid tax and commercial register. • The company exporting to Egypt is already registered on the CargoX platform
Activities and associated documentary requirements	2.1.1. The importer receives the Proforma-Invoice from the exporter after the final purchase order is sent to him. 2.1.2. The importer on the Nafeza platform records all required exporter data, which includes (VAT number, supplier type if distributor or exporter), supplier country, name of the person dealing with the foreign company, the person's ID number, telephone, e-mail). 2.1.3. The importer records all data on the shipment itself, which includes (purchase number and date, type of contract, port of loading, port of entry, bank name and SWIFT code, initial invoice number and date, number of invoice items, customs item, total value of invoice, value of each item, and the currency used). 2.1.4. The Egyptian importer applies for ACID on Nafeza 2.1.5. Nafeza checks whether the data is complete or not? 2.1.6. If the data is not complete, Nafeza will notify the importer that some data is missing 2.1.7. The importer should then ask the exporter for the missing information 2.1.8. Supplier sends required data/information to the importer 2.1.9. The importer uses the data sent by the exporter to register on Nafeza again 2.1.10. One the data is complete, Nafeza sends all the data to customs for security Clearance. 2.1.11. Customs receive the data via Nafeza and do the checkup 2.1.12. Customs decide whether the application is approved or not. 2.1.13. If the application approved, Nafeza will send ACID to both the importer and the exporter 2.1.14. If the application was rejected, Nafeza will revoke the process.
Output criteria to exit the business process	ACID Number

Average time required to complete this business process	2 days (48 Hours)

Core business process area 2.2: Apply for letter of credit

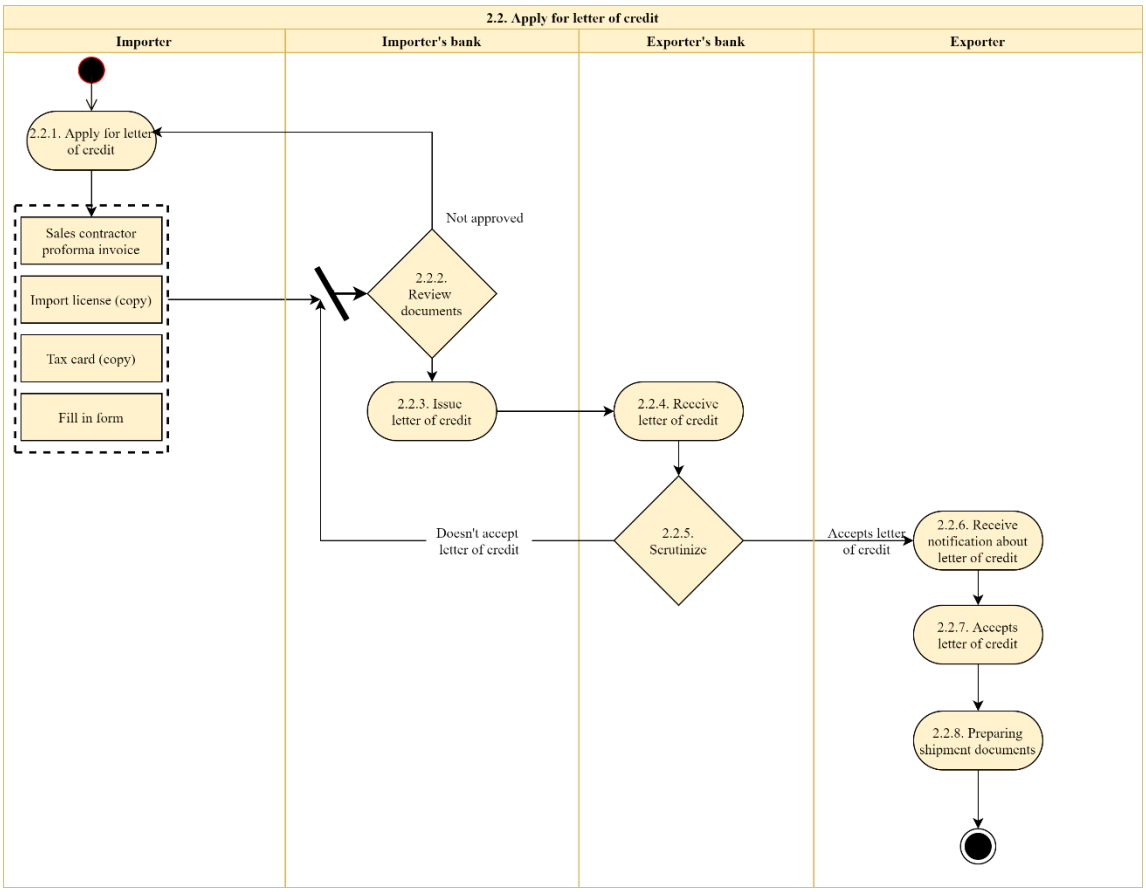
Figure 3.7. "Apply for letter of credit" use case diagram



The use case diagram shown in Figure3.7 suggests that "apply for letter of credit" process requires the participation of:

- Egyptian importer
- Importer's bank
- Exporter (supplier)
- Exporter's bank

Figure 3.8. “Apply for letter of credit” activity diagram

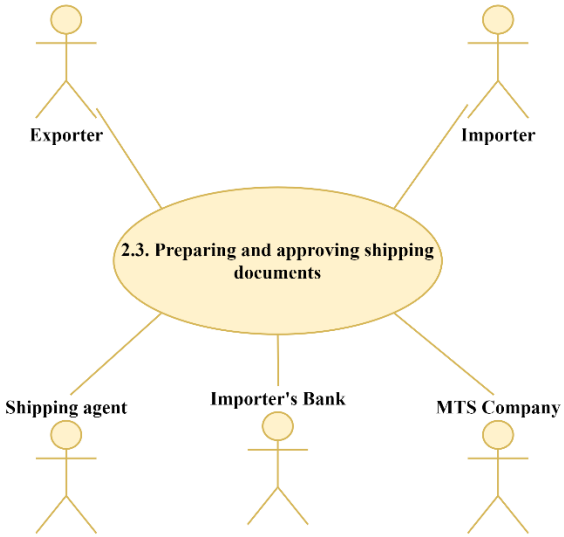


Name of process area	**2. Ship**
Name of business process	***2.2 apply for letter of credit***
Related laws, rules, and regulations	• Law No. 118 of 1975 promulgating the Import and Export Law and its executive regulations issued by Ministerial Decision No. 770 of 2005 and their amendments • Law of the Central Bank, the Banking System and Money 2004 • Law No. 194 of 2020 promulgating the Central Bank and Banking System Law • Letter of the Central Bank issued in February 2022 and the e-mail issued to banks on February 21 and its updated version in March 2022 • Central Bank circular dated 6 June 2022 regarding updating the response to banks' inquiries regarding documentary credits • Procedures circular No. 6 of 2022 that each client notifies the Authority in writing of any changes to the registration data • Import circular No. 32 of 2019 regarding Form 4 (cases of not requesting it, and receipt of payment of administrative expenses)
Process participant	• Egyptian importer • Exporter (supplier) • Importer's bank • Exporter's bank
Input and criteria to enter/ begin the business process	• Sales contract has already been concluded
Activities and associated documentary requirements	2.2.1. The importer applies for a letter of credit (LC) at the importer's bank and provides all required documents (Application form – Tax card – Copy of the import license – Sales contact) 2.2.2. The importer's bank reviews all documents submitted, and evaluates the importer's credit status, if the application is not approved the bank asks the importer to re-apply for LC. 2.2.3. If the application is approved, the importer's bank approves the application, issues a letter of credit, and sends it to the exporter's bank (advisory bank). 2.2.4. The exporter's bank receives the letter of credit from the importer's bank

	2.2.5. The exporter's bank reviews all terms and conditions. If LC is not accepted, exporter's bank notifies the importer's bank with the result. 2.2.6. If LC is accepted, the exporter receives notification of the letter of credit. 2.2.7. The exporter accepts letter of credit 2.2.8. The exporter starts the preparation of shipment documents
Output criteria to exit the business process	LC has been already opened
Average time required to complete this business process	Steps to apply and approve documents (1 – 3 months) depending on the size of the importing enterprise. The bigger the enterprise, the faster the process.

Core business process area 2.3: Preparing and approving shipping documents

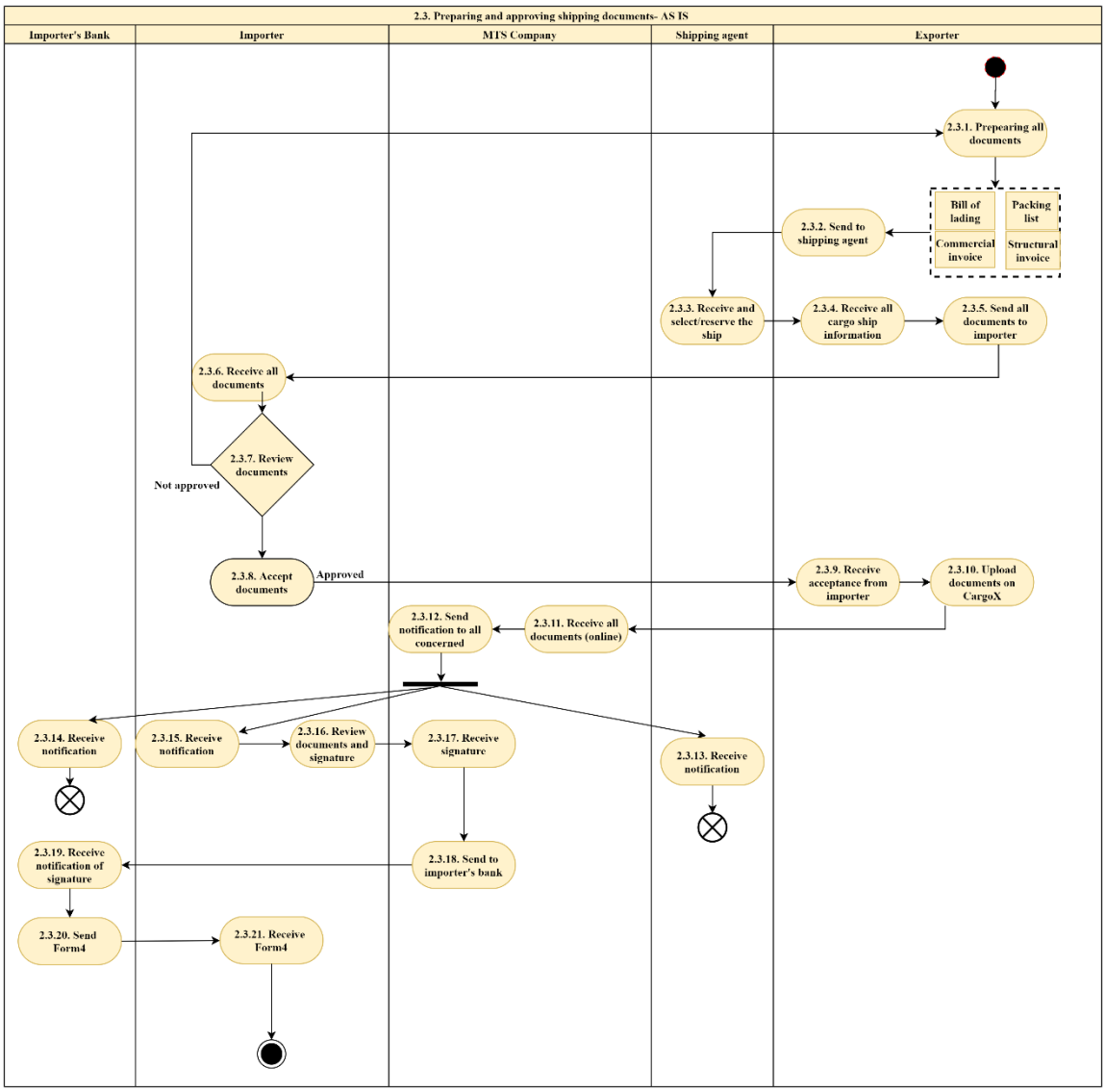
Figure 3.9. "Preparing and approving shipping documents" use case diagram



The use case diagram shown in Figure 3.9 suggests that "Preparing and approving shipping documents" process requires the participation from:

- Egyptian importer
- Exporter (supplier)
- Shipping Agent
- Importer's bank
- MTS company

Figure 3.10. “Preparing and approving shipping documents” activity diagram

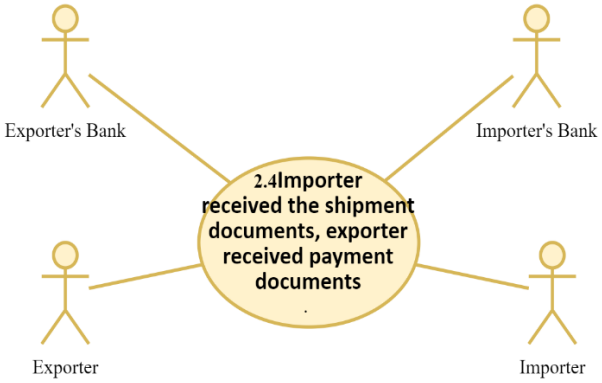


Name of process area	**2. Ship**
Name of business process	***2.3. Preparing and approving shipping documents***
Related laws, rules, and regulations	• Law No. 118 of 1975 promulgating the Import and Export Law and its executive regulations issued by Ministerial Decision No. 770 of 2005 and their amendments • Customs Law No. 207 of 2020 and its executive regulations issued by Minister of Finance decision No. 430 of 2021 and their amendments • Law of the Central Bank, the Banking System and Money 2004 • Law No. 194 of 2020 promulgating the Central Bank and Banking System Law • Letter of the Central Bank issued in February 2022 and the e-mail issued to banks on February 21 and its updated version in March 2022 • Central Bank circular dated 6 June 2022 regarding updating the response to banks' inquiries regarding documentary credits • Import Circular No. 32 of 2019 regarding Form 4 (cases of not requesting it, and receipt of payment of administrative expenses)
Process participant	• Exporter • Importer • Importer's bank • MTS company • Shipping agent
Input and criteria to enter/ begin the business process	• Importer obtained ACID Number and sent it to the exporter to put it on all documents
Activities and associated documentary requirements	2.3.1. The exporter (supplier) prepares all documents for shipment, including, bill of lading, packaging list, analysis certificate, structural invoice, analysis certificates 2.3.2. The exporter(supplier) sends all the documents to the shipping agent 2.3.3. The shipping agent receives documents and make the reservation 2.3.4. The exporter(supplier) receives all cargo/ship information 2.3.5. The exporter sends all documents to the Egyptian importer including the shipping details such as vessel name and number, arrival dates, as well as the documents 2.3.6. The importer receives the documents 2.3.7. The importer reviews the documents, if not approved they will inform the exporter to re-prepare the documents

	2.3.8. If approved, the importer will acknowledge the acceptance of all documents 2.3.9. The exporter receives acceptance from the importer 2.3.10. The exporter uploads all documents on the CargoX platform, which is linked to the Nafeza platform 2.3.11. Nafeza receives all documents 2.3.12. Nafeza notifies all concerned partners that the documents are well received 2.3.13. Shipping agent receives notification that the documents are well received 2.3.14. Importer's bank receives notification that the documents are well received 2.3.15. The importer receives notification that the documents are well received 2.3.16. The importer accesses the Nafeza site, reviews the documents and places the electronic signature on them. 2.3.17. Nafeza receives the signature of the importer 2.3.18. Nafeza sends documents to the bank 2.3.19. The bank is notified, and the importer awaits the bank's approval to sign. 2.3.20. The bank approves and sends the shipment Form 4 on the Nafeza platform (recent procedure) 2.3.21. The Nafeza receives Form 4 2.3.22. The Nafeza sends a notification to importer that form 4 is received 2.3.23. The importer acknowledges notification
Output criteria to exit the business process	Approved shipping documents
Average time required to complete this business process	7 days

Core business process area 2.4: Importer received the shipment documents, exporter received payment

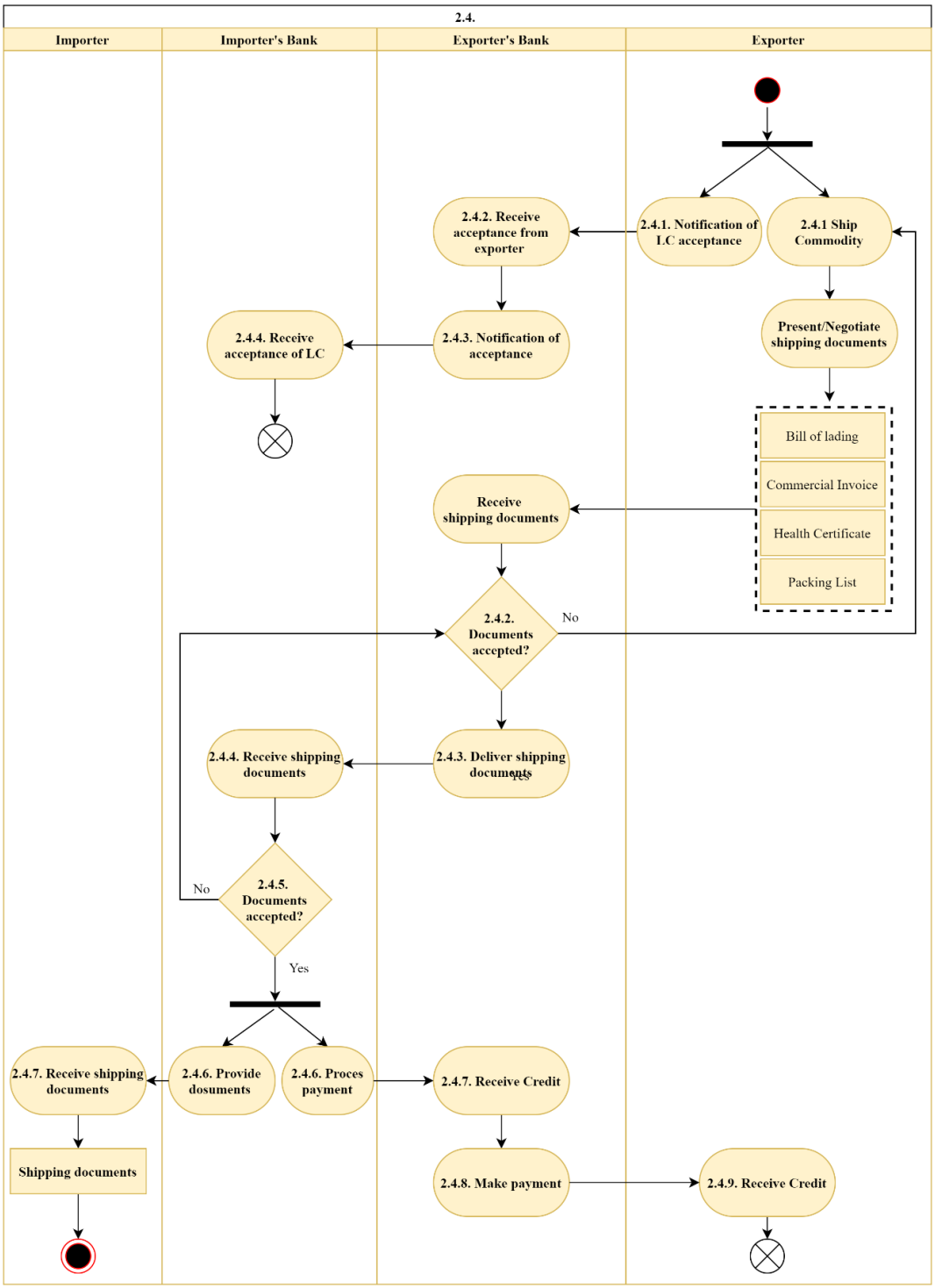
Figure 3.11. "Importer received the shipment documents, exporter received payment" use case diagram



The use case diagram shown in Figure 3.11 suggests that "apply for letter of credit" process requires the participation of:

- Egyptian importer
- Importer's bank
- Exporter(supplier)
- Exporter's bank

Figure 3.12. “Importer received the shipment documents, exporter received payment documents” activity diagram

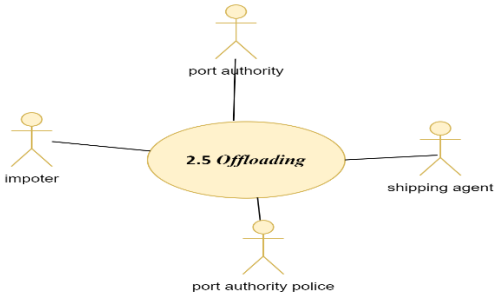


Name of process area	**2. Ship**
Name of business process	***2.4. Importer received the shipment documents, exporter received payment***
Related laws, rules, and Regulations	• Law No. 118 of 1975 promulgating the Import and Export Law and its executive regulations issued by Ministerial Decision No. 770 of 2005 and their amendments • Law of the Central Bank, Banking System and Money 2004 • Law No. 194 of 2020 promulgating the Central Bank and Banking System Law • Letter of the Central Bank issued in February 2022 and the email issued to banks on February 21 and its updated version in March 2022 regarding documentary credits • Central Bank circular dated June 6, 2022, regarding updating the response to banks' inquiries regarding documentary credit
Process participant	• Egyptian importer • Importer's bank • Exporter (supplier) • Exporter's bank
Input and criteria to enter/ begin the business process	LC has been already opened
Activities and associated documentary requirements	2.4.1. • Supplier notifies the acceptance of LC to their bank • The supplier reviews the terms and conditions. If they believe that the importer can meet all the terms and conditions, the goods are sent. The Supplier sends shipping documents to their bank. 2.4.2. • The exporter's bank receives acceptance of the letter of credit from the exporter (supplier) and checks the shipping documents in exchange for the letter of credit. • The exporter's bank receives shipping documents from the exporter and reviews the shipping documents. 2.4.3. • If the documents meet the terms and conditions of the letter of credit, the bank sends the shipping documents to the importer's bank. • The exporter's bank gives notification of acceptance to importer's bank 2.4.4. The importer's bank receives shipping documents. 2.4.5. • The importer's bank receives and inspects shipping documents. If the documents meet the terms of the letter of credit, they are released to the importer.

	• The importer's bank receives acceptance of the letter of credit. 2.4.6. • The importer's bank pays to the exporter's bank (credit). • The importer's bank provides shipping documents to the importer. 2.4.7. The exporter's bank receives payment notice (credit) from the importer's bank. 2.4.8. The exporter's bank transfers the payment to the exporter. 2.4.9. The exporter (supplier) receives payments from it.
Output criteria to exit the business process	• Egyptian importer received documents • Exporter (supplier) received payment
Average time required to complete this business process	1-3 months depending on the size of the importing enterprise; the bigger the enterprise the faster the process

Core business process area 2.5: Offloading

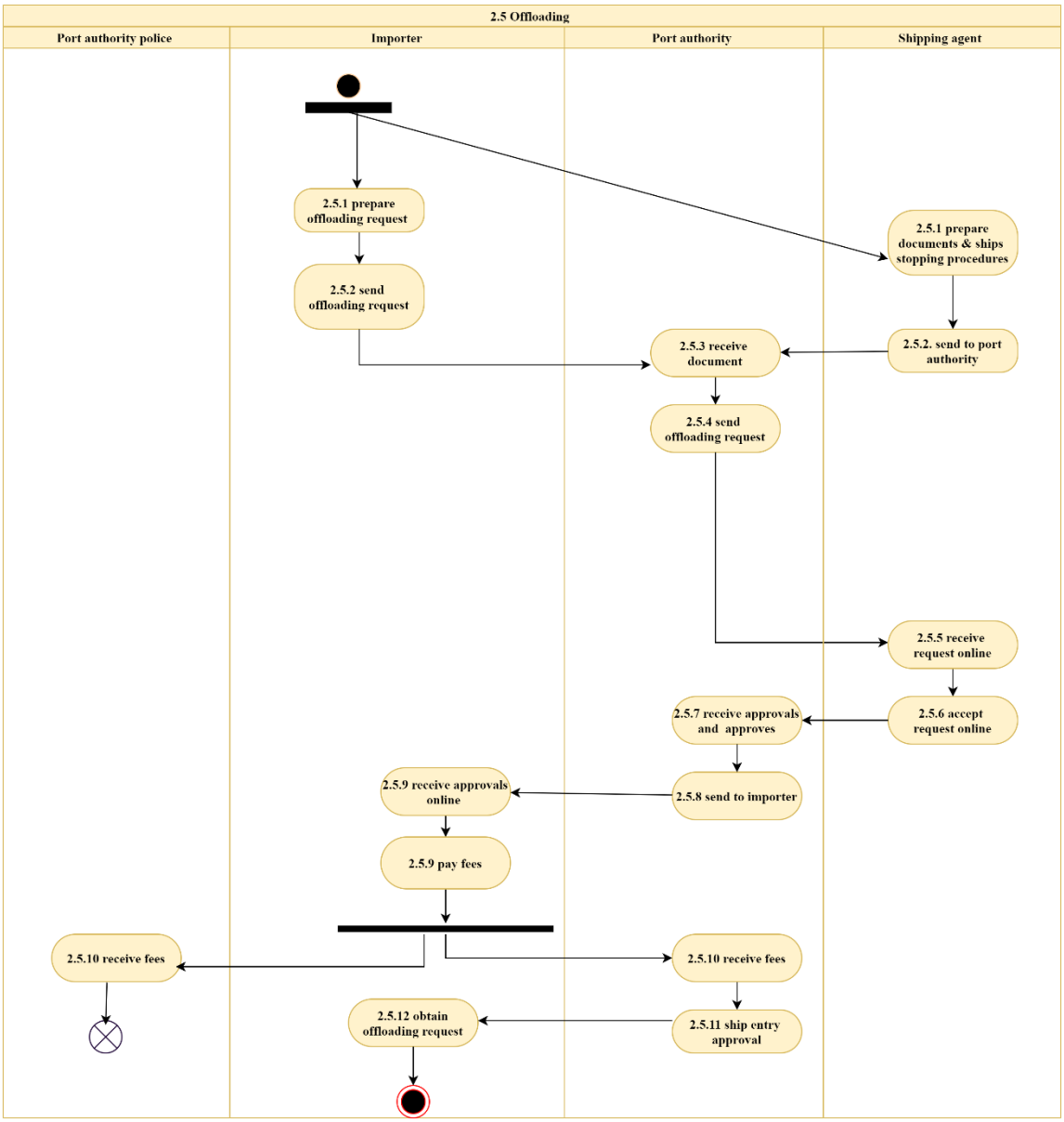
Figure 3.13. "Offloading" use case diagram



The use case diagram shown in Figure 3.13 suggests that "Offloading" process requires the participation of:

- Egyptian importer
- Port authority
- Port authority police
- Shipping agent

Figure 3.14. “Offloading” activity diagram

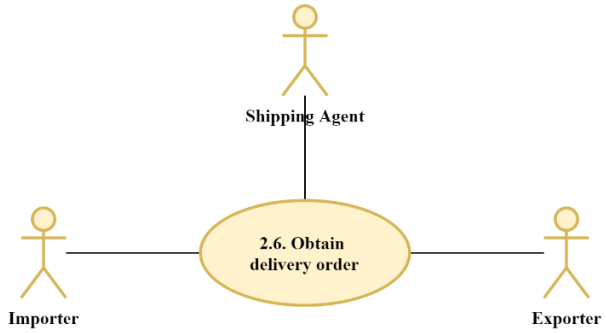


Name of process area	**2. Ship**
Name of business process	***2.5 Offloading***
Related laws, rules, and Regulations	• Law No. 118 of 1975 promulgating the Import and Export Law and its executive regulations issued by Ministerial Resolution No. 770 of 2005 and their amendments • Decision No. 800 of 2016 issuing a regulation governing the conduct of activities and works related to maritime transport and cost of their use • Customs Law No. 207 of 2020 and its executive regulations promulgated by Minister of Finance decision No. 430 of 2021 and their amendments
Process participant	• Egyptian importer • Port authority • Port authority police • Shipping agent
Input and criteria to enter/ begin the business process	
Activities and associated documentary requirements	2.5.1. • The importer or (customs clearing agent) processes an offloading order about 7 to 10 days before the shipment arrives (the average cost is EGP 25 per ton). • The shipping agent also prepares the procedures and manifest data and upload it online on NAFEZA at least 48 hours before the arrival of the shipment 2.5.2. • The shipping agent submits a request to the Port Authority for anchor the ship on the quay • The importer or customs clearing agent sends the offloading request to the port authority 2.5.3. Port Authority receives documents and offloading request 2.5.4. Port Authority sends to the responsible authorities for approval (like shipping agent). 2.5.5. Each of these entities receives request from port authority 2.5.6. Each of these entities sends their approval to port authority 2.5.7. Port Authority receives approvals, and approves also 2.5.8. Port Authority sends approvals to importer

	2.5.9. The importer receives approvals and pays the required payment to the Port Authority & the Port Authority police 2.5.10. The Port Authority & the Port Authority police receive payment and issue receipts 2.5.11. • The port authority officer issues approval for the entry of the vessel • The quarantine officer boards the vessel, performs a visual inspection, and issues a permit for approval of the vehicle (CROLEST). 2.5.12. Importer obtains the approval for the offloading request and offloading begins
Output criteria to exit the business process	The Egyptian importer obtains approval for the offloading request
Average time required to complete this business process	3 hours

Core business process area 2.6: Obtain delivery order

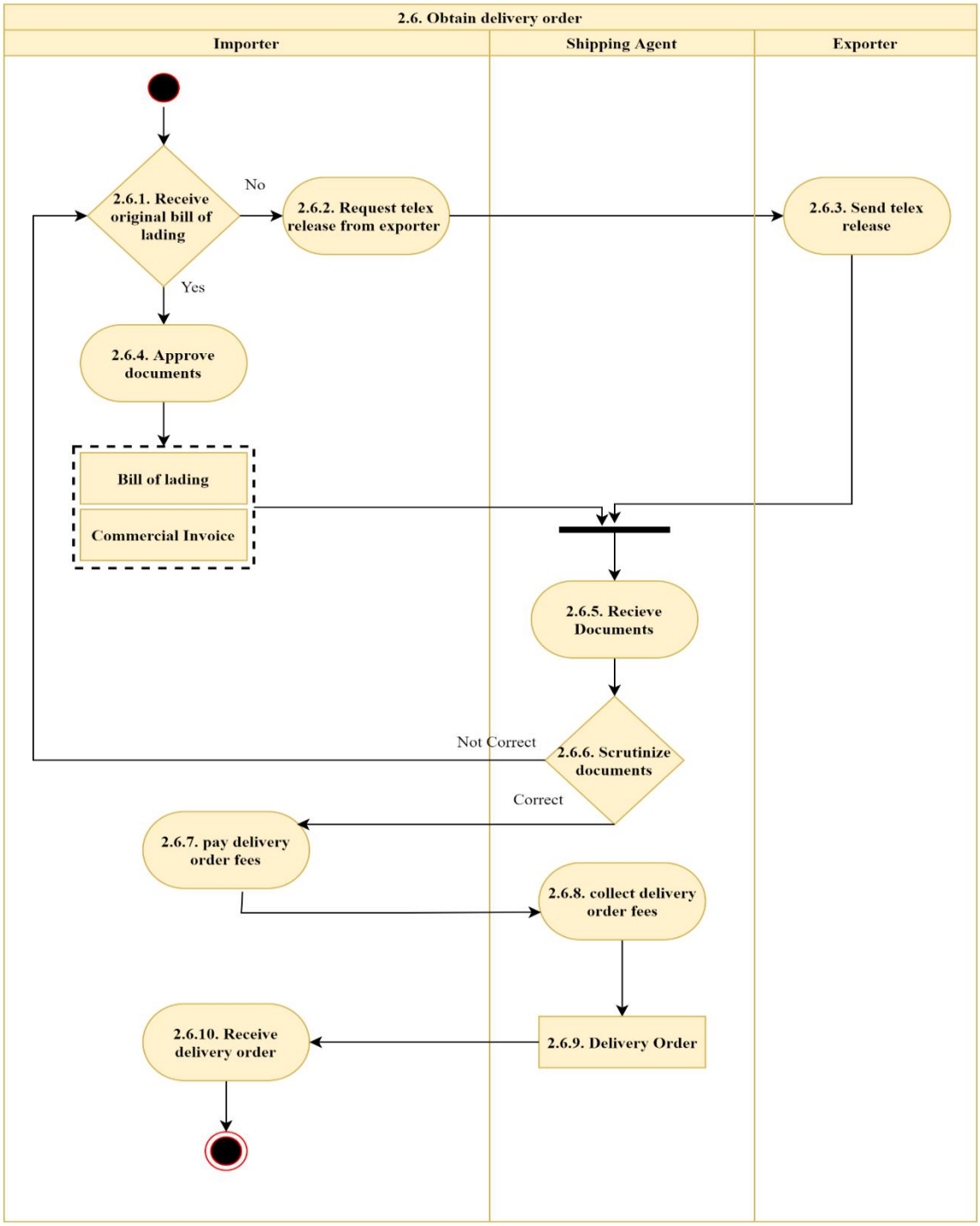
Figure 3.15. "*Obtain delivery order*" use case diagram



The use case diagram shown in Figure 3.15 suggests that "Obtain delivery order" process requires the participation of:

- Egyptian importer
- Exporter (supplier)
- Shipping agent

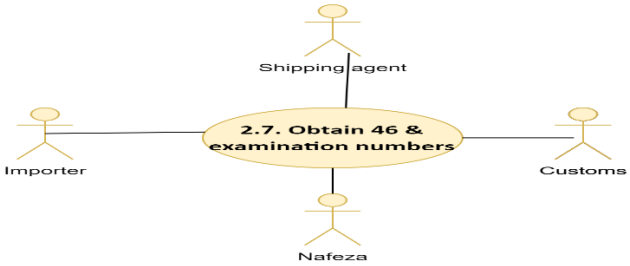
Figure 3.16. “Obtain delivery order” activity diagram



Name of process area	**2. Ship**
Name of business process	***2.6. Obtain delivery order***
Related laws, rules, and Regulations	• Law No. 118 of 1975 promulgating the Import and Export Law and its executive regulations issued by Ministerial Decision No. 770 of 2005 and their amendment. • Customs Law No. 207 of 2020 and its executive regulations promulgated by Minister of Finance decision No. 430 of 2021 and their amendments
Process participant	• Importer • Shipping agent • Exporter (supplier)
Input and criteria to enter/begin the business process	Egyptian importer has the bill of lading or the telex release
Activities and associated documentary requirements	2.6.1 Has the bank delivered the documents to the importer on time? 2.6.2 If the bank has not delivered the documents to the importer on time, they request telex release from the exporter via email. 2.6.3 The exporter sends telex release to the shipping agent. 2.6.4 If the bank delivered the documents to the importer on time, the importer approves the documents and uses the original copy of the bill of lading along with the commercial invoice to apply for the delivery order. 2.6.5 The shipping agent receives either the original copy of the bill of lading or the telex release. 2.6.6 The shipping agent reviews the documents, if they are not acceptable the importer has to start all the process again 2.6.7 If the documents were accepted, the importer pays delivery order fees to the shipping agent 2.6.8 The shipping agent collects delivery order fees 2.6.9 The shipping agent signs the delivery order 2.6.10 The importer collects the delivery order
Output criteria to exit the business process	Delivery order
Average time required to complete this business process	3 hours (Depends on the steps above)

Core business process area 2.7: Obtain 46 & examination numbers

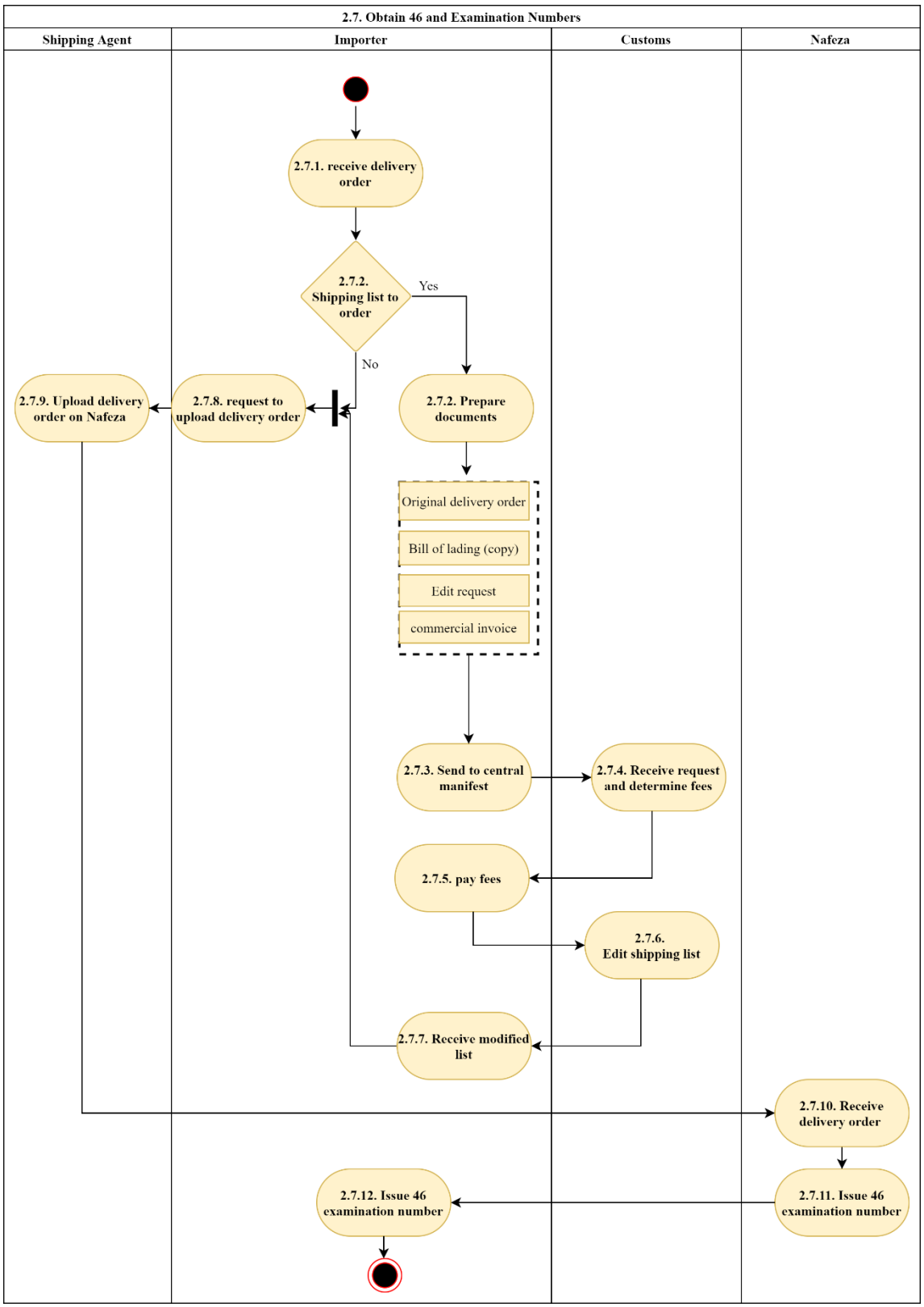
Figure 3.17. "Obtain 46 & examination numbers" use case diagram



The use case diagram shown in Figure 3-17 suggests that "Obtain 46 & examination numbers" process requires the participation of:

- Importer
- Customs
- Shipping agent
- NAFEZA platform

Figure 3.18. “Obtain 46 & examination numbers” activity diagram

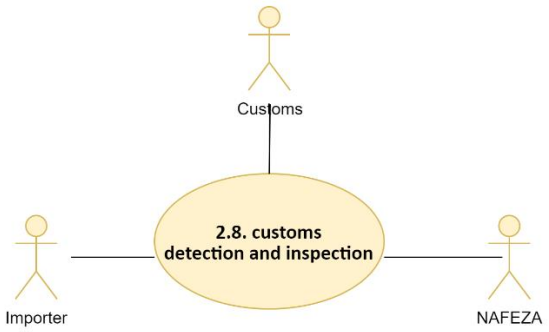


Name of process area	**2. Ship**
Name of business process	***2.7. Obtain 46 & examination numbers***
Related laws, rules, and regulations	• Customs Law No. 207 of 2020 and its executive regulations promulgated by Minister of Finance Decision No. 430 of 2021 and their amendments • Law No. 118 of 1975 promulgating the Import and Export Law and its executive regulations issued by Ministerial Decision No. 770 of 2005 and their amendments
Process participant	• Egyptian importer • Customs • Shipping Agent • NAFEZA platform
Input and criteria to enter/ begin the business process	Importer already received the delivery order
Activities and associated documentary requirements	2.7.1. Egyptian importer or customs clearing agent receives delivery order 2.7.2. If the shipping list is "To order," importer or customs clearing agent prepares documents like (original delivery order, bill of lading (copy), edit request, commercial invoice) 2.7.3. Importer or customs clearing agent submits central manifest at the customs authority to modify the shipping list 2.7.4. Central manifest receives request and determines the fees 2.7.5. Importer or customs clearing agent is notified to pay fees 2.7.6. Central manifest edits shipping list 2.7.7. Importer or customs clearing agent receives modified list 2.7.8. Importer or customs clearing agent asks shipping agent to upload delivery order on NAFEZA (online) 2.7.9. Shipping agent uploads delivery order 2.7.10. NAFEZA receives delivery order 2.7.11. NAFEZA issues 46 & examinations numbers 2.7.12. Importer receives 46 & examinations numbers
Output criteria to exit the business process	• 46 Number • Examination number

Average time required to complete this business process	1 hour

Core business process area 2.8: customs detection and inspection

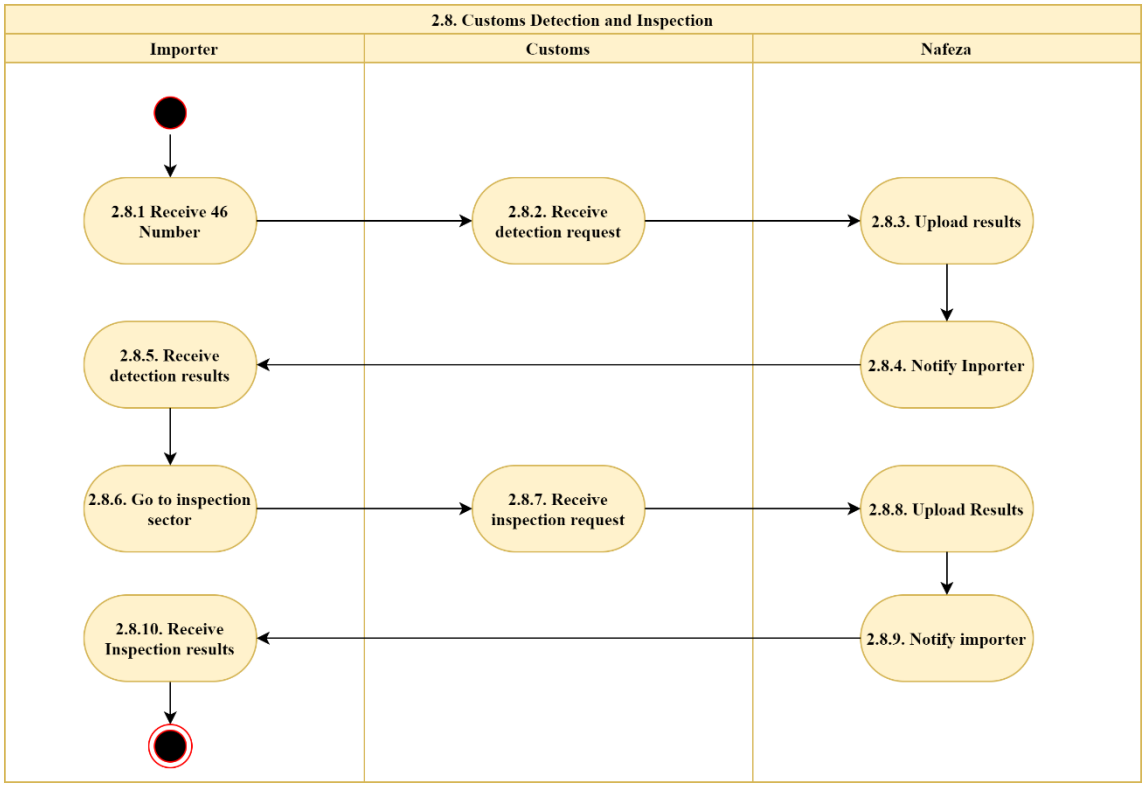
Figure 3.19. "Customs detection and inspection" use case diagram



The use case diagram shown in Figure 3.19 suggests that "customs detection and inspection" process requires the participation of:

- Egyptian importer
- NAFEZA
- Customs

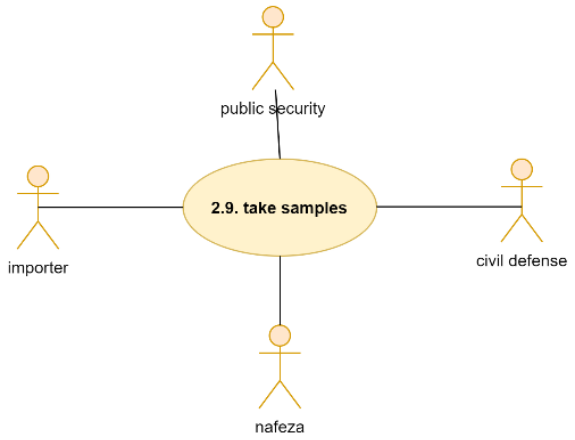
Figure 3.20. “Customs detection and inspection” activity diagram



Name of process area	**2. Ship**
Name of business process	***2.8. Customs detection and inspection***
Related laws, rules, and regulations	• Customs Law No. 207 of 2020 and its executive regulations promulgated by Minister of Finance Decision No. 430 of 2021 and their amendments • Law No. 118 of 1975 promulgating the Import and Export Law and its executive regulations issued by Ministerial Decision No. 770 of 2005 and their amendments • Circular No. 21 of 2019 regarding goods subject to loss or damage
Process participant	• Importer • NAFEZA • Customs
Input and criteria to enter/ begin the business process	Egyptian importer already has 46 number and examination number
Activities and associated documentary requirements	2.8.1. Egyptian importer receives 46 number to begin the customs clearance procedures 2.8.2. • The importer or customs clearing agent presents the shipment to the customs inspection officer to analyze and verify the goods • The officer of detection receives request and performs detection 2.8.3. The officer uploads the result on the Nafeza platform 2.8.4. Nafez notifies importer 2.8.5. Importer receives the results of detection 2.8.6. Importer begins the procedures of the inspection to determine the type of good and customs classification of the shipment. 2.8.7. The inspector receives request and perform inspection 2.8.8. The inspector uploads the result on the Nafeza platform 2.8.9. Nafeza notifies importer 2.8.10. Importer receives the results of inspection
Output criteria to exit the business process	Inspected goods
Average time required to complete this business process	2 hours

Core business process area 2.9: Take samples

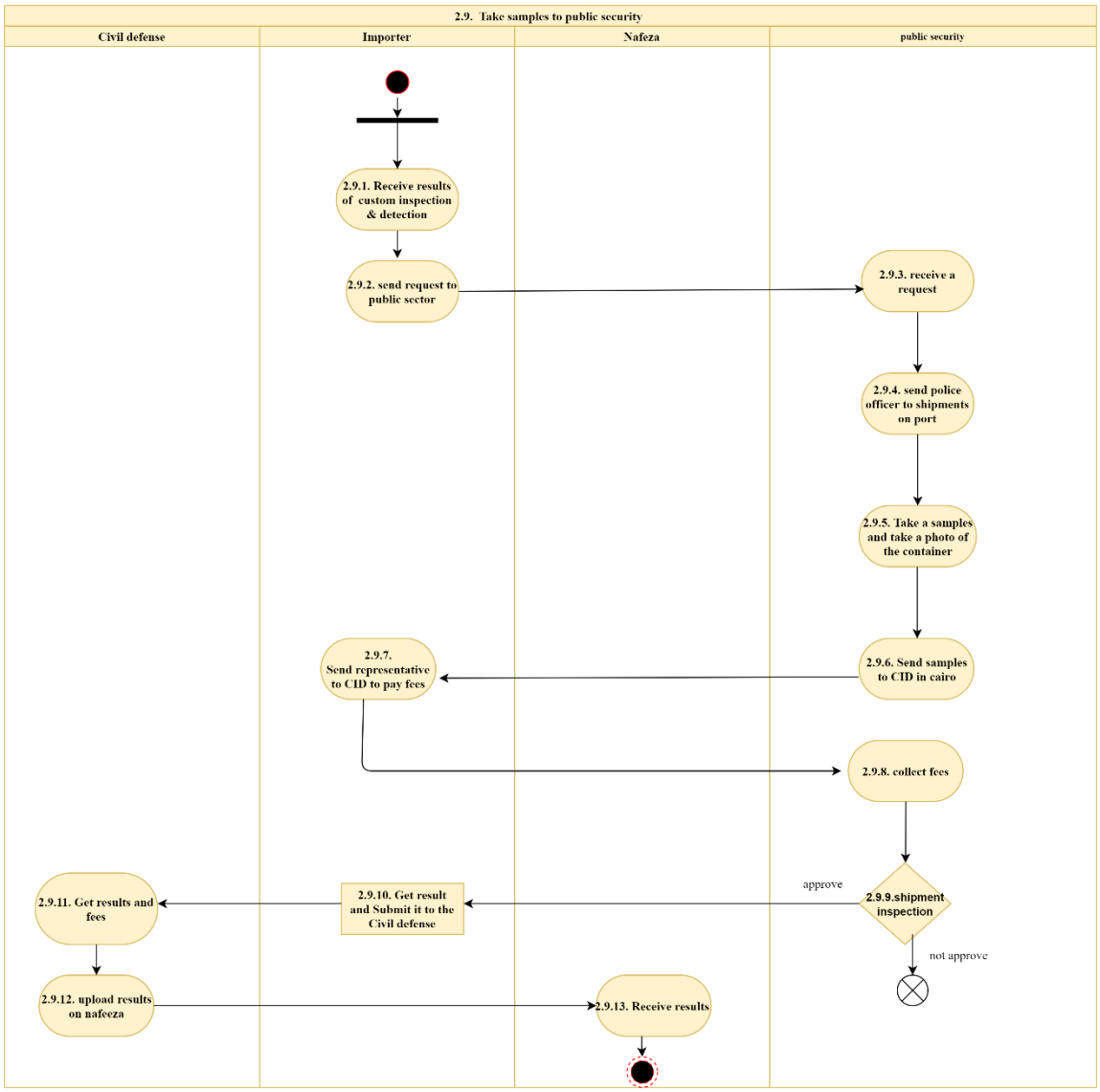
Figure 3.21. "Take samples" use case diagram



The use case diagram shown in Figure 3.21 suggests that "Take samples and receive shipment under reservation" process requires the participation of:

- Egyptian importer
- Public Security (Al Amn Al Aam)
- Civil Defense
- NAFEZA

Figure 3.22. “Take samples activity diagram”



Name of process area	**2. Ship**
Name of business process	***2.9 Take samples***
Related laws, rules, and regulations	• Customs Law No. 207 of 2020 and its executive regulations promulgated by Minister of Finance Decision No. 430 of 2021 and their amendments • Law No. 118 of 1975 promulgating the Import and Export Law and its executive regulations issued by Ministerial Decision No. 770 of 2005 and their amendments • Circular No. 29 of 2022 regarding customs administrations providing military intelligence offices with chemicals-related customs certificates until electronic linkage is established • Circular No. 28 of 2022 regarding the customs release mechanism for shipments of powders of all types and colors, and chemicals • Circular No. 27 of 2022 regarding the exclusion of production requirements and raw materials from the instructions of the Central Bank to stop using collection documents • Circular No. 3 of 2022 regarding facilitating the customs release of chemicals Procedural Circular No. 40 of 2019 regarding chemicals
Process participant	• Egyptian importer • Public security • Civil defense • NAFEZA
Input and criteria to enter/ begin the business process	Samples has already been drawn
Activities and associated documentary requirements	2.9.1. The importer or clearing agent receives the results of custom inspection and detection 2.9.2. The importer sends a request to General Security (Al Amn Al Aam) to start inspections 2.9.3. Public Security revives request 2.9.4. Public Security sends police officer to the port to take samples 2.9.5. The police officer opens the container and takes a sample along with a photo of the container

	2.9.6. Public Security sends sample to Criminal Investigation Department (CID) on Cairo 2.9.7. Importer or clearing agent travels to Cairo to pay fees to CID, If the examination request is urgent, EGP 5200 pounds is paid, if non-urgent, EGP 2400 is paid. 2.9.8. Public Security collects fees 2.9.9. The examination process begins 2.9.10. If approved, importer's representative gets the results and submit it to Civil Defense 2.9.11. Civil Defense gets results and collects fees 2.9.12. Civil Defense uploads results on Nafeza 2.9.13. Nafeza receives the results
Output criteria to exit the business process	Importer completed the regulatory requirements to receive shipment
Average time required to complete this business process	10 days

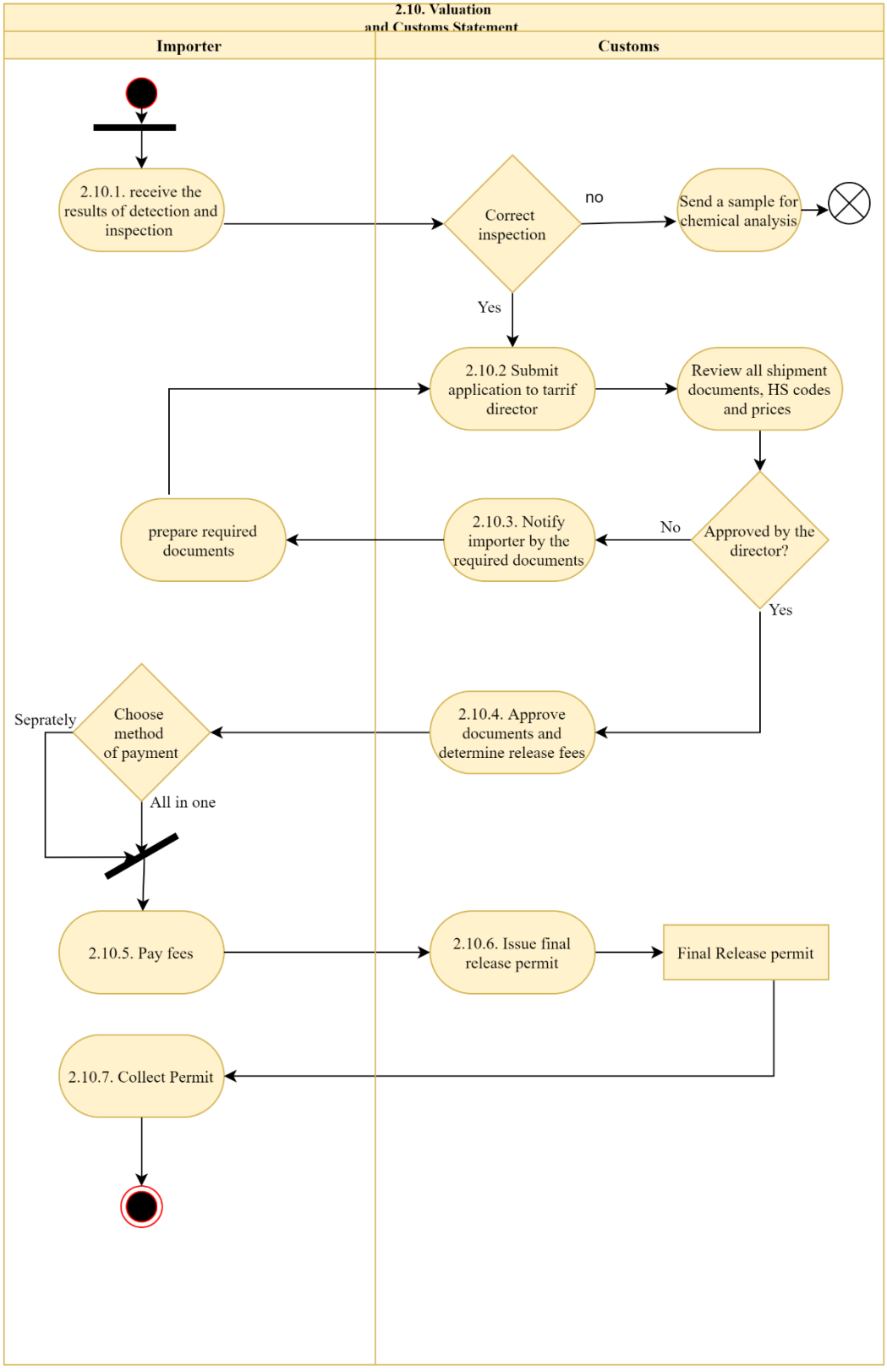
Core business process area 2.10: Valuation and Customs Statement

Figure 3.23. "Valuation and customs statement" use case diagram

The use case diagram shown in Figure 3.23 suggests that "Valuation and Customs Statement" process requires the participation of:

- Egyptian importer
- Customs

Figure 3.24. “Valuation and customs statement” activity diagram

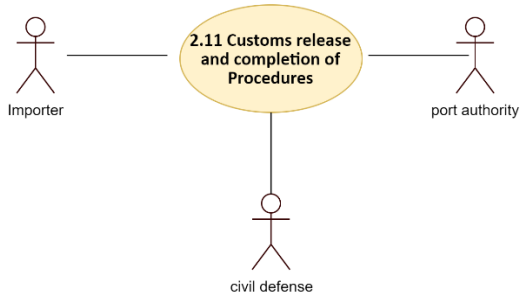


Name of process area	**2. Ship**
Name of business process	***2.10. Valuation and customs statement***
Related laws, rules, and regulations	• Customs Law No. 207 of 2020 and its executive regulations promulgated by Minister of Finance Decision No. 430 of 2021 and their amendments • Law No. 118 of 1975 promulgating the Import and Export Law and its executive regulations issued by Ministerial Decision No. 770 of 2005 and their amendments • Law No. 67 of 2016 promulgating the Value Added Tax Law and its executive regulations issued by the Minister of Finance Decision No. 66 of 2017 • Procedures Circular No. 4 of 2022 reminding of the procedures of Circular 43 of 2020 regarding valuation procedures under MTS • Circular No. 29 of 2022 regarding customs administrations providing military intelligence offices with chemicals-related customs certificates until electronic linkage is established • Circular No. 28 of 2022 regarding the customs release mechanism for shipments of powders of all types and colors, and chemicals • Circular No. 27 of 2022 regarding the exclusion of production requirements and raw materials from the instructions of the Central Bank to stop using collection documents. • Circular No. 3 of 2022 regarding facilitating the customs release of chemicals • Procedural Circular No. 40 of 2019 regarding chemicals
Process participant	• Importer • Customs
Input and criteria to enter/ begin the business process	Detection and inspection have been completed
Activities and associated documentary requirements	2.10.1. • Importer receives the results of detection and inspections, along with the tariff manager.

	• If the inspection is incompatible a sample is sent to the chemistry department for examination 2.10.2. Tariff Manager reviews all documents and makes sure that all import restrictions are met, and reviews prices to make sure of them 2.10.3. If there are problems with the documents, the importer is notified 2.10.4. Tariff manager approves the documents and sets the total fees required for release which include (customs duties, value added Tax, commercial and industrial tax of 1% (and Nafeza fees at EGP 1780). 2.10.5. • The importer or customs clearing agent pays the required amount, which appears in a unified invoice 2.10.6. Customs receives the payment status on NAFEZA platform, and a release permit is issued. 2.10.7. After the payment process is completed, the importer or clearing agent can print the customs statement and customs clearance on the Nafeza platform.
Output criteria to exit the business process	Customs statement
Average time required to complete this business process	• Average 1 day (custom clearance agents are still operating just as before only with few automated procedures (not digitized)). Each approving authority at the other end is still following its own separate procedures/approval process without integration with each other.

Core business process area 2.11: Customs release and completion of Procedures

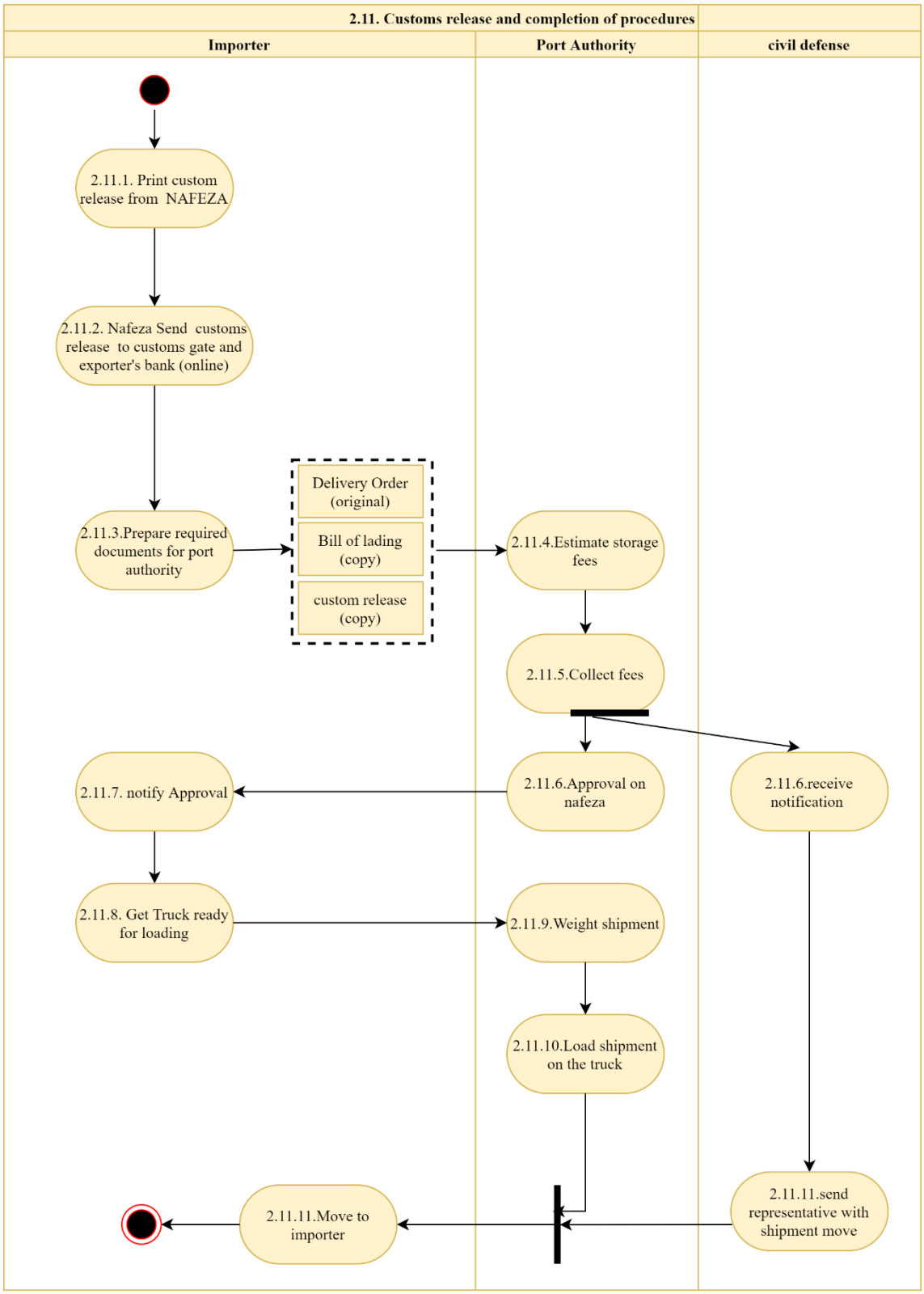
Figure 3.25. "Customs release and completion of Procedures" use case diagram



The use case diagram shown in Figure 3.25 suggests that "Customs release and completion of Procedures" process requires the participation of:

- Egyptian importer
- Port authority
- Civil Defense

Figure 3.26. “Customs release” activity diagram



Name of process area	**2.Ship**
Name of business process	***2.11. Customs release and completion of Procedures***
Related laws, rules, and regulations	• Customs Law No. 207 of 2020 and its executive regulations issued by Minister of Finance Decree No. 430 of 2021 and their amendments • Law No. 118 of 1975 promulgating the Import and Export Law and its executive regulations issued by Ministerial Decision No. 770 of 2005 and their amendments • Decision of the Minister of Finance No. 367 of 2021 regarding prior customs clearance procedures • Procedures Circular No. 8 of 2021 regarding procedures of the specific tariff manager after completion of the appraisal process and turning the declaration into approved and under payment • Reminder Procedures Circular No. 2 of 2021 regarding the documents to be submitted for the release of imported and exported goods • Procedures Circular No. 23 of 2020 regarding prior release • Procedures Circular No. 5 of 2018 regarding the existence of six customs release tracks • Circular No. 28 of 2022 regarding the customs release mechanism for shipments of powders of all types and colors, and chemicals
Process participant	• The port authority • The importer • Civil Defense
Input and criteria to enter/ begin the business process	All customs fees have already been paid
Activities and associated documentary requirements	2.11.1. After the payment process is completed, the importer can print the customs statement and customs release on the Nafeza platform. 2.11.2. Customs clearance is sent to the customs gate, the importer's bank, and the archive of the customs through Nafeza 2.11.3. The importer delivers to the following documents to the port authority including (an original document of the delivery permit, a copy of the bill of lading and a copy of the customs release document).

	2.11.4. The Authority appraises the storage fees at (EGP 1/per day/per ton plus 14% VAT). 2.11.5. the port authority Collect fees 2.11.6. After paying the port authority fees, the importer is given exchange approval on the Nafeza platform. Also, Civil Defense receive notification 2.11.7. Notify the importer that approval is done 2.11.8. The importer can enter their trucks to load the shipment through the customs release number. 2.11.9. The shipment is weighed before exiting the customs gate and importer pays if there is difference in weight recorded in invoice and the real weight. The fee is calculated as (EGP 1 per ton). 2.11.10. The shipment is cleared from customs and transported to the importer's facilities. 2.11.11. The shipment will be moved to the importer warehouse and the representative of civil defense move with it for protection
Output criteria to exit the business process	The exit of the goods from the port and the arrival of the goods to the warehouse.
Average time required to complete this business process	1 day

3C. Process area 3: Pay

(Already concluded in shipment)

Conclude payment

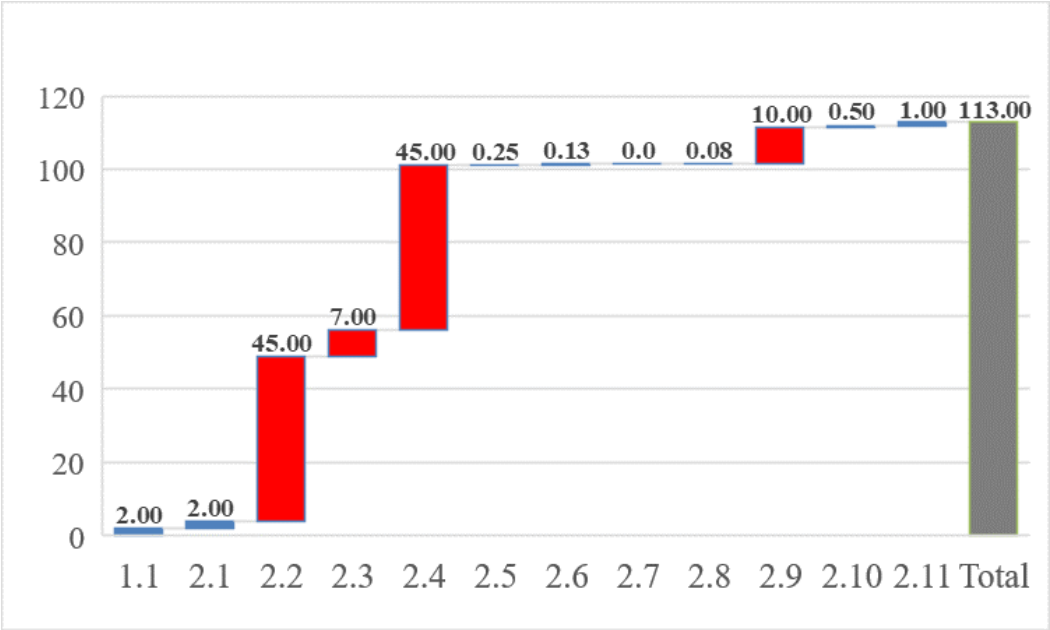
Once each party (buyer and seller) has fulfilled its commitments (seller: sending the shipping documents; buyer: making the payment), the pay-process is considered completed. Since the money and document transfers are across two countries, it can take up to 45 days. Payment for the iron and steel is concluded in process 2.2 & 2.4 “Letter of Credit.” Therefore, no extra graph is drawn for the pay-process.

4. Time procedure chart of polymers of ethylene imports to Egypt

Figure 4.1 presents a time-procedure chart listing core business processes that are required to import Polymers of Ethylene to Egypt. The time procedure chart suggests that it takes on average 113 days for the importing enterprise to fulfill commercial and regulatory requirements of 13 polymers of Ethylene business processes.

Figure 4.1 also shows that only 4 business processes consume more than 95 percent (107 days) of the time required to import Polymers of Ethylene into Egypt.

Figure 4.1. Time procedure chart for polymers of ethylene imports



Part II: "To Be" Scenario

1. The methodology of dealing with the "To Be" scenarios

The "To Be" scenario starts with identification of key problem areas, followed by suggestions of corrective solutions based on stakeholders' opinions, international experiences and ECES's analysis and expertise.

Many key observations need to be made here before getting into the details of analysis of the specific product:

1. Even though the Customs Authority looks like it is the core of all bottlenecks associated with importation process, the fact of the matter is that the Customs Authority is the interface window with several other organizations such as port authorities, many inspection organizations (around 38) among others. All deficiencies or weaknesses in these organizations are reflected in Egyptian importer's dealings with Customs. As a matter of fact, the slowest junction determines the pace of the entire import process.

2. The interface system "Nafeza" itself has numerous deficiencies in its original design and implementation phase as it does not achieve the full depth integration of processes, which was originally promised, and which leads to the maximum efficiency needed. Instead, the system is expanding horizontally to additional organizations. This is complicating problems and adding unnecessary layers of bureaucracy.

3. The above does not deny the fact that the Customs Authority needs serious reform and complete digitization. The fact that "documentation cycle" in Egypt is slower than "product cycle," is clearly unlike the norm in the entire world.

4. There are significant differences in costs and procedures between different ports even for the same product. This manifestation of the problem means no proper estimation of duration or costs for the import process as a whole, not to mention heavy traffic on ports with "easier" procedures.

5. Serious focus on solving all bottlenecks associated with import processes is needed to take full priority, because it is the real heart of all problems regarding trade process. In fact, solving it is a precondition for exportation itself, raising competitiveness and improving business environment.

6. Governmental orientation needs to be changed drastically from targeting “import prohibition” to “export promotion” because both targets have the same positive effect on foreign exchange.

7. Both targets will not be achieved unless there is trust in the private sector. The perception and belief by authorities that the private sector is corrupt until proven otherwise needs to be reversed to a belief that corrupt behavior is rare and cannot be the base upon which all polices, and surveillance actions are decided.

8. A sizable portion of all problems associated with trade processes is linked primarily to the Ministry of Finance with its different departments and a secondary responsibility falling on the Ministry of Trade and Industry. The core of these problems lies in the fact that the Ministry of Finance has “collection of Money” as its main objective. Furthermore, the limited coordination between the Ministry of Finance and the Ministry of Trade and Industry, deepens the misconception and misunderstanding of the industrial and export development objectives.

9. As per the best practices, increasing efficiency and transparency of the import process is dynamic in nature. It means that it requires continuous institutionalized involvement of and consultation with different stakeholders, especially the private sector, not to mention high flexibility in preparation of strategies, implementation mechanisms and regular monitoring and evaluation.

The detailed methodology is as follows:

Analyzing the business process for importing polyethylene revealed several bottlenecks. Those bottlenecks arise due to a problem either in the design of the system itself, or in the implementation of the system and finally the lack of relevant policy action as clarified in Table 1 below**.**

Table 1. Definition of different types of problems

Nature of the Problem	Definition
Failure in system design	When the system fails to achieve the objective due to inadequate planning, missing elements, adopting partial solutions, or system adopted is not consistent to what is adopted internationally.
Failure in system Implementation	When the system fails to achieve the objective due to problems related to poor management, employees' resistance, or lack of human capabilities to implement the new system
Lack of relevant policy action	The problem has not been addressed by appropriate policy action, even though the system design and system implementation exist

The following table proposes a list of corrective actions to each of these bottlenecks and the expected impact. Corrective actions are classified by the timeframe of implementation, with immediate actions denoted by the letter (I), short term (2-5 months) actions denoted by the letter (S) and medium-term actions denoted by the letter (M) (6 months-1year). The timeframe is intentionally short because the problems are very urgent to address. Several immediate measures are meant to reduce the extent of the problem until deeper corrective actions are adopted.

These proposed corrective actions fall into two categories as follows:

- Category (A): First-best solutions which are radical changes based on international experiences
- Category (B): Second-best solutions which are improvements the existing system

Both categories are included in our analysis to make sure that the "To Be" scenario is realistic and viable.

Several international experiences have been studied with respect to problems related to system design and system implementation. Reference is made in the table 2 to the relevant international experience. Following is the table of the modified business process. Charts are in a separate document due to different paper size.

2. Detailed table for the modified trade process (To Be)

Table 2. Proposed corrective actions in the business process of importing polyethylene (HS3901)

Business Process Area	Bottleneck	Nature of the Problem	Relevant International Experience	Proposed Solution	Impact	
					Process of import	**Others**
Pre-requisites						
	• Importation of polyethylene requires multi-staged registration procedures with several organizations (namely GOEIC, IDA, GAFI and Customs Authority). • Although most of documents are the same, there is not enough coordination among the three organizations. • IDA in particular is a major bottleneck regarding industrial licenses. • The information about time, fees, documents, and	• Failure in System design and implementation	Turkey and Gulf countries	• Complete digitization of all services related to trade process on Nafeza platform, so users can apply electronically through one online user-friendly platform (S) • All information regarding documents, time, fees should be available on the internet in a timely, updated format, and in a binding manner (I).	• Speed up pre-requisite for import processes and remove redundant resubmission of duplicate document	• Improve the overall business environment, which will eventually lead to a rise in investment, production, and exports

Business Process Area	Bottleneck	Nature of the Problem	Relevant International Experience	Proposed Solution	Impact	
	procedures required is not necessarily available in an updated format on their websites. • Failure to renew any pre-requisite documents will stop the import process at any stage.			• IDA must implement law 15 / 2017 for easy issuance of industrial license, especially for low-risk activities (I) • There is a need to improve capabilities of IDA employees to be able to provide efficient services to the business community in a professional way. (S) **Radical Change (M):** • Expand vertical and horizontal digitization for all business services: trade, licensing, land finance, etc., so users can apply electronically through		

Business Process Area	Bottleneck	Nature of the Problem	Relevant International Experience	Proposed Solution	Impact	
				one online, user-friendly platform		
	• Suppliers to Egypt face several difficulties regarding MTI Decree No 43 /2016 which involves: • Lack of transparency and ambiguity in GOIEC registration procedures, duration, and costly informal payments.	• Wrong policy action	• There is no other country that applies such procedures	• Cancellation of Decree 43 altogether since there is no benefit from applying it to any of the parties involved	• Widen the suppliers base for Egyptian imports	• Improve Egypt's image in the trade world and avoid reciprocal actions by other countries against Egyptian products.
1. Buy						
Trade steps of relevance to production						
2. Ship						

Business Process Area	Bottleneck	Nature of the Problem	Relevant International Experience	Proposed Solution	Impact	
2.1 Obtain ACID number	• Since October 2021, the Advance Cargo Information system (ACI) is applied. Egyptian importers face many problems: • System is not user friendly • Unnecessary details are needed for the registration process • The system accepts original documents only • Any change of information/ correction is not allowed such as changing bank details or port • Weak technological infrastructure interrupts the registration process • Any small mistake in the registration process requires re-submission of all data.	• Failure in System design and implementation	• UAE, Brazil	• Improve system design to overcome current challenges. (I) • To be user friendly • Remove unnecessary details for registration • To accept changes and edits • To accept photocopies • Strengthen the technological infrastructure to make sure the system is working efficiently • Developing the system to automatically fill the detailed required data from uploaded documents.	• Facilitation of obtaining ACID number, decrease duration through increasing system efficiency and eliminating step No. 2.1.3 (Figure 3.6). • Minimize human intervention across the registration process and reduce errors • Egyptian importer will get ACID number	• Improve cross border trading and increase the efficiency of trade procedures, time, etc. • Maximum efficiency of trade process will be achieved

Business Process Area	Bottleneck	Nature of the Problem	Relevant International Experience	Proposed Solution	Impact	
	• The system cannot automatically fill the detailed required data from the documents uploaded. • Users of the system are not informed of periodic changes in a timely manner			• Proper and timely communication with users on the latest changes in relevant procedures legislation, fees. etc., **Radical Change (M):** • Use 4IR technologies especially artificial intelligence (AI), machine learning (ML) and big data (BD) to intelligently: • Distinguish original from copies • Classify products according to their level of risk • Determine proper future action regarding	along with their risk category and all details regarding the import process including risk factor for their product, upcoming steps across Customs procedures • Finally, they can predict the time and cost for the whole import process.	

Business Process Area	Bottleneck	Nature of the Problem	Relevant International Experience	Proposed Solution	Impact	
				Customs inspection and sampling percentage and frequency for each category based on two criteria: 1. The commodity risk is a predetermined factor based on an algorithm 2. Credibility of Egyptian importers. • Categorize importers as per their historical behavior based on their credibility and correctness of all previous procedures into red, yellow, and green.		

Business Process Area	Bottleneck	Nature of the Problem	Relevant International Experience	Proposed Solution	Impact	
				• Identify a different process as per category (green is the fastest one)		
	• ACI system was implemented with neither proper involvement of relevant stockholders nor testing phase to improve the system upon the feedback from users.	• Lack of a proper policy action • Failure in system implementation		• Institutionalize the continuous involvement of different stakeholders in designing the system and its implementation mechanism, and dynamic changes needed.	• Remove bottlenecks that are causing a multitude of problems	
2.2. Apply for letter of credit	• Applying for LC requires submitting the same documents uploaded on Nafeza. • Shortage in foreign currency plus the CBE March Decree resulted in long durations to issue LCs. • It resulted in raising the prices of polyethylene locally	• Wrong policy action	• Central bank direct intervention in B2B relations does not exist elsewhere worldwide	• Cancel the CBE decree completely (as announced by CBE, it is expected to take place by December 2022) (I) • The banking system needs to give a higher priority to quickly cover importing intermediate products (I)	• Fast issuance of letter of credit and import process, especially for intermediate inputs • Decrease inflexible	• Solve production problems and remove disruption of the whole supply chain • Keep Egypt's share in foreign markets

Business Process Area	Bottleneck	Nature of the Problem	Relevant International Experience	Proposed Solution	Impact	
	• Although polyethylene as a raw material is exempted from the CBE decree, all partners across the supply chain are still subject to the decree so they face many problems disturbing the manufacture of plastic • The impact of these problems was also felt at the technical level as public companies reduce their supply of polyethylene to SMEs			• Involvement issuing LC on Nafeza platform • Establish Institutional mechanisms for the involvement of and consultation with different stakeholders in economic policy process (S)	tendencies at all levels in the entire chain • Remove redundant resubmission of duplicate documents	for plastics and keep up with competitors
2.3. Preparing and approving shipping documents	• As per the ACI system, foreign suppliers must upload all documents related to the shipping transaction on the CargoX platform, which is linked to the Nafeza platform.	• Failure in system design & system implementation	• Governme nt direct intervention in B2B relationships does not exist	• It is necessary to allow any digital corridor service other than CargoX to be used by foreign supplier. (I)	• Facilitate preparing and approving shipping documents	• Expand the supplier base for Egypt

Business Process Area	Bottleneck	Nature of the Problem	Relevant International Experience	Proposed Solution	Impact	
	• Suppliers claim that registration on CargoX is complicated; it is not user friendly, it requires much detailed information, and high costs of around $165 per transaction • Enforcing suppliers to register on CargoX only is considered as Government interference into the B2B relation. • Usually, form 4 is issued manually		elsewhere in the world	• Revisiting the cost of registering on CargoX. • Form 4 is automatically issued through Nafeza		
2.5. Offloading	• All procedures related to offloading are done totally outside the NAFEZA platform • There is a lack of transparency regarding procedures, duration, cost for	• Failure in system design and implementation		• Cancel separate application by having it take place automatically on NAFEZA. (I) **Radical Change (M):**	• Facilitate offloading process, increase transparency regarding the procedures, duration, and cost	• Facilitate another part of the import process that activates trade and increases Egypt's

Business Process Area	Bottleneck	Nature of the Problem	Relevant International Experience	Proposed Solution	Impact	
	offloading process, especially that they are not unified across all Egyptian ports.			• Completely digitizing the whole import process implies automatically applying for offloading • Adding fees to the unified invoice paid at final release.	• Minimize human intervention	competitiveness .
2.6. Obtain 46 & examination numbers	• Egyptian importers pay additional charges to the Central Manifest to modify any item in the main import documents • Actual costs are determined through negotiation with employees. • Egyptian importers often face mandatory modification due to simple technical	• Failure in system design & system implementation		• Increase transparency of obtaining 46 and related cost paid by Egyptian importer (I) • Improving the Nafeza system to eliminate technical problems (I)	• Facilitate obtaining 46 • without exaggerated cost born by the Egyptian importer	• Reduce the informal fees • Speed the import process and increase efficiency and transparency

Business Process Area	Bottleneck	Nature of the Problem	Relevant International Experience	Proposed Solution	Impact	
	problems in the NAFEZA platform. • (For example, the number of the container cell contains 19 digits, while Nafeza allows for only 9 digits)			• Modifying the Manifest can take place directly through Nafeza platform (I) **Radical Change (M):** • Completely digitizing the whole import process implies reviewing the importance of this step altogether, so it may be canceled if there is no need for it or turn to be fully automatically implemented. • Adding the fees to final unified invoice paid at final release.		

Business Process Area	Bottleneck	Nature of the Problem	Relevant International Experience	Proposed Solution	Impact	
2.8 Customs detection and inspection	• In case of disagreement between the Egyptian importer and the Customs Authority regarding HS code, the debate will be raised to The Chemistry Administration. It might take 15-20 days or more to resolve the problem, in addition to the Egyptian importer bearing the costs of inspection, transportation, and additional storage costs. • The Chemistry Administration is the only entity authorized to do so, and usually has multiple disputes awaiting resolution.	• Failure in system design & System implementation		• To set timeframe regarding the duration of solving disputes for product code. (I) • Improve the procedure of the Chemistry Administration to speed the process of solving disputes. (I)	• Speed up the detection and inspection process	• Increase the efficiency and transparency of the release process
	• Customs detection and inspection usually take place		• UAE • Brazil	**Radical Change (M):** • Using 4IR technologies in complete	• Increase efficiency and transparency of	• Facilitate another part of the import

Business Process Area	Bottleneck	Nature of the Problem	Relevant International Experience	Proposed Solution	Impact	
	in absence of using 4IR technologies			digitization of the whole import process implies that the system will automatically determine • The following actions regarding Customs inspection according to the risk category of product and importer	inspection and detection • Decrease load on Customs • Minimize human intervention • For green products, the importer will shift to step 2.10.1 in AS-IS scenario and all steps before this step will be canceled	process that activates trade and increases Egypt's competitiveness .

Business Process Area	Bottleneck	Nature of the Problem	Relevant International Experience	Proposed Solution	Impact	
2.9. Take samples	• There is usually miscommunication between NAFEZA platform and inspection authorities, so the latter are not necessarily receiving inspection requests. • The Egyptian importer cannot predict the time taken to get the inspection results of samples • The determined date may be delayed if port is crowded (such as in case of Ain Sokhna port) • In case of polyethylene, it takes long duration to get the approval of General Security Authority (Al Amn El Aam) due to the following reasons: • The General Security Authority usually does not	• Failure in system design & implementation		• Development the Nafeza platform to be well linked with all inspection authorities so they well received the inspection requests. (I) • To set a timeframe regarding the duration of sample inspection by General Security Authority (Al Amn El Aam) (I) • Fees paid electronically to the General Security Authority (I)	• Speed sampling process and decrease its time	• Increase the efficiency and transparency of taking samples and hence the release process

Business Process Area	Bottleneck	Nature of the Problem	Relevant International Experience	Proposed Solution	Impact	
	have a representative in each port so the sample is inspected centrally in Cairo (CID). • Representative of General Security Authority may not travel and deliver the sample to Cairo (CID) immediately or on the same day. • Egyptian importers must pay the fees at the Cairo office. • After approval of General Security Authority, the Egyptian importer should apply to get approval from the civil defense authority.			• Cancel the step for Civil Defense approval (I)		
	• The Egyptian Customs and inspection authorities inspect each shipment even if it comes from the same	• Failure in system design and implementation	• Countries apply various risk management	• There is a need to specify the criteria on which risk is assessed. (I)		• Facilitate another part of the import process that

Business Process Area	Bottleneck	Nature of the Problem	Relevant International Experience	Proposed Solution	Impact	
	supplier and imported by the same Egyptian importers • The risk assessment system mentioned in the new Customs law is not implemented and there are no clear criteria on which risk is assessed		systems for imports • USA and Canada use a scoring system with scale from 1-10 • Turkey applies different colored tracks based on risk of imports	• Egyptian Customs in coordination with different inspection authorities should apply risk assessment system that has been mentioned in the new Customs law to easily categorize which products should be inspected. (S)		activates trade and increases Egypt's competitiveness .
			• Most countries all over the world	**Radical Change (M):** • Using 4IR technologies in complete digitization of the whole import process implies	• Minimize the human intervention in sampling process	• Facilitate another part of the import process that activate trade

Business Process Area	Bottleneck	Nature of the Problem	Relevant International Experience	Proposed Solution	Impact	
				that the system should automatically: • Classify products according to their risk • Determine the following proper actions regarding Customs inspection and sampling percentage and frequency for each category based on two criteria: • The product risk predetermined factor based on an algorithm • Creditability of Egyptian importers. - One inspection window in each port receives the inspection request automatically	• Cancel the direct • Relationship between Egyptian importer and Inspections Authority (cancel step 2.9.6 of AS-IS scenario and all related steps) • Minimize the duration and cost of inspection • Add all fees to the unified invoice paid at final release	and increase Egyptian competitiveness .

Business Process Area	Bottleneck	Nature of the Problem	Relevant International Experience	Proposed Solution	Impact	
				- The Egyptian importer can trace their transaction step by step through their account - All fees will be paid electronically in one user friendly platform		
2.10 Valuation and Customs Statement	• In case of approval on the samples, the results will be uploaded on the NAFEZA platform, and the appraisal stage begins. • The appraisal stage is not necessarily held in the arrival port and as such might take longer. • There is a lack of transparency regarding all the fees paid by the Egyptian	• Failure in system design and implementation	• In most international experiences, it is determined intelligently.	• It is necessary that the appraisal stage is conducted in the port of arrival, to save time and benefit from the experience of port employees regarding the products (I) • Linking the Nafeza platform with all relevant authorities and	• Speed valuation and release process • Increase transparency regarding the aggregated fees paid by Egyptian importers	• Facilitate another part of the import process that activates trade and increases Egypt's competitiveness .

Business Process Area	Bottleneck	Nature of the Problem	Relevant International Experience	Proposed Solution	Impact	
	importer. As the unified invoice is not comprehensive, it excludes other fees such as fees of port authority and shipping agent			entities electronically, so that Egyptian importer pays all fees once electronically. (I)		
	• Importation of polymers of ethylene faces price re-evaluation by Customs employees to prevent under estimation of invoices, but the revaluation process is implemented wrongly as it is not based on any market studies or reliable sources and the Customs employees either depend on local prices or their own judgment with focus only on increasing Customs fees.	• Improper policy action	• In Turkey, business associations determine the prices of each product based on market studies	• Revising the Price revaluation process to be implemented properly. This means to put a clear reliable reference for prices that is well known to Customs and Egyptian importers • This reliable reference for prices should be designed with the involvement of a business representative for each product and based on updated market studies.		

Business Process Area	Bottleneck	Nature of the Problem	Relevant International Experience	Proposed Solution	Impact	
				Radical Change (M): • Using 4IR technologies in complete digitization of the whole import process implies that the system will automatically determine the total fees that should be paid electronically in one user friendly platform	• Increase efficiency and transparency of Customs valuation	

Finally, it should be stressed that a dialogue with importers should be done on a regular basis, this is in addition to a consultation process with the importers before implementing any new policy, with a feedback mechanism on the implementation. It is also very important to consider the capabilities of implementing government agencies before putting any policy into action. This will lead to rebuilding trust between the government and importers, and save efforts and time wasted with a definite positive impact on the business environment.

In conclusion, the time required to complete the business process for importing Polyethylene products will be reduced from currently 113 days (including indirect time) to just 31 days in the second-best scenario, and to 11 days in the first best scenario as highlighted in charts (1), (2), (3) and table (3).

Figure 1. Polyethylene – time chart, "As Is" situation

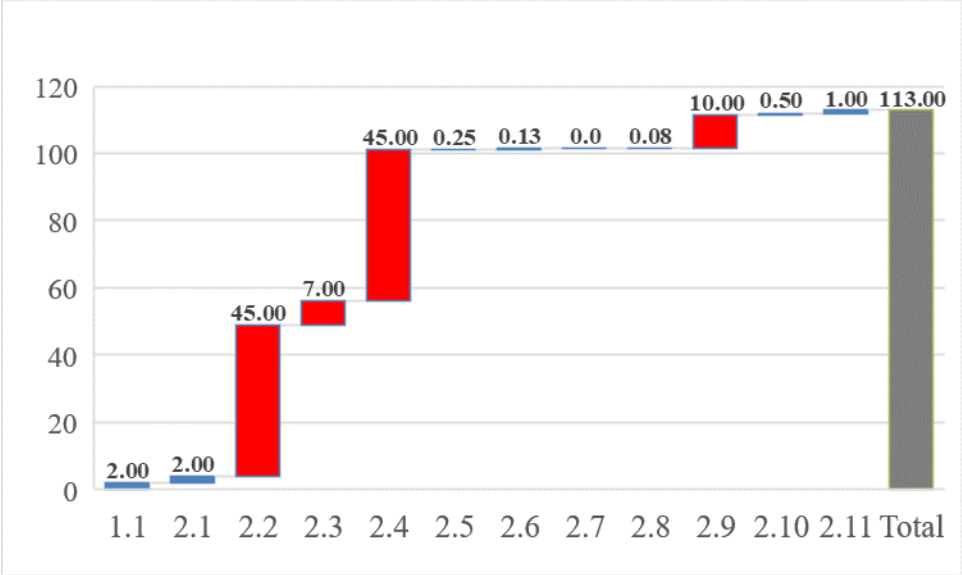


Figure 2. Polyethylene – time chart, "To Be" scenario (second best)

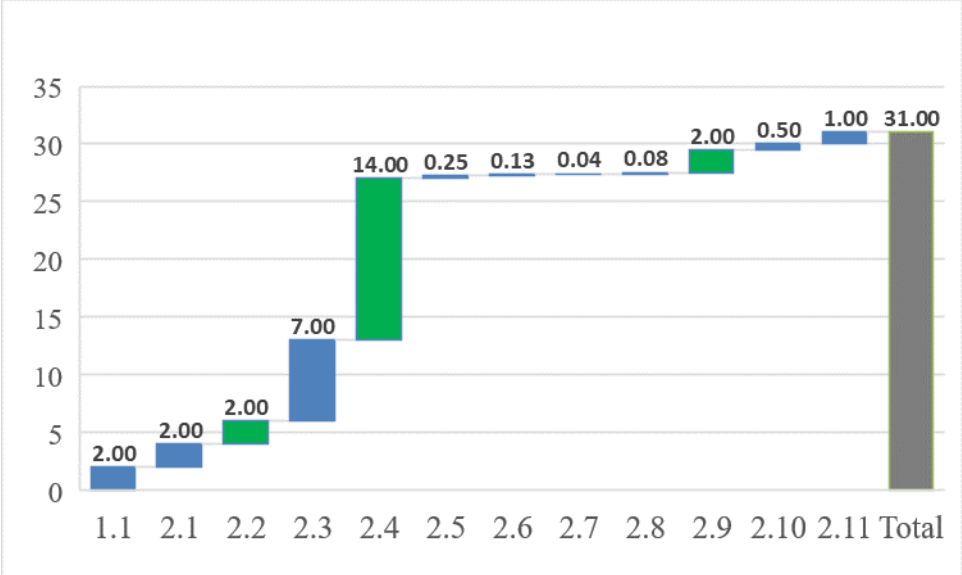


Figure 3. Polyethylene – time chart, "To Be" scenario (first best)

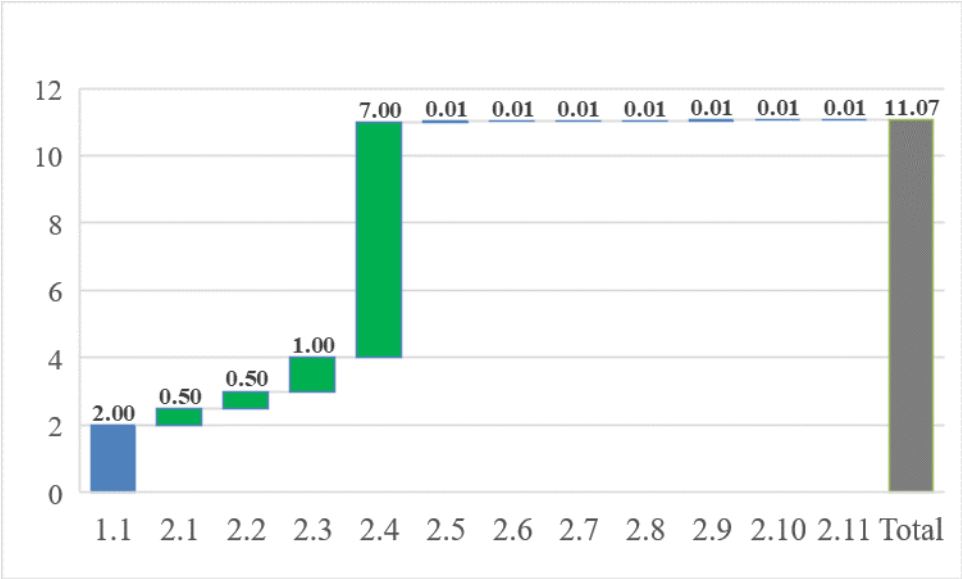


Table 3. Polyethylene – timetable, first best vs second best scenario

Process Area	ID	Business Process	AS IS	To Be (Second Best)	To Be (First Best)
Buy	1.1	conclude sales contract and trade terms	2	2	2
Ship	2.1	Obtain ACID number	2	2	0.5
	2.2	Apply for letter of credit	45	2	0.5
	2.3	Preparing and approving shipping documents	7	7	1
	2.4	importer's bank received the shipment documents,	45	14	7
	2.5	Offloading	0.25	0.25	0.0104
	2.6	Obtain delivery order	0.125	0.125	0.0104
	2.7	Obtain 46 & examination numbers	0.041	0.041	0.0104
	2.8	Customs detection and inspection	0.083	0.083	0.0104
	2.9	Take samples	10	2	0.0104
	2.10	Valuation and Customs Statement	0.5	0.5	0.0104
	2.11	Customs release and completion of Procedures	1	1	0.0104
Total			112.999	30.999	11.0728