



**STRATEGIES TO SECURE SEA PORTS AGAINST TERRORISM,
ILLEGAL TRADING AND ILLEGAL MIGRATION**

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ABBREVIATIONS

C-TPAT	====	Customs-Trade Partnership Against Terrorism
ILO	====	International Labour Organization.
IMO	====	International Maritime Organization.
IOM	====	International Organization for Migration.
Km	====	Kilometre.
KSA	====	Kingdom of Saudi Arabia.
SAF	====	Saudi Army Forces.
SBG	====	Saudi Border Guards.
SNF	====	Saudi Naval Forces.
SOLAS	====	International Convention for the Safety of Life at Sea.
SPA	====	Saudi Ports Authority.
STW	====	Saudi Territorial Waters.
UAV	====	Unmanned Aerial Vehicle.
UN	====	United Nations.

ABSTRACT

This study focuses on maritime security and illegal actions that take place at sea which can evolve into international conflicts and disputes. The field of maritime security entails the comprehensive confrontation of illegal actions such as maritime piracy, maritime terrorism, illegal trade of drugs and arms, plunder and environmental crimes. This study will focus on the ports of the Kingdom of Saudi Arabia (KSA) and will look at ways to achieve security and stability of the country's maritime transportation sector.

The study concentrates mainly on three issues: maritime terrorism, illegal trade and illegal immigration. Terrorism has increased, especially after the events of 9/11, and terrorists are using new methods to attack civilians and governments all over the world. The study concentrates on the danger of terrorism in seaports and sets out a strategy to confront it. Illegal trade is considered one of the most dangerous international crimes and all countries of the world suffer from the trafficking of drugs and arms. KSA is no exception. It suffers from these crimes across its maritime and territorial borders. Thus, it is important to tackle this crime via a security strategy for protecting Saudi ports. KSA also suffers from a high level of illegal immigration across its maritime and territorial borders, mainly from neighbouring countries such as Yemen, Somalia and Iraq. Illegal migrants are usually searching for work and a better life.

The study tries to find new methods to solve the problems of maritime terrorism, illegal trade and illegal immigration at large ports. Securing the coasts of KSA, which stretch 2000 km along both the Red Sea and the Arab Gulf, is an important matter,

especially nowadays with the spread of terrorist attacks due to international political and religious conflicts.

The geographical location of KSA is considered a huge obstacle to the successful securing of its ports and coasts, as KSA is surrounded by 13 countries. Some of these countries are very poor in terms of their economy and security level. There are also several political conflicts surrounding KSA, and every year thousands of migrants try to enter KSA looking for work or trying to perform religious pilgrimage. In addition, many methods are used for the trade of drugs, explosives and arms. All these issues are tackled in the study with the aim of setting a strategy for the protection of Saudi ports.

The researcher uses a questionnaire to obtain data from Saudi borders guards in order to recognize the role of these forces in protecting Saudi ports. At the end the researcher reaches conclusions and makes important recommendations for the KSA government to consider, for example: Saudi authorities may wish to approve the strategy suggested by the researcher to protect Saudi ports from maritime terrorism, illegal trade and illegal immigration using the latest technology. KSA must further develop and activate this security strategy. Saudi Arabia should use advanced technology systems for monitoring and protecting ports, especially pilotless planes (UAVs) to monitor the coasts.

1. CHAPTER ONE: INTRODUCTION

1.1 Background

The word “terrorism” has become one of the most commonly used words recently in both national and international circles. It is used in data, political speeches, legislative discussions, media and international conferences. The word is also used in philology and academic research. The popularity of its use stems from the acts committed on 9/11, which attracted the attention of the whole world, as well as from the procedures and actions taken by countries and approved by various organizations and international institutions with regards to a framework for the international campaign against terrorism. This word will continue to be used as long as terrorist operations persist.

Although many people use the term “terrorism”, the question to be asked is what specifically is terrorism? Is it enough to say that we know terrorism by watching it, or should we define it before we watch it?

There are various methods and means of terrorism, and terrorists have showed their proficiency and intelligence by using all means and applications of modern science to reach their goals and achieve their targets. Indeed, terrorism takes various forms, such as hijacking planes, attacking ships at sea, attempting to murder leaders and heads of countries, along with other forms of terrorism.

The present study aims to find methods to deal with the problem of maritime terrorism, illegal trade and illegal migration by setting up effective security strategies along the coasts of the Kingdom of Saudi Arabia (KSA). The country’s coasts exceed 2000 km in length, running along both the Red Sea and the Arabian Gulf. The process of

securing these coasts is of great importance due to the increase in dangerous terrorist attacks and the increasing forms and methods of terrorism used day after day.

The KSA occupies a distinguished geographical location among the Middle East region countries. It is surrounded by 13 countries, some of which are very poor. Many individuals from these countries want to enter KSA in an attempt to find job opportunities and for a better life, or to perform the religious duty of Hajj (pilgrimage). Besides illegal migration, there exists an illegal trade whereby smugglers attempt to smuggle drugs, bombs, and small weapons into the KSA via the coasts using various deceptive methods.

Thus, the KSA is confronting three dangerous issues connected with money and welfare, namely: terrorism, illegal migration and illegal trade. Illegal trade achieves large profits, whether the trade is of weapons or drugs. Drug trade is the most profitable illegal activity in the world after the trade of weapons, which occupies the first position. The value of transactions of drug smuggling has reached between 500 and 800 million dollars annually. A gram of cocaine costs 40 cents when produced but it is sold to clients for 100 dollars, which means a profit of 250%.

These huge amounts of money obtained from illegal trade facilitate the processes of selling, smuggling and storing illegal goods. Poor workers who are in a bad need of money are always needed for the trade; consequently, illegal migrants are used since they are the most appropriate to work under the smugglers' control. Due to their need for protection, particularly during the process of smuggling and selling, smugglers resort to terrorist groups to provide them with the required protection in return for money (see figure 1-1).

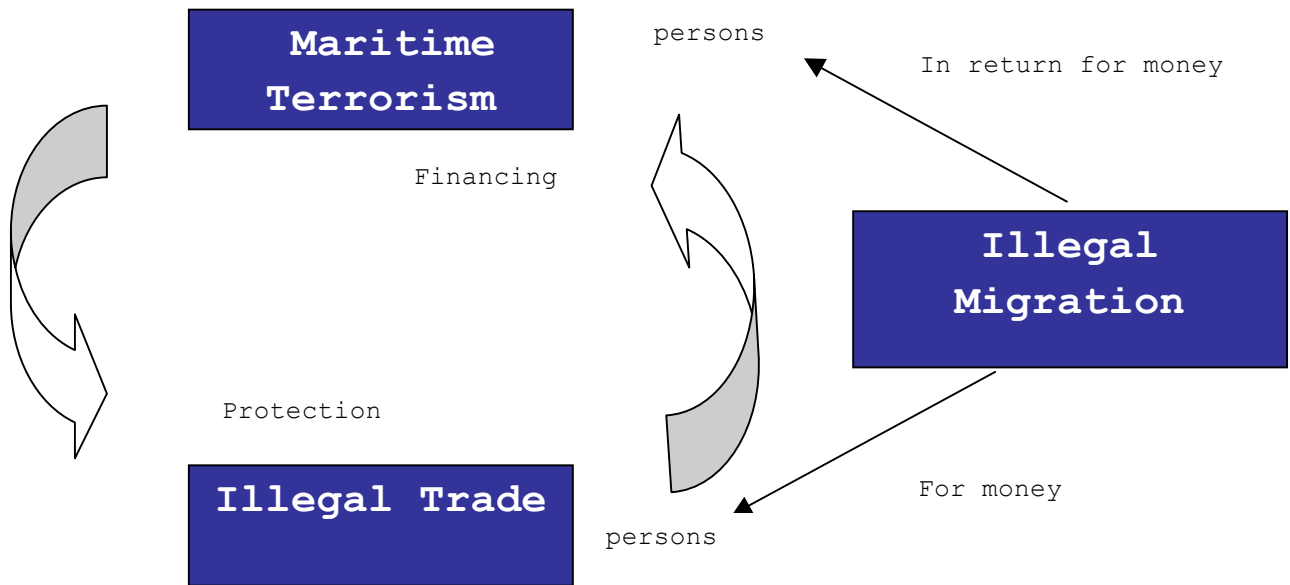


Figure 1-1: The connection between terrorism, illegal migration and illegal trade.

These interconnected factors (terrorism, illegal trade and illegal migration) have to be dealt with. Over the past few years, more than 900,000 persons tried to enter the KSA using illegal methods, either through the country’s coasts or its other frontiers. Most of these people came from neighbouring countries such as Yemen, Sudan, Somalia and Iraq. This is in addition to those coming from other countries seeking work and illegal trade. Consequently, it is very important to secure KSA’s ports, frontiers, and coasts against the dangers of terrorism, illegal trade and illegal migration. As a Saudi citizen who attempts to assist with the security of his country, and also as a person who works in the SBG which seeks to keep peace and security in the KSA, the researcher has selected this topic with the aim of achieving appropriate results and making recommendations in order to help maintain the required level of security.

1.2 Problem of the study

Terrorism has become the most effective way of achieving political goals. It is a pattern of power usage that is used in political conflict. It creates a state of terrible fear

and is oblivious to the destruction it may cause to life and property. Terrorists are able to increase this fear by using the elements of surprise and terrorization. Terrorism can control the political arena with all its social and political elements, as well as destroy human life. It is noticeable that the motive of power behind most terrorist groups confirms the persistence of terrorism. The main objective of terrorism is to seize power and the most important issues for terrorists are controlling people and obtaining wealth, which is the source of power.

Today there is no country that is completely safe from terrorism. For example, Japan was not alert to terrorism until an explosion took place in a city metro by the group Oam Sefreek (Robyn, P. 2002). Many countries have met to discuss the phenomenon of terrorism and many conferences have been held to deal with the issue. However, countries have argued about the definition of terrorism and so far they have not reached a unified definition of the term.

Due to this unsettled atmosphere, the term “terrorism” has become a commonly used word in politics. Commentators also use the term whenever they want to condemn any activity, even if this activity is not actually terrorism (Guelke, A. 1998). For instance, pollution has become “environmental terrorism”, stock-market speculation has become “economic terrorism”, and computer and internet piracy has become “computer terrorism” (Kushner, H. 2000).

The goals of terrorists have developed with the development of terrorism. Today, it cannot be said that “terrorists do not want to be watched by a large number of people, nor do they want a large number of killed people” (Jenkins, B. 1975). Now they do want a large number of murdered people in order to be noticed by as many people as possible.

Illegal trade and illegal migration are considered two faces of illegal work. In the world, there are at least 500 million small weapons; that is one weapon for every 12 persons. Most of these weapons are in the hands of police, governments and armed forces, but they are also available to illegal forces, criminals and terrorists. It has been discovered that millions of these weapons resulted from the cold war and have found their way into various conflicts throughout the world, as well as into countries where there is no conflict. All this has contributed to the spread of violence and crime. These small weapons have resulted in thousands of terrorist operations. According to a survey about independent small weapons in the year 2001, these weapons are involved in more than 1000 cases of death daily.

The problem of illegal trade of small weapons has become one of the fundamental causes of armed conflicts. Illegal trade and transfer of traditional weapons is considered a source of danger that threatens the whole world, particularly when they fall into the hands of groups that do not have any value for life, peace or safety. The groups that use these weapons can use terrorist actions to threaten the security and internal safety of a large number of countries. This can result in pressure applied by terrorists in order to get their demands met.

There is a strong relation that cannot be denied between illegal trade of small weapons, terrorism and organized crime. Terrorist groups form relationships with illegal traders and participate with them in the transfer of illegal substances in order to obtain the money they need to further their cause. Thus, terrorist groups are considered to be the biggest buyers of weapons and money launderers.

It is very important to fight maritime terrorism at the present time. Most experts have been alarmed by the current increase in terrorist attacks at sea, and they fear that the

sea will become the new target for terrorists. Therefore, it is important to set a strategy for port security so as to fight maritime terrorism. Despite the small number of maritime terrorist actions that have occurred over the past few years, the sea may be the place where most terrorist actions take place in the future, and the time and place of execution will be unknown. Consequently, countries should be alert and take precautions so that they are not caught by surprise by actions carried out in their waters.

In the present study, the researcher focuses on the danger to maritime security represented by maritime terrorism, illegal trade and illegal migration, with the aim of finding ways to deal with these issues pertaining to maritime security for KSA. The researcher will also identify the advantages and disadvantages of maritime port security systems. The researcher also seeks to provide some recommendations to improve the security of Saudi ports in their fight against terrorism. The project aims also to identify the danger of terrorist acts that may occur in maritime ports, and to present suggestions to prevent such terrorism. The project involves a questionnaire and a survey of the Saudi Border Guard (SBG) and Saudi Naval Forces (SNF).

The problem can be formulated as follows:

What is the role of the SBG in fighting terrorism and setting an effective strategy for Saudi port security to protect ports from terrorism, illegal trade and illegal migration?

1.3 Significance of the study

The study is important because maritime terrorism has become a major issue that all countries will have to face and pay millions of dollars to fight and get rid of, along

with illegal actions related to it, such as illegal trade, illegal migration and other illegal actions.

The current study focuses on KSA ports because of their great importance; the country's ports are considered the largest ports in the region. This is in addition to the huge economic value they represent to the KSA, since they deal with 75% of all imports and exports of the KSA. Indeed, the maritime ports are considered life arteries for the KSA and its economy.

This study is significant because it is conducted at a time when people of all countries are facing terrorism. All people want to live in peace and security away from horror and terror. They all want to stay at home or go to places safely without fearing or facing the threat of terrorism. As a Saudi citizen who works in the SBG at Mecca (Jeddah port), who recognizes the importance of achieving security and safety and fighting terrorism, the researcher has conducted this study in order to be better informed and able to introduce recommendations and produce results that can help to eradicate the dangers of maritime security by applying better methods for securing ports.

1.4 Regions of the study

The study will cover the ports of the KSA. The researcher has selected these ports because he is a Saudi citizen who works for a Saudi Ports Authority (SPA).

1.4.1 KSA

The KSA occupies a distinctive location, for it is located at the extreme west of South Asia and is surrounded by the Red Sea to the west and the Arabian Gulf to the east. It shares borders with the United Arab Emirates, Qatar, Kuwait, Iraq, Jordan, Yemen and

Oman. The KSA represents four fifths of the Arabian peninsula, with an area of more than 2,250,000 km².

The elevations of the KSA vary due to its vast area along the Red Sea (the coastal plain of Tihoma), with a length of 1100 km and a width of 60 km in the south, which narrows the more it goes to the north at the Gulf of Aqaba. From the east of this plain appears the “Sarawat Mountain”, with a height of 9000 feet in the south, decreasing gradually to the north until it reaches 3000 feet. Large valleys stem from it and move towards the east and west, such as Jizan Valley, Najran Valley, Tethleth Valley, Beisho Valley, Al-Homd Valley, Ramma Valley, the Valley of Fatima, and the Valley of Yanbu. This series of valleys leads to the Najd plateau in the east, reaching heights in the east at the Dahna Dunes and Saman Desert. To the south a region known as the Valley of Dwaser stretches to the desert of the Empty Quarter. To the north the Najd plateau extends to the region of Hael and connects with the great desert of Nafud, and then on to the borders of Iraq and Jordan. It also has some mountain heights such as Mount Tawif, Al-aared, Ago and Salma. As for the Empty Quarter Desert, it covers the south east part of the KSA. It is a big desert region with an area of 640000 km², consisting of sand dunes and marshes. The eastern coastal plain, with a length of 610 km, is composed of salt marshes and sand areas (Saudi Arabia, 2006).

The climate of the KSA differs from one region to another due to the differences in elevations, some of which fall under the influence of tropical air. The KSA has a continental climate which is hot in the summer and cold in the winter. There is rain in winter and the climate becomes mild on the west and south west heights. The central regions have a hot, dry summer and a cold, dry winter. Temperature increases on the coasts as well as humidity, and rain falls in winter and spring. Rain is scarce in most

regions of the KSA except on the south west heights which have more abundant rainfall in the summer compared to other regions. Humidity increases on the western heights and coasts most of the year, and decreases the further inland one goes.

The KSA ranks number one in the production and reserves of oil, and fifth in reserves of gas. It ranks tenth in the production of natural gas. The KSA has a population of 27.4 million and its capital is Al-Riyadh. The official language is Arabic and the currency is the Saudi Riyal. The most important cities in the country are Mecca and Jeddah.



Figure 1-2: Map of the KSA

1.4.2 Ports of the KSA

The KSA has various ports. Some are located on the Red Sea and some are located on the Arabian Gulf (see figure 1-3). The ports differ in terms of specialization; some are commercial ports, some are industrial ports, some are oil ports, some are fishing ports, and some transfer passengers.



Figure 1-3: A map indicating the ports of the KSA.

1.4.3 Ports of the study

In this study, the researcher focuses on 9 Saudi ports, namely the most important and largest ports, each with a different geographical location. The researcher has been careful about choosing ports on the Arabian Gulf and Red Sea, as well as those with different specializations, including industrial, commercial, oil and passenger ports.

KSA has 18 marine ports that represent the total marine trade of the kingdom. The 9 ports under study are the biggest and the most important of all the Saudi marine ports. In 2010, they, collectively, achieved 84% of the total Saudi marine trade which amounted 2.97 billion Saudi riyal; leaving 16% to be achieved by other ports. It is worth mentioning that Jeddah port alone achieved 17% of the total marine trade of the kingdom in 2010 (Report of the General Institution of Ports, 2010).

Sea Port Name	Location	Type	Length	Berth No.
Jeddah Port	Red Sea	Commercial port	11.4 km	58
Jizan Port	Red Sea	Commercial port	4.9 km	12
Dhiba Port	Red Sea	Transportation of passengers	1.48 km	3
King Fahad Industrial Yanbu Port	Red Sea	Industrial port	1.86 km	91
Yanbu Commercial Port	Red Sea	Commercial port	1.54 Km	9
King Abdulaziz Port Dammam	Gulf of Arabia	Industrial port	18.1Km	39
King Fahad Industrial Port Jubail	Gulf of Arabia	Industrial port	8.9 Km	27
Jubail Commercial Port	Gulf of Arabia	Commercial port	5.0 km	16
Ras Tanura Port	Gulf of Arabia	Commercial port	3.4 Km	10

Table 1-1: Ports under study and primary information about their nature.

1.5 Objectives of the study

The researcher has conducted this study in order to achieve the following goals:

- The overall aim of this study is to define a process whereby the Saudi Border Guard (SBG) can fulfil its requirements for securing ports using various types of security that can meet future security challenges.
- Establishing a strategy for developing future sea port securing strategies.

- The purpose behind the overall study is to develop and provide a conceptual framework of the final strategy for securing sea ports.
- The nature and composition of the future sea port securing strategy will be the result of careful study, evaluation and planning by skilled officers, staff and managers of the SBG using the current survey results.
- Identifying the threats and terrorist actions that might be possible at Saudi ports.
- Recognizing the importance of compliance with preventive procedures against terrorist attacks at Saudi ports.
- Identifying the role of SBG workers in fighting terrorism, illegal trade and illegal migration at Saudi ports.
- Identifying the preventive measures required to fight terrorism, illegal trade and illegal migration at Saudi ports.
- Identifying the problems that workers in the SBG face when performing their jobs.

1.6 General Objectives

- The SBG must have a clear and well thought out plan for securing sea ports.
- The SBG must have officers and shore staff with appropriate levels of experience and expertise in a range of security areas.
- The SBG should be in a position to effectively monitor sea ports for terrorism, illegal immigration and illegal trade.

1.7 Specific Objectives Research

To convert the survey results into conclusions and recommendations that can be used to produce a future plan for securing sea ports.

1.8 Reasons for selecting the topic

The researcher has selected the study topic for the following reasons:

- The issues of terrorism, illegal trade and illegal migration are considered very important topics that are of interest to most countries in the world. The study of these topics is of great importance in the present time and significant recommendations should be posed.
- The nature of the researcher's job makes this study very relevant as he is involved in the security of ports, in particular achieving peace and safety at Jeddah Port.
- The nature of the job of the researcher in the maritime field makes him fully aware of terrorist and smuggling operations that occur continuously. He also understands the importance of setting a strategy to fight such crimes.
- The researcher is aware of the dangers of terrorism and the necessity of fighting it.
- The researcher is interested in identifying the role of the SBG in fighting terrorism, illegal trade and illegal migration in KSA.

1.9 Study questions

This study seeks to answer the following questions:

1. From your point of view, what is the meaning of the word ‘terrorism’?
2. What are the threats or potential terrorist operations affecting Saudi Ports?
3. What is the extent of the commitment to security and protecting against terrorist attacks at Saudi Ports?
4. What is the role of SBG in combating terrorism, illegal trade and illegal immigration at Saudi Ports?
5. What is the role of SBG in the fight against terrorism and illegal trade, and the monitoring of illegal immigration vessels, cruise boats, yachts and fishing boats at Saudi Ports?
6. What are the preventive measures necessary to combat terrorism, illegal trade and illegal immigration at Saudi Ports?
7. What are the problems faced by SBG in the performance of their duties at Saudi Ports?
8. What is the extent of the impact of technology and modern port security measures in fighting terrorism, illegal trade and illegal immigration at Saudi Ports?
9. What are the reasons and motives underlying the existence of terrorism, illegal trade and illegal immigration in KSA?
10. How best can the rules of safety and security, and combating emergencies be followed at Saudi Ports?

11. From your point of view, should any of these steps be taken by the KSA government to confront terrorism, illegal trade and illegal immigration?

1.10 Domain of the study

1.10.1 Spatial Area

The researcher chose to study the role of SBG in fighting terrorism, illegal trade and illegal migration within nine Saudi ports, some of them are located on the Red Sea and the others are on the Arabian Gulf.

1.10.2 Human Area

This area includes all the officers who are directly or indirectly related to the acts of maritime and coastal patrols with the leadership of SBG of Saudi ports. It also includes a random sample of the workers of maritime and coastal patrols with the same leadership.

1.10.3 Temporal Area

A detailed field study of Saudi Ports is the major element of the research. During this field study, the researcher visited nine Saudi ports to distribute and collect data of the study sample. The researcher began with the Islamic port of Jeddah at Mecca and ended with the port of Ras Al-Tanura.

1.11 Terms and concepts used in the study

1.11.1 Ports

The term port is derived from the old Latin word “porta”, which means gate or way from sea to land, or vice versa. The port is the region that is located on the beach. It has all facilities and equipment required to receive ships and handle cargo, such as anchors, platforms, equipment for cargo handling and for safety and fire-fighting, areas for storing, etc.

1.11.2 Ship

The law of maritime rules and instructions for countries of the Gulf Cooperation Council defines a ship as any floating body (construction) that is able to move or to make maritime navigation regularly (law of maritime rules and instructions for the countries of Gulf Cooperation Council, 1998).

1.11.3 Port security

Port security has various and different definitions. It is simply defined as:

“The preventive measures used to suppress crimes and to keep the calm and settled status of the ports” (Al-Mazmomi, A. 1998).

Here are some definitions of port security:

"The safeguarding of vessels, harbors, ports, waterfront facilities, and cargo from internal threats such as destruction, loss, or injury from sabotage or other subversive acts; accidents; thefts; or other causes of

similar nature. See also harbor defense; physical security; security” (Dictionary of Military and Associated Terms, 2005).

“Protective measures taken to secure the maritime-related in for modal supply chain from terrorism, the unwitting transmission of terrorism-related assets, and crime, effective response should those measures fail, and freedom from danger, harm, and loss to person and property” (Haveman, D. 2006).

1.11.4 Terrorism

Due to the various and different definitions of the term ‘terrorism’, the research will now present the most important ones:

“According to the Oxford Dictionary: “Terrorism is a policy intended to strike with terror those against whom it is adopted; the employment of methods of intimidation; the fact of terrorizing or condition of being terrorized” (Hawkins, J. 1981).

“According to the third conference of Brussels 1930, terrorism is: “the act of any person intended to use material that may cause a public danger in committing a crime against human lives or their physical safety or freedoms, or against public or private properties with a purpose of expressing or implementing political or social ideas” (Zlataric, B. 1975).

“According to the agreement of 1937 regarding suppression and punishment of terrorism, terrorism is: “criminal acts directed towards

a country and intended to create a state of terror in the minds of particular persons, group of persons or the public” (Lon, 1937).

There are many types of terrorism, including state terrorism, individual terrorism, international terrorism and maritime terrorism.

1.11.5 Maritime terrorism

There are various definitions of ‘maritime terrorism’. One of them is the definition of The Council for Security Cooperation in Asia and the Pacific Ocean, which includes many details in the definition of maritime terrorism:

“The undertaking of terrorist acts and activities (1) within the at sea or in maritime environment, (2) using or against vessels or fixed platforms or personnel, (3) against coastal port, or against any one of their passengers tourist resorts, port areas and port towns or facilities or settlements, including cities” (Quentin, S. 2003).

Another definition of maritime terrorism is: “any attempt of or threat to seize control of ship by force to damage or destroy a ship or its cargo to injure or kill a person on boards a ship or to endanger in any way the safe navigation of a ship that moves from the territorial waters of one state into those of another state or into international waters” (Ronzitti, N. 1990).

1.11.6 Migration

Migration is a population movement by which an individual or group moves from his native home into a new one selected by him due to some reason. The individual might enter the targeted country by an illegal method or by infiltration.

1.11.7 Illegal migration

Illegal migration is crossing national borders in a way that is contrary to the laws of migration in the intended country. It may be by penetrating or infiltrating the land or sea borders of the intended country.

1.11.8 SBG

The Saudi Border Guard is a governmental arm of the Ministry of the Interior, officially called the General Directorate of Border guards. It is concerned with securing (guarding) the land frontier and waters of KSA according to the rules and bylaws set by the Ministry of the Interior.

1.11.9 Regional waters

Regional waters are those areas that extend 12 miles into the sea in internal waters of any country overlooking the sea and which fall under its supervision. In this study, regional and internal waters refer to the regional and internal waters of the KSA.

1.11.10 Internal (inland) waters

Article No. (5) of the Geneva Convention on the Territorial Sea (1985) defines internal waters in its first paragraph as: “the territorial waters located on the opposite side of the earth from the line measure of the territorial sea”.

1.12 Research plan

- Collecting hydrographic data from previous studies, both inside and outside the KSA.

- Collecting and analysing data through interviews and questionnaires with SBG members and high ranking officials about the future of sea ports and security requirements.
- Investigating the scientific aspects of the phenomenon under study.
- Proposing new technological methods to secure maritime ports from terrorism.
- Reviewing the current SBG strategy with the aim of proposing a new strategy plan.
- Studying geopolitical forecasts and new technological developments.
- Predicting future challenges for the SBG in securing sea ports.

1.13 Research Methodology

The methodology of the research is based on several stages:

- Collecting data and information from SBG officials regarding securing Saudi sea ports.
- Collecting information about future staff training requirements.
- Collecting information about modern developments and devices for securing sea ports, including unattainable vehicle areas and unmanned aerials.

1.14 Results expected from the project

- Identifying the problems associated with securing sea ports, including Saudi ports and the Saudi coastline, by collecting and analyzing data of a survey, a

questionnaire and interviews with sea port security authorities in general and those from Jeddah Port in particular.

- Developing a strategy to improve port security systems.
- Revising the Saudi Border Guard strategy for securing the coastline and sea ports.
- Identifying the threat of terrorism at maritime ports and along coasts.
- Informing KSA of the danger of maritime terrorism and the sense of speed needed to take necessary action to face terrorist attacks.
- Displaying security problems related to the study of ports and attempting to resolve them.
- Attempting to develop the functions of the Saudi Border Guard.
- Developing new ideas for technology related to port security.
- Generating solutions and alternative solutions.
- Studying expertise of border troops in others states and how this can be transferred to the Saudi Border Guard.
- Using the strategy of coast guards in developed countries to develop the Saudi Coast Guard strategy.

1.15 Overview of the study

The present study consists of seven chapters. The first chapter includes an introduction to Saudi ports and indicates the problem of the study, its objectives and its

importance. The chapter also presents the research questions and methods of study. It also discusses the results predicted and an overview of the study. The second Chapter presents Saudi ports in terms of their significance and their required protection. It also discusses the importance of Saudi ports, the importance of the Saudi maritime system, fears regarding port security, weak points of the port security system, threats to the port security system, and the required protection for ports. The chapter also deals with the risks of maritime security in terms of prevention and readiness; rules and legislation are mentioned, along with the training of workers at ports, shared leadership for protecting ports, data exchange, international cooperation, and the role of the SBG. At the end of the second chapter, the researcher asserts the role of modern techniques in the enforcement and protection of port security. The chapter makes a new suggestion for the protection of Saudi ports. The third chapter handles the systematic framework of the study, its limits, and the system followed and used in the study. The fourth chapter explores conclusions and data analysis. The fifth chapter includes a general view about further local developments of Saudi ports. The sixth chapter presents a general view about planning and organizing the security strategy of Saudi ports. The last chapter summarizes results, makes recommendations, presents conclusions, and suggests areas for further study.

2. CHAPTER TWO: BACKGROUND

2.1 Introduction

This chapter is a conceptual framework for the study, and the researcher will discuss many important points related to the study. The researcher will discuss several issues related to maritime security, such as the importance of Saudi ports and their protection, port security and their vulnerabilities, and risks affecting maritime security. At the end, the researcher will address the issue of technology and its role in enforcing and protecting port security.

2.2 Saudi ports: Importance and Protection

The KSA has a number of ports which are extremely important from both an economic and strategic stance. It has the largest ports in the Arab region and Middle East. KSA relies mainly on its maritime ports to perform international trade deals. Therefore, maritime ports represent a major asset for KSA. The importance of the current study is derived from the importance of these ports. The research will cover the Saudi maritime system and will illustrate its economic and security importance. Also, the researcher will deal with fears regarding port security, points of weakness, scenarios that threaten the security of Saudi ports, and methods of protecting Saudi ports.

2.2.1 Saudi maritime system

The KSA is ranked first among oil exporting countries. It also has a strong economy characterized by multiple activities and manufactured exports that target

international markets. It is therefore essential for KSA to have a strong maritime system and highly efficient ports.

Saudi ports

KSA has 9 maritime ports which are of extreme importance. They represent the largest ports in the Middle East and play a major role in serving the national economy; 95% of the annual exports and imports of KSA are exchanged via ports. A vessel anchors at a Saudi port every half an hour. Saudi ports deal with the largest share of goods among ports in the Gulf Cooperation Council. This share amounted to 71% in 2009 (Abdul Rasool, A. 2010).

Saudi ports play a great role in developing the country's economy. They have generated major transformation in the national economy towards exportation. In 1983, KSA's exports represented less than 7% of the total dealings in Saudi ports; while in 2000 the percentage reached 70%.

Saudi commercial vessels

The KSA has many diversified commercial vessels. It is well-known that KSA is considered one of the leading countries in exporting oil. Oil exportation takes place via the sea through commercial vessels. KSA has a large fleet of commercial vessels, such as tankers which transport fluids such as oil to importing countries. KSA has many tankers of solid material, disinfection ships, research ships, passenger ships, fishing ships, and public goods ships (Elrashied, H. 2001).

2.2.2 The importance of the Saudi maritime system

The Saudi maritime system plays an important role in Saudi trade. It is also influential in reviving the Saudi economy after recession. The Saudi maritime system is of extreme economic importance. KSA is ranked 20th globally in terms of the size of its fleet of marine vessels and it has 1.13% of the total world fleet (UNCTAD, 2010).

Over the past two decades, international maritime transportation has increased for many reasons, including low cost and easy procedures as well as the increased hopes of countries regarding their exports and imports. Accordingly, the maritime system has gained major importance both domestically and internationally.

In addition to the economic importance of the Saudi maritime system, experts participating in the Saudi Maritime Forum 2010 emphasized the important role of Saudi ports in increasing international exports (Ali, M. 2010). Saudi ports enhance the efficiency of trade exchange via ongoing improvement, fewer procedures, and improving the level of services. Indeed, Saudi ports will raise international exports by 340 billion dollars and gross international products by 385 billion dollars.

2.2.3 Port security

The concept of security is no longer limited to achieving the internal security of a country or to assuring the application of law, but it extends to include the realization of a country's external security to ensure safety in its relation with other countries and its regional sovereignty, which is expressed here by the country's security strategy. KSA security strategy is the main topic of this study. In this regard, safeguarding the country's secrecy has become the main target of internal security. One may argue that the wide concept of security comprises all procedures, policies which protect the country from

conflicts, and internal as well as external breakups; but security, in its broadest sense, starts with citizen security procedures inside the country against any possible risks, setting of laws and legislation that guarantee this protection, and ensuring the presence of authorities which execute law so that procedures extend to include those related to securing the country. This can be achieved by setting suitable rules to guard its frontiers and coasts, and keeping secrets via the armed forces, in addition to making procedures for achieving the country's security both economically and socially.

Maritime security in general and port security in particular are of great concern. International law has paid much attention to maritime security as a part of the whole security system. Many conventions and international policies have been approved to protect the maritime system. Ensuring security is the motive behind these conventions. For example, international law has applied the theory of defence as a standard for determining a country's sovereignty over islands. This theory states that an island is under the sovereignty of a coastal country if it can be controlled and protected by guns located on the island. Ensuring security is the standard which is used for determining a regional sea by 3 nautical miles, according to Galiani's standard ⁽¹⁾ (Elizabeth, C. 1992). The objective of ensuring security is highlighted in the issue of determining an absolute economic area. In discussion of the peaceful usage of a seabed committee formed by the UN in 1976 and through discussions held by the United Nations (UN) Conference of Seas, developed countries adopted an agreement regarding the organization of seas according to the needs of countries in order to protect their interests, national security and

¹ - Galiani Standard: is a standard developed by Galiani in 1782 to specify the territorial water of any country by three nautical miles measured from the beach.

sovereignty. Security issue is the primary motive for providing protection. We can also say that security considerations (including sea law) as national interests are also the primary motive behind determining a country's attitude towards the law of seas.

Thus, it is clear that all governments are highly concerned with security affairs, protection of frontiers, public establishments, and commercial and industrial ports, as they are considered essential supports for any country in order to achieve its vital and strategic goals. The KSA is no exception; it gives much concern to port security, as its ports represent a real threat to the security and stability of the KSA.

2.2.4 Fears and risks regarding Saudi ports

Many international experts in the field of security have expressed their fears about maritime and port security, as they may be easy targets for terrorists along with maritime transportation (Loy, J. 2002). Indeed, many Saudi security experts are worried about Saudi port security. Saudi ports are the largest ports in the Arab region, and the primary resources of the KSA. Terrorists misuse maritime transportation to smuggle individuals, weapons, and drugs. Huge vessels anchoring at Saudi ports (whether commercial or tourist) are easy targets for terrorist attacks. All Saudi ships may also be targeted; a matter which could result in an economic, security or environmental disaster, not only on a domestic level but also worldwide, affecting international trade as well.

A report issued by the Saudi Minister of Interior states that there are points of weakness in Saudi ports. It also reports that a terrorist attack on a port could lead to severe loss of life, property and infrastructure. It could also results in severe damage to the environment (report of terrorist attacks, 2006).

2.2.5 Port security - points of weakness

Ports have many points of weakness which may facilitate a terrorist attack. These weaknesses are discussed in more detail below.

Port facilities

Ports, vessels and other establishments are points of weakness. Ports are very spacious and are usually located in urban areas; this allows terrorists to hide nearby ports. Many trucks enter and leave the ports daily; therefore, they can be used by terrorists to hide their weapons. In addition to the threats coming from the sea, there are threats coming from land, terrorists could use cargo trucks in bombing seaports.

Vessels

Commercial vessels, whether passing through the port or anchoring in it, are of slow motion, making it easy for a fast boat to attack. Also, such vessels have a very limited armed crew. This makes it difficult to resist pirates. Huge carriers are an easy target due to their low speed, especially while navigating in passages and narrow canals. Warships, although equipped, represent a weakness of the maritime system; an example being the attack on the destroyer USS Cole. Terrorists can use ships to carry their weapons and for drug dealing. Terrorists usually use drug dealing processes to finance their attacks. That is why they use warships for carrying and distribution (Anderson, S. 2002).

Containers

Containers represent a major problem for the security system. Port administration has to search containers without hindering shipping processes. A huge container ship can carry as many as 14000 containers, which makes it impossible to complete searching without hindering shipping processes.

Terrorists may use containers for smuggling mass destruction weapons. The shipping system makes this task easy. Terrorists may also use containers for smuggling light weapons to be used in their attacks. Also, terrorists can smuggle drugs and heavy weapons via such containers.

International straits

International straits are considered weaknesses as they form a real threat to maritime security. Seventy five percent of the world's maritime trade pass through a relatively low number of narrow navigation passages. About 35 million barrels of oil pass through these narrow passages. These passages are (Richardson, M. 2004):

- Strait of Hormuz, the only sea entrance to the Persian Gulf. It is the gateway to the Arabian Sea and Indian Ocean;
- Malacca and Singapore Straits linking the Indian Ocean (and oil and gas supplies from the Middle East) with the Pacific Ocean (and major consuming markets in Asia) via the Andaman Sea and the South China Sea;
- Panama Canal connecting the Pacific and Atlantic Oceans;
- The Suez Canal linking the Red Sea and the Mediterranean Sea;

- Bab el-Mandab passage from the Arabian Sea and the Gulf of Aden to the Red Sea.
- Bosphorus and Turkish Straits, connecting the Black Sea and the Mediterranean.

The previously mentioned passages are very narrow, and hence are a very easy target for terrorists. Huge carriers which carry Aluminium nitrates, liquefied natural gas, liquefied gasoline and other inflammable and explosive materials also pass through these passages, and therefore they represent floating bombs. Targeting these narrow passages may result in a disaster which causes damage to individuals, property and the environment. Additionally, world trade may stop. Accordingly, the international economy will be affected.

2.2.6 Scenarios of security threats to Saudi ports

Maritime ports face four main threats or crimes which are of great concern to the whole international community. The sea is considered an open stage for committing maritime based terrorism crimes. In addition, the sea is the easiest place for theft and piracy crimes. The sea is also a safe place for carrying and distributing drugs. Finally, the sea is an ideal place for illegal immigrants who are looking for better life opportunities.

Such crimes threaten maritime security and make it weak. These crimes facilitate the tasks of terrorists. Hence, it becomes difficult to arrest them. The whole international community has to deal with such crimes so that maritime life is secure. That will lead to an increase in international trade and accordingly a revival of the world's economy.

The most effective means to combat these crimes is international cooperation among the world's countries. The main difficulty that may be encountered by the

international community, however, is the interrelation between these crimes which results in a strong organization that is difficult to resist or combat.

The following section outlines the threats and risks encountered by Saudi ports. Subsequently, it will tackle the issues of Maritime terrorism, piracy, illegal trade and illegal immigration, and will show how these crimes are related to each other.

2.2.6.1 Maritime terrorism

Since the beginning of the 21st century, the world has faced new challenges in the field of security. Such challenges are due to real weaknesses in the international security system as a whole. At present, international terrorism is one of the most challenging issues as it has become deeply interrelated with organized crime. It has used financial and human resources available to innovate new techniques for terrorist attacks.

The aims of international terrorism are varied, but they include the following (Kolev and Mednikarov. 2006):

- Triggering off psychological wars among the world's peoples.
- Triggering off religious wars, in particular to increase conflict in countries with different cultures.
- Spreading confusion in the world's economy and breaking confidence in most developed and industrial countries, in addition to destabilizing democratic and Islamic governments.
- Creating a collective state of panic using chemical, biological and toxic materials.
- Threatening the security of computer systems and communications.

- Creating serious problems in the fields of commerce, transportation, etc.

Terrorist groups try to achieve these objectives using many methods in all fields. Today's world is facing new terrorist crimes every day. Maritime terrorism is one part of international terrorism. It can be considered a set of procedures that are illegal and which affect, either directly or indirectly, the interests of a country whether in the sea or on land (Martin, M. 2009).

The domestic aspect of the phenomenon

The KSA and other countries located on the Red Sea and the Arab Gulf have developed industries over the past few years that depend totally on maritime trade. KSA has more than 12% of the world's commercial fleet, consisting of merchant ships, industrial ships and oil carriers (Elwahab, F. 2002). Many of the main ports in the region are located in KSA. Jeddah Islamic Port is one of the largest ports in the Middle East, and hundreds of the world's ships pass through and anchor at Saudi ports. All the above attract terrorists who target KSA either internally or externally making it possible to attack KSA via the sea.

The international aspect of the phenomenon

International maritime transportation faces two dilemmas. The first is the weaknesses of the international maritime transportation system (ports, containers and vessels); the international community is calling for provision of security, especially after the increase in the number of terrorist attacks and dangers arising from the use of mass destruction weapons. The second dilemma is the lack of organization of international maritime transportation. Most employees working in this sector break the law. There is

often mystery surrounding maritime operations, in particular hiding the real owners of vessels. This can be for many reasons, such as tax evasion and participating in terrorist acts.

Due to these two dilemmas, the international maritime transportation system is not efficient, while terrorist groups have become much stronger. At the same time, there are 46,000 ships anchoring at more than 4000 ports around the world and more than 1.2 million people working in that field (Jacks, D. 2008). Thus, terrorists have many opportunities to commit their crimes at sea. At present, ports, vessels and containers can be considered potential disaster areas.

The possibility of extreme maritime terrorist attacks

More than two thirds of the earth is occupied by salt water and this affects the lives of all humans. There are four oceans: the Atlantic Ocean, the North Antarctic Ocean, the Pacific Ocean, and the Indian Ocean. These oceans are of major importance to the world economy. More than 80% of the world's trade is transported via water. That is why these oceans are of major strategic importance worldwide.

Maritime transportation and the present maritime system are considered vital goals for terrorists, smugglers and illegal traders. The maritime environment provides great opportunities for terrorists to achieve their strategic and geographic objectives (Burns, R. 2004). In addition, many relative advantages of the maritime environment attract terrorists (Joshua, H. 2005). Terrorist activities that are committed on the ground require high level techniques and more finance compared to maritime targets (Borgu, A. 2004). At sea, a small boat carrying explosives is sufficient to attack a ship and destroy it.

Intelligence agencies and security experts have considered certain scenarios which pose a threat to maritime security. They include (Michael, G. 2006):

- Using containers for smuggling radiant, biological and chemical weapons in order for them to be used to carry out a terrorist attack on land or at a port.
- Sinking of a ship in a strait to prevent or hinder the navigation process.
- Hijacking a carrier of liquefied natural gas for it to be used as a bomb or an explosive.
- Using a small high speed boat to attack a huge oil carrier to influence the international price of oil or pollute a particular region.
- Targeting tourist ships or passenger vessels.

Maritime terrorist attacks

Terrorist attacks may target maritime establishments. These attacks can be divided into the categories discussed hereunder.

- **Attacking sailing ships**

Ships can be considered sailing explosives as well as the most important type of maritime transportation. Ships are attractive targets for terrorists. They can be easily attacked at low costs. Terrorists can use ships to carry weapons and individuals, and ships are a means of finance for terrorists who use them to conduct illegal trade.

A ship is a very weak target which can be easily controlled. For example, terrorists can use a small boat to sink a huge carrier, as it cannot defend against a small boat carrying armed personnel. Terrorists can also launch a nuclear attack against food

ships or oil ships, causing a real environmental disaster. They can attack sailing ships using only hand grenades or simple weapons.

- **Attacking anchored ships**

Anchored ships are also not safe, despite security that may be provided. Terrorists can attack anchored ships using high speed boats, colliding with the ships to cause fire and explosions. They can use weapons directed at the ships, whether from the sea or from buildings surrounding a port. It is known that most piracy attacks in South East Asia have been launched against anchored ships. In short, we can say that terrorists are always able to attack targets successfully whether at sea or on land.

- **Attacks against port establishments and other coastal targets**

Port establishments and other coastal targets are attractive to terrorists, as these coastal targets are extremely important. For example, most Saudi ports have oil companies on land within the port vicinity.

Targets of maritime terrorist attacks

There are many political, economic, social and psychological targets for terrorism. Terrorists always seek to cause damage, economic loss, environmental problems and many other negative effects (Enders and Sandler. 2005). Human life is the most important victim, however. Passenger ships, such as tourist ships, are seen as important targets for terrorists.

Merchant ships are also of great importance to terrorists. Economic loss is at the top of terrorists' interests. They always seek to cause low human loss but great damage to vital infrastructure, which in turn hinders international trade (Jonathon, V. 2008).

Other terrorist crimes similar to maritime terrorism

There are a number of maritime crimes which are similar to maritime terrorism, most important of which is maritime piracy. People usually combine these two categories. There are some similarities between them in terms of purpose and execution; however, there are differences in terms of methods used and goals sought. The following section will shed some light on the recent piracy phenomenon, which is considered the most important risk facing maritime security.

2.2.6.2 Maritime piracy

It past years, the maritime environment was used for criminal purposes such as human and drug smuggling, as well as the smuggling of weapons, piracy and armed robbery against ships. Together all these issues constitute a threat to international maritime security. Piracy attacks and maritime crimes are usually committed in areas of commercial maritime areas, especially in times of political and economic instability or in areas where maritime protection does not exist. Today's pirates are usually organized groups, highly equipped with communication devices and weapons as well as high speed ships.

Maritime crimes in high seas are international crimes (Sinai, J. 2004), and are also considered a form of terrorism. They are similar; however, maritime piracy uses violence to attack cabin crews and passengers, owners of merchant ships and political ships (Greenwood, C. 2002).

Piracy exists in many areas of the world. However, its main centres are the South China Sea, Philippine and Indonesian waters, Malacca Strait, Red Sea, Bengal Gulf,

Edden Bay, and the Horn of Africa region (ASEAN 2002). In 2000, there were more than 471 piracy accidents against ships (Ibid)

Piracy in the past

Piracy crimes are amongst the oldest crimes on earth. In ancient Greece, piracy was conducted on a large scale and was considered a legal means of making money. During Roman ages, there were many piracy attacks in the Mediterranean area, leading to many maritime forces working to combat them. With the end of these periods and the beginning of the age of Empire, piracy appeared again much stronger and has lasted until today (Souza, P. 1999). During the golden age of piracy (1690-1730), many modern countries suffered from its crimes, a matter that obliged the British government to combat it using armed vessels (Konstam, A. 1999).

Piracy in the present

Piracy nowadays has caught the attention of the whole international community, as it is a crime of international interest. Piracy had grown noticeably by the end of the 20th century after a long period of decline. This appearance means that fleets of major countries are encountering a real challenge. Piracy exists in many of the world regions and occupies position 2 in the rank of crime. The following section discusses locations of piracy in the current age.

- **South East Asia**

Most of the attacks in South East Asia take place in the Malacca Strait, Singapore, Indonesia, the Philippines or in the South China Sea. The main reason for the appearance

of piracy is the increase in maritime activity, especially huge merchant ships crossing water passages to save time and distance. This region is enjoying economic prosperity, as is the case in Japan, China, Korea, Europe, the Middle East and Africa (Klein, M. 2010).

- **Africa**

Africa, China, and the Niger Delta have suffered a lot from pirate attacks more than any other areas. Although piracy has decreased noticeably recently, it has not stopped completely. Piracy still represents a serious problem and there are attacks on ships, oil carriers and fishing ships. The kidnapping of cabin crew is increasing in order for ransoms to be obtained (Moller, B. 2009).

Edden Bay and the Horn of Africa are the most frequently attacked areas. Most pirate attacks target the regions around Somalia's east coast. Attacking ships in the Horn of Africa influences world trade, maritime transportation, and the Somalian people as well because such attacks hinder the delivery of aid to Somalia. Pirate attacks are always very harsh and although most attacks target anchored ships, Somalia attacks target ships in the high sea.

In the past three years, pirate attacks have extended to a distance of 115 km off the Somali coast. Somalian pirates have seized merchant ships for ransom; in 2008, for example, (Lennox, P. 2008), Somalian pirates sized the Ukrainian gunboat carrying weapons to Kenya, mainly tanks but also large quantities of ammunition and bombs. The ship was released after the pirates received a ransom of 3.2 million dollars (Hourel, K. 2009). It is worth mentioning that poverty, low economic status, the decline of social and political life, and the absence of security have all contributed to the growth of this phenomenon (Shani, R. 2009).

- **Middle East**

The coasts of the Middle East have three main commercial passages: Bab Al-Mandab Strait, Hormuz Strait and the Suez Canal. Pirate attacks appear in these areas from time to time. In Yemen, the destroyer 'USS Cole' was attacked in 2000, which had a negative influence on the Yemeni economy. The Iraqi war and Iraq's bad situation in terms of security and politics recently have also led to the appearance of piracy. Iraqi ports are considered vital for the re-establishment of its economy. According to the International Maritime Bureau, Iraqi pirates are armed and their primary motive is theft and realization of profit. They attack ships using small boats. Most piracy incidents have taken place on anchoring ships in Al-Basra and Om-Qasr Port.

- **Europe and Middle Asia**

There are some reports stating that attacks have occurred in the Mediterranean Sea, Black Sea and Qazween Sea. The Mediterranean Sea plays an important role in the field of terrorist logistics. The Bosphoros Strait is also an important passage for European security. Many gas pipelines pass through it from Asia to Europe.

Pirate hotspots

There is general agreement about the geographical areas most affected by piracy and such locations are called pirate 'hotspots'. These hotspots change according to the motives and factors related to piracy. Piracy may appear in a particular area because of economic difficulties or an increase in maritime transportation in that area. It could also be a mix of political and social events that push citizens towards piracy. Armed conflicts are also considered to be major factors leading to piracy.

In order to avoid the possible dangers of piracy, many international organizations warn ship captains and owners to be extremely careful when passing through certain areas, including coastal waters, straights, roadsteads and near ports in the following regions (Parritt, B. 1986):

- South East Asia and the Indian Subcontinent (Bangladesh, India, Indonesia, Malaysia, Thailand, Vietnam, the Philippines, and the Strait of Malacca);
- Africa and the Red Sea (Conakry, Dacca, Dar el Salaam, Lagos, Aden Gulf, and the area near the Somalia coast);
- South and Central America, the Caribbean (Brazil, Columbia, Dominican Republic, Ecuador, Guyana, Jamaica, Peru, and Venezuela).

The above areas are considered hotspots of piracy, and the first two areas are called the 'strategic triangle'. This strategic triangle comprises three main regions: the Persian Gulf which contains about 65% of international regions production, 49% of production in the current time, and 75% of oil reserves. These resources may be the reasons behind the conflict of national, regional, and international interests (Kolev and Mednikarov. 2006).

The definition of absolute economic areas, mentioned in the UN convention of the law of seas, may lead to conflict among countries with regard to maritime frontiers. Also, the absence of a law governing the mechanisms of execution of law may increase piracy attacks in these regions.

The effects of piracy

There are many effects resulting from piracy. In addition to the risks surrounding the lives of sailors and employees in the maritime sector, there are many other undesired effects. Piracy leads to the theft of goods and the delay of shipping. This negatively influences companies and their clients. Also, pirates aim to obtain a large amount of money through ransoms. This certainly affects companies and stakeholders as well as increasing insurance premiums. The most important of all is that it negatively affects maritime security when there are breaches of the international maritime security system. In short, piracy represents a real threat to maritime stability and security on national, regional and international levels.

The volume of piracy and the lack of information

Most analysts agree that there is deficiency in terms of information about piracy incidents which results in an absence of accurate data about the real volume of pirate attacks. This may be due to authoritative failures in restoring stolen goods or lost ships. Also, collecting information about piracy is time consuming, especially the investigation process. It may also harm companies' reputation and raise their insurance premiums if they provide too much information about piracy.

The above factors negatively affect the international community's realization of the problem of piracy. The reality is that most pirate attacks are very simple in nature, i.e. stealing simple goods either from anchoring ships or from ships in the high sea. This seems to be of minor importance to international maritime transportation or the whole world as such cases numbered 310 in the period 2003 to 2007 (Lauren, P. 2009).

Piracy and maritime terrorism - the point of difference

In the current time, terrorists and pirates conspire together to achieve separate targets. However, governments do not demarcate between piracy and terrorist attacks (Valencia, M. 2003). Indeed, there is a relationship between piracy and maritime terrorism; there are some similarities as well as some differences between the two phenomena. Also, the interests and objectives of each group may vary. Researchers have identified four major points that can be considered common in both piracy and maritime terrorism attacks, as follows:

- Both piracy and maritime terrorism represent security threats across national frontiers; or in other words, piracy and terrorism on the high sea are international crimes that cut across national frontiers (Sakhuja, V. 2002).
- The overlapping of tactics and methods used in both piracy and maritime terrorism (Brandon, J. 2003).
- Violence is considered a common factor between the two crimes (Gerard, G. 2004).
- Piracy has become more bloody and violent, resembling terrorism to a great extent (Gerard, G. 2004).

According to the above, we can see that there is an overlap between piracy and maritime terrorism. However, there are some differences that should be highlighted. Pirates aim to obtain money where as maritime terrorism seeks political gain. Concerning the methods used, piracy always adopts fundamental tactics and simple capabilities. On the other hand, maritime terrorism adopts more advanced and complex tactics and

capabilities (Bingley, B. 2004). As for the effects, piracy is restricted to the tactical level while terrorism aims to achieve strategic goals.

Financing piracy and maritime terrorism attacks

Finance for attacks comes from other crimes not less dangerous than piracy and terrorism. Illegal drug dealing and smuggling of weapons are the main crimes used to obtain large cash flow. They are the main sources of finance for terrorist attacks. The following sections illustrate in detail the issue of illegal trade.

2.2.6.3 Illegal trade

Illegal trade is one of the major problems faced by the international community. It is considered one of the most serious crimes and can be used to obtain large cash flows. It is one of the main crimes that countries try to combat. Illegal trade is among the threats encountered by Saudi port security. Accordingly, the researcher will discuss illegal trade and its influence on the security and stability of the KSA.

Types of illegal trade taking place in Saudi ports

Many goods and services are being illegally smuggled into the KSA for two main reasons: first, the presence of a certain law that forbids the circulation of certain goods or services inside the country; and second, the imposition of high taxes on these goods or services. For these two reasons many goods and services are smuggled into the country, mainly drugs and illegal weapons in addition to certain food stuff like alcohol and tobacco. The main objective of smuggling is to avoid taxes. One can buy large quantities of cigarettes at low prices and sell them in another place at higher prices, thus obtaining a

great profit. One truck of cigarettes directed to the U.S. can result in profits of about 2 million dollars (Horwitz, 2004).

In the current time, many countries are confronting illegal trade and setting strategies and security plans to defeat smuggling. The following section deals with types of illegal trade passing through Saudi ports; however, we will restrict our discussion to drug dealing and the illegal trade of weapons.

Drug dealing

The problem of drug dealing and its security, political as well as economic influences are still a major issue facing the international community. It is a serious threat requiring the cooperation of the producer, manufacturer, dealer, financier, trader, distributor and addict. Drug dealing started in the KSA about 35 years ago and has increased in recent years (Almiman, 2006). In the beginning it took the form of distribution of narcotics (Al-Zahrany, A. 2001). Drug dealing is facilitated by paying bribes to employees of drug combating authorities. Offerings are not limited to those employees only but also extend to those working in the justice field, especially investigation authorities, in order to help dealers avoid prosecution (Al-Gamaan, A. 2003).

Types of drugs smuggled into KSA

Drugs smuggled from production areas (outside the KSA) to distribution centres inside the KSA are many and diversified. They include cannabis, opium, cocaine, barbitals, amphetamines and hallucinogenic drugs.

- **Cannabis**

Cannabis derivatives are varied and come from the Indian cannabis tree which grows widely in the North Himalayas. Cannabis derivatives are the most widespread drugs around the world. It is grown in many regions of Central Asia, Sudan, and South Africa (which is one of the main countries producing cannabis), followed by Mexico, Columbia, Morocco, Jamaica, Palestine, the United States, and many other African, Asian, European and American countries.

Cannabis enters the KSA via the Red Sea through Sudan as well as through Iran and Pakistan via the Arabian Gulf. The amounts of cannabis smuggled have increased recently due to an increase in illegal immigration.

- **Opium**

The opium poppy is the main source of opium. It has grown wildly in the Mediterranean area since pre-historic times. The main regions producing opium nowadays are:

- South East Asia, especially Thailand, Lao and Porma.
- South West Asia, especially Pakistan, Iran and Afghanistan.
- Firewood areas such as Columbia, Mexico, Ukraine and Moldova.
- Central Asia, especially Tajikistan, Azerbaijan, and Kyrgyzstan.

Heroin is produced inside the regions that cultivate the opium poppy; however, there are also other countries which produce heroin from opium. Illegal opium dealing is relatively low. Dealing organizations prefer the manufacture of the poppy crop into heroin before it is shipped to consuming countries because a little quantity of heroin is of

much higher value than the same quantity of opium. In other words, heroin is more profitable than opium. Opium is among the narcotics that enter the KSA via the sea, but in relatively low quantities. The amount seized in recent years has not been huge.

- **Cocaine**

Cocaine is the main source of cocaine. It has grown in Latin America since pre-historic times. Peru is the main cultivating area, followed by Bolivia and then Columbia. At the beginning of the new century, Columbia was ranked the highest cultivator of cocaine. Cocaine is the main narcotic smuggled into KSA. In the period from 2000 to 2010, about 1,808,329 tons of cocaine in KSA alone were seized, in addition to hundreds of tons that were seized, burned or dispossessed.

- **Tobacco**

In most countries smuggled cigarettes are cheaper than cigarettes produced nationally. Smuggled cigarettes increase the consumption of tobacco and accordingly increase the death rate resulting from smoking. Also, they deprive governments from profits due to tax evasion. A report issued by the Blomberg Initiative to reduce smoking states that if the illegal trade of tobacco were eliminated, governments would gain not less than 31 billion dollars annually as well as save the lives of 160,000 persons per year (Report reduce tobacco smoking, 2009). Like many other countries, the KSA suffers from the problem of smuggling of large quantities of tobacco via maritime and land ports.

- **Alcohol**

In some regions of the world Alcohol trade is completely forbidden, especially in Islamic countries. The KSA is one such country. It also forbids alcohol imports.

However, many smugglers succeed in bringing large quantities of alcohol inside the KSA (UNDOC World Drug Report 2006).

Methods of drug dealing through Saudi Ports

Professional drug dealers have created many diversified methods that help them conduct their activity of drug dealing and smuggling through Saudi ports. Such methods are characterized by accuracy so that they avoid both traditional and modern security techniques adopted by the Saudi government. It is well known that the bulk of Saudi imports come into the country through its ports. That is why drug dealers make use of maritime ports, ships, equipment and packages imported from outside the country. It might be difficult to enumerate these methods; therefore, the most important methods only will be discussed.

- **Equipment and machines imported via maritime ports**

Drugs are smuggled by hiding them inside equipment and machines that enter KSA through maritime ports. Such equipment facilitates the hiding of drug packages from inspection officers at the ports. Among the drug packages seized are the following:

- A large quantity of prohibited pills inside a cement tank.
- A large quantity of weapons hidden inside a graver opening.
- A large quantity of wine inside a tank with a side opening which permits the entrance of wine boxes. The tanks were then sealed using an electrical structure board for deception (Report of terrorist attacks, 2006).

- **Consignments and packages imported**

Drug dealers use international consignments and packages to hide drugs so as to deceive port security and inspection officers. The most serious method is to send consignments and packages directed to certain diplomatic missions. Many of these consignments have been seized, including:

- A large amount of cannabis inside a container after passing the custom inspection and control stage. Police quality and quantity laboratories at the port were able to detect the contents of the package.
- A large amount of alcoholic beverages (wine) in plastic bags, inside barrels containing granite.
- A quantity of cannabis hidden inside a furniture consignment imported from outside.
- Prohibited pills hidden in cavities between the inner and outer walls of electric heaters.
- A large number of whisky bottles in a consignment of iron structures consisting of columns and tubes hollow inside and equal in size to the whisky boxes. These tubes were sealed from both ends.

- **Containers**

Containers are widely used for drug smuggling (Singh, K. 2008). Containers are used in large numbers. This helps with the transportation of huge amounts of drugs. Also, drugs can be hidden in such a way that they cannot be observed by inspectors. Many of these containers have been seized, including:

- A large amount of alcoholic beverages inside mineral water boxes similar to other boxes regarding volume and shape, all in the same container.
- A large amount of wine bottles inside boxes containing ceramic.
- A large amount of wine inside a container (Al-Rashoudy, I. 2005).

- **Various methods**

There are many diversified methods used for drug dealing and smuggling through Saudi ports. For example:

- Avoidance of control procedures at frontiers. This is done by small ships, planes or smuggling tunnels, or even small submarines.
- Using islands opposite maritime ports to hide drugs for long periods of time.
- Using low profile vessels, designed in a way that makes them difficult to be physically, visually, electronically or audibly discovered. They are high-tech and high speed vessels that can carry drugs up to half a ton (approximately). Under normal sea conditions, these vessels can be hardly seen by the naked eye or superficial radars if their distance is more than one kilometre. Almost no waves can be detected by air radars if they are more than 1500 m in height.
- Using Jet skis for drug smuggling, especially over short distances.
- Using Alhaska (which is a small wooden boat usually used as a fishing boat but modified with a strong engine). This method was used by Arabs of the Sinai desert for smuggling drugs not more than 200 kg into Saudi territory.

- Using high speed boats and yachts, as well as fishing vessels and sailing vessels.
- Using hi-tech devices to distort spying devices.
- Using satellite devices to determine drug locations at the sea in case of an attack by security officers.

- **Weapons trade**

The current age is characterized by the use of nuclear weapons. However, small weapons are widely spread around the whole world and frequently smuggled. Small weapons include pistols, military guns, ordinary guns, and sub maritime guns (UN Report, A/52/298). Light weapons include heavy submachine guns, hand grenades, and mobile antitank submachine guns. Small and light weapons are widely spread inside KSA due to large scale weapon smuggling. Light weapon smuggling gangs use maritime and terrestrial outlets due to a lack of control.

- **The main types of weapons smuggled inside KSA**

There are many types of weapons smuggled inside KSA. During the past 10 years, 7650 tons of weapons were seized, varying from pistols, submachine guns, hunting guns, Kalashnikov guns and large submachine guns, to explosives, dynamite and hundreds of tons of ammunition.

- **The effect of illegal trade on the security and stability of KSA**

In general, organized crime weakens social, economic and political conditions, as well as security institutions, making them unable to work properly. Sometimes, crime organizations take the place of the central authority as a legislator and governor (Johnson,

C. 2004). A good example of this is the events that occurred in Latin America in the 80s when governments were described as drug governments. Also, the presence of light weapons in the hands of outlaws led to the break out of war, violence and conflict within society (Kater, C. 2003). In most civil wars, small and light weapons play a major role. In short, weapon trade, particularly small weapons, hinders and obstructs the peace process in all countries suffering from war.

Drug dealing has a negative effect on Saudi society. It destroys the health of the youth and raises death rate. Also, the trade of light weapons and small weapons results in many security and political problems inside the KSA as well as many other minor and simple conflicts among families.

The human resources required for illegal trade

Illegal trade gangs, whether those that concentrate on drug dealing or weapon trading, need human resources to carry out their actions, mainly to assist production, distribution, promotion, smuggling and selling. Illegal trade gangs seek needy people who lack protection, money and shelter; accordingly; these aspects can be found in illegal immigrants.

2.2.6.4 Illegal immigration

Immigration is an old phenomenon related to economic, social, demographic, political and security aspects. Immigrants are usually directed towards areas that have an availability of job opportunities and which have a low population density. Individuals and families usually move from areas of conflict and civil war, or those which are affected by drought, desecration and natural catastrophes. Man has a double-faced relation with land;

the first is characterized by movement through wide areas and the second deals with settlement in a particular location within these areas (Borricand, J. 1998).

During the past two decades, external immigration rates have increased noticeably in comparison with immigration rates in previous periods. The International Organization for Migration (IOM) estimated the current number of immigrants as being 192 million, and estimated current annual rate increases of 2.9% in comparison with 2.1% in the previous period at end of the 20th century.

The problem of illegal immigration is growing all over the world, resulting in billions of dollars gained by crime organizations. It is ranked third for financial returns after the illegal trade of drugs and weapons. Many experts have stated that human trafficking is ranked second after drug dealing with regard to financial returns (Maicibi, B. 2007).

The KSA suffers from the problem of people staying in the country after performing Hajj or Umrah (the religious pilgrimages) and not returning back to their home countries. It also has to combat hundreds of people trying to sneak into the country through both land and maritime borders. Security, passport and immigration authorities all play an important role in combating illegal immigration.

Illegal immigration on an international level

Illegal immigration is considered a worldwide problem although it varies in its trends and levels from one country to another. Immigration, in general, is the result of economic problems. Although there are other reasons, economic problems come out top, especially in terms of illegal immigration due to declining economic situations in the home countries of illegal immigrants who suffer from failure of their country's

development process, low job opportunities, low wages, and low standards of living. Europe is considered the best destination for immigrants due to its lack of skilled labourers and high salaries. Estimates of the United Nations (UN) state that Europe will receive 159 million immigrants by 2025. A recent report issued by the International Committee of Immigration states that the number of immigrants at the present time has reached 200 million individuals, in comparison with 75 million just 30 years ago. (Tsyler, C. 2006).

As for illegal immigrants, they amounted to 30 million individuals in the 1990s. The United States of America has the largest share: 1 to 5 million illegal immigrants. There are 3 million immigrants in Europe, 500 thousand in Italy and the same number in Spain and Germany (Zohry, A. 2006). In KSA, however, there are 900 thousand immigrants.

Most illegal immigrants are unskilled labourers. Therefore, they find it difficult to find a proper job in the country to which they emigrate. Additionally, they usually do not have any legal documents required for employment. As a result, they prefer to work in secondary jobs or seek illegal ways to earn a living. Such ways may vary, but some immigrants eventually undertake organized crime.

Illegal immigration and human trafficking in KSA

The issues of human trafficking and smuggling are two recent criminal phenomena. In other words, they represent a major contemporary criminal activity. Human smuggling is considered a good field for organized criminals. This fact was highlighted in a report issued by the UN (2005). Specialists view human trafficking as a modern form of slavery (Bravo, K.2007). Also, it is viewed as a new form of crime in

which gangs and organized criminals are involved. It is ranked among the most profitable criminal activities and accordingly it has become a form of illegal trade with high returns (Kevin, B. 2006).

Human trafficking is related to illegal immigration in that it can be defined as a group of acts where humans are the target. It aims to evacuate or displace humans, whether inside their home country or outside, abusing immigrants sexually or in any other way (Hughes, D. 2001). Human trafficking has many definitions, but is characterized by compulsion. Debts or bonds are often involved, so the individual is under complete slavery (State, D. 2005).

Human smuggling first appeared worldwide after the Second World War and after the advancement of countries' sovereignty on their territory, maritime and terrestrial ports. Human smuggling has increased across the borders of the KSA, particularly through poor neighbouring countries.

Human smuggling may take place as an individual activity or a professional activity. As an individual activity it is performed by a single person or through small groups using smuggling boats in return for specific amounts of money, or by climbing onto vessels without informing the sailors. People sneak onto vessels by swimming during the shipment and unloading processes. They usually hide inside the stores, warehouses or life boats on the vessel. Some of these individuals may use terrestrial passages where watching and control points are not concentrated.

Organized crime groups smuggle in return for some gains and through smuggling they build up networks with qualified personnel in the fields of immigration, citizenship and residence laws. Smuggling gangs use maritime and terrestrial passages not subject to control by SBG in exchange for sums of money, but without any security or health

guarantees during smuggling. Gangsters may face the risk of death at sea due to the overloading of boats. Also, smugglers may undertake extortion and abuse of the economic conditions of illegal immigrants.

Illegal human smuggling into the KSA takes place via the Red Sea in old boats or boats with large engines sailing from specific points on the Red Sea coast in the direction of the KSA. Most of these illegal immigrants come from Somalia, Sudan, Ethiopia or Eritrea. These trips are usually risky due to high sea waves and high wind speed. A boat sank in 1991 while it was on its way to the Saudi coastline, resulting in the death of 11 persons and the survival of only two, who were rescued by fishing boats. During the last five years, the number of illegal immigrants has declined sharply due to the strict control of Saudi coasts and after conventions among countries along the Red Sea coastline.

The effects of illegal immigration

Illegal immigration is a major issue for countries. Illegal immigration has many negative effects on security, economics and social aspects. The following section discusses the effects of illegal immigration and human smuggling on the KSA.

- **The security aspect**

- Human smuggling is a real threat to Saudi national security. Agents and saboteurs are smuggled in with the immigrants, resulting in the appearance of terrorist groups inside the KSA.
- Illegal immigration leads to the entrance of many weapons, explosives and ammunition, which are always related to illegal trade.

- Circulation of immoral ideas, and breaches and violations of the laws and state system often stem from illegal immigration.
- Illegal immigration results in financial burdens for the country because authorities have to choose between imprisonment or deportation of immigrants.
- **The economic aspect**
 - Violation of labour market mechanisms and creation of an imbalance between supply and demand due to the availability of illegal labour.
 - Availability of unnecessary labour with low productivity.
 - Increase in unemployment.
 - Increase in the demand for food stuff, resulting in an increase in prices.
 - Increase in inflation rates.
 - Intensive use of public utilities and basic services.
 - Increase in money laundering crimes.
- **The social aspect**
 - The spread of random neighbourhoods, resulting in a decline in necessary services, an increase in environmental pollution, and the spread of social diseases such as theft, drugs addiction and prostitution.
 - Appearance of strange customs and improper cultural practices such as begging.

Illegal immigration and crime - An international view

Crime has increased in general throughout the world. These crimes include armed robbery, theft, the devastation of public and private property, threatening people, and premeditated murder, among others. Criminal organizations may abuse illegal immigrants and use them for criminal work such as drug dealing or the weapon trade. They may also be used for sex tourism or hard work in the fields of industry, agriculture, and domestic services. In some cases, children, women and elderly people are used for organized begging or even collecting rubbish and waste materials that are harmful to human health (Jonathan, T. 2009). As for girls, they may be used for compulsory marriage or temporary marriage, as well as the adoption business (Nilanjana, R. 2006). Additionally, illegal immigrants can be used for the human organs business (UNODC, 2009).

At present, the European continent suffers a lot from crime and problems arising from illegal immigration. The European agency has revealed that there are four main mafia groups which conduct organized crime on the European continent. These groups are distributed according to nationality and geographical location (Report of Crime Status in Europe, 2008).

The European continent is considered the second main market for drug dealing after the United States of America. At the same time, it is the primary producer of manufactured drugs. Illegal immigration gangs have played an important role in the increase of crime and drug dealing in Europe (Fargues, P. 2005).

The United States of America is the main country that suffers from illegal immigration. Many immigrants live in the U.S., especially from Mexico and South American countries. This explains the spread of crimes committed by illegal immigrants

in the U.S. (Mac Donald, H. 2004). Indeed, there are many citizens in the U.S. who suffer from crime committed by illegal immigrants, including murder and theft.

2.2.7 Protecting Saudi ports

The threat facing maritime security represents a great challenge for the whole world since this threat can cause harm to most countries. Consequently, maritime security requires concrete and inclusive efforts through cooperation among countries in order to protect common interests in the area of universal maritime security.

The Saudi government has set a security strategy to protect settlement and security within the KSA against all possible threats and crimes. This strategy aims to encourage security efforts that can enforce security effectiveness in various areas while maintaining all rights and freedom. The strategy also contains a section concerned with the protection of maritime security and the security of maritime ports.

The Saudi security strategy is distinguished in that it sticks to the principles of the Saudi constitution and law, along with maintaining the principles of international law. The strategy aims to suppress criminal and terrorist attacks and hostile actions via maritime frontier patrols, SBGF and the customs directorate. The strategy focuses on the role of authorities and naval forces in controlling attacks and protecting the KSA maritime frontiers. The following section will discuss the role of maritime frontier forces in protecting and enhancing security and settlement.

2.2.7.1 Enforcement of frontier security

The country pays great attention and interest to its frontiers and ports because of many reasons. The most important of these is the sovereign rights of the country.

Contemporary and modern history confirms that the main motive behind most conflicts in the world of today is related to frontier problems. Due to countries' interest in the sovereign right, each country has set a system concerned with this issue. A SBG system has recently been established to deal with the problems of security on the frontier, such as guarding the frontier, preventing infiltration, preventing smuggling all that is prohibited in the country, and having an early alarm system when exposed to risks that threaten frontier security, as well as organizing a process for the signing of agreements between states.

2.2.7.2 Saudi Naval Forces (SNF)

A naval force has been formed in order to maintain the security of the KSA and its frontiers, with the task of defending the safety and security of the KSA and its territorial waters. The force also works to protect ports and keep the security and safety of ships coming to and leaving the KSA. It also cleans waterways leading to the KSA's ports from maritime mines. The SNF has passed through three stages since being established (Report of Saudi Maritime Force, 1989).

- **Establishment stage**

The beginning was the establishment of a navy school in 1957. It was the first part of the Saudi Army, but then the school was developed to become a small naval base located at Dammam. In 1961, the KSA bought its first maritime piece, which was the King's ship (Al-Riyadh). It was purchased from the coast guard of the United States of America.

- **Construction stage**

In 1973, the first independent navy budget was pronounced. Adraya and Malya were separated from the army and the first navy organization was set up.

- **Development stage**

The actual development stage started in 1975 with a project for developing naval forces, including the construction of essential facilities and the buying of equipment and systems such as ships/vessels and maritime weapons. Naval forces are now in continuous development, with the introduction of various modern techniques in the area of maritime security. Today, there is a unit concerned with maritime security at each Saudi port to fight maritime terrorism, piracy, illegal trade and illegal migration.

2.2.7.3 Saudi Ports Authority (SPA)

The SPA has a fundamental role in the protection of Saudi ports against the dangers of terrorism and piracy. It plays a significant role in improving port efficiency. After a Saudi port crisis 100 years ago, the country started to convert its port administration into an independent authority directly connected to the prime minister, with the aim of developing and improving the status of ports and administering them according to international methods and systems.

Since its establishment in 1976, the SPA has eradicated the crisis of accumulation in a period that does not exceed 6 months. It has also concentrated on its main target, which is organizing ports and improving their efficiency. The past three decades have witnessed a number of achievements, the most important of which are as follows:

- The establishment of the biggest system of ports in the Middle East, containing eight fundamental ports with 184 platforms, supplied with modern equipment.
- The revival of the Saudi economy, as more than 95% of the KSA's imports and exports pass through maritime ports.
- The handling of over 2500 million tons of goods by the end of 2009.

The SPA plays a fundamental and effective role in the protection of Saudi ports. Its bylaws stipulate a number of laws and principles that help to improve the security of ports.

2.2.7.4 Bureau of Customs and Frontier Protection

The Bureau of Customs and Frontier Protection works to implement law, for it has the authority to practice and perform the duties stipulated by the law and system of the Saudi Ministry of Interior. It also has the authority to implement arrests and inspections, and the operations of holding firearms (guns) and implementing sentences (judicial matters). The bureau also has the right to protect Saudi frontiers against terrorist infiltration by detaining suspected persons who are trying to enter the KSA by illegal ways. The bureau plays a significant role in suppressing criminal activities such as the trade of drugs, the smuggling of weapons, and the laundering of money. It performs these tasks through inspecting trucks and vehicles, and preventing the movement of those unregistered persons who break the laws of immigration.

Personnel of the Saudi Bureau of Customs are trained in basic skills to implement the laws regarding fighting terrorism, discovering forbidden things, carrying out

interviews, recognizing Saudi laws of migration, and being familiar with modern techniques, such as those used for examining goods and bags.

2.2.7.5 Saudi Border Guard (SBG)

The establishment and development of the SBG

The KSA has a unique geographical location of a great importance since it occupies 80% of the Arabian peninsula. It is surrounded by three international maritime ports (Strait of Hormuz and the Straits of the Gulf of Aden and the Suez Canal). It also overlooks the Persian Gulf and Red Sea. It also has a frontier that extends for 7000 km. In order to control these long borders, the government was obliged to establish a security system to guard the land and sea frontiers of the KSA and maintain the safety of the KSA. This involves the following steps:

- Since the unification of the KSA, the administration of the SBG has passed through many stages, the most important being the establishment of the directorate of the SBG.
- A coast guard institution was established in 1924 at Jeddah, but worked only to guard the Red Sea coast through repeated patrols and inspection to discover smuggled and forbidden materials.
- Royal decree No. (26) was announced in 1973. It approved a system for frontier security and its regulation. It changed the name of the coast guard institution to the General Directorate of Frontier Corps.

- Royal decree no. (9) was announced in 1994. It approved the changing of the name of the Frontier Corps to the SBG.

The importance of the SBG

The SBG plays a significant role in the security system of the KSA. It is considered the fortress and shield of a country with a geographical area of thousands of kilometres. The importance of the force derives from its mission to guard and watch the KSA frontiers. The SBG authority works to ensure the Saudi frontier protection against any possible danger that might arise, such as infiltration, smuggling and destruction. Indeed, the SBG is considered the first line of defence against any attempt to target the security and safety of the country (Al-Mazmumi, A. 1998).

Goals of the SBG

The goals of the SBG can be recognized through the third article of the frontier security system, as follows:

- Guarding the KSA land and sea frontiers, and fighting smuggling, internal and external infiltration.
- Early alarm raising for any unusual movement on the border line.
- Contributing to rescue operations in the maritime border region and the presenting of help to its maritime bodies.
- Guiding and helping drifters in the border region.

- Watching all persons and ships existing in the frontier region and making sure they adhere to obligations and stipulated rules.
- Cooperating with official bodies within the scope of the stipulated systems to ensure the general interests of the mission of the SBG.

Implementation of the task

The following steps were mentioned by the head of the KSA (article No. 4, frontier security system) as part of the frontier security system to help the SBGF in tasks of fighting infiltration and smuggling:

- Organizing the guard of the frontier line, determining leadership locations, watching centres and securing communication, besides organizing patrols in the frontier region.
- Coordinating and cooperating with the internal security forces, Saudi armed forces and other official forces in order to implement duties in a better way.
- Guarding maritime transportation and watching vessels while passing through the maritime frontier region.
- Watching the use of explosives in the frontier region and arresting those who violate the system.
- Watching fishermen and determining places in the sea for fishing, diving and leisure.
- Collecting forbidden things that exist in the maritime transport media directly after completing a health inspection, keeping them sealed in a safe place, and

providing them with the appropriate guard who is a representative of the SBG, as well as the captain if the vessel is submersible. However, if the vessel is anchored on a platform a signed record must be prepared.

- Preventing passengers from getting down from the means of transportation unless to complete quarantine procedures.
- Inspecting all maritime transportation ships that do not raise the flag of their nationality when entering or crossing the frontier region, and arresting those on board if they cannot prove their identity.
- Inspecting persons existing in the frontier region and outside the custom circle, considering them suspects and investigating them with regard to the reason behind their existence and in order to find out their identity.
- Considering as suspect all maritime transportation ships except military transportation ones and those which enter or pass through the frontier in order to implement the duties of the SBG.
- Discovering prohibited and smuggled things and arresting smugglers and stopping their transportation. Inspecting these things (substances) and preserving them inside the frontier region.
- Investigating crimes and riots that occur onboard maritime transportation in the frontier regions which do not have safety centres.

The role of the SBG in fighting threats to Saudi port security

The SBG play an effective and significant role in fighting maritime terrorism, piracy, illegal trade and illegal migration which threaten the security of Saudi ports and the whole maritime sector. They move through maritime coasts and STW in the Red Sea and the Arabian Gulf in order to keep safety and security as stipulated by the frontier security system and its regulations.

The SBG perform a lot of tasks that help to fight maritime terrorism, illegal trade and illegal migration (see table 2-1), using various means and activities.

Goals	Tasks & Activities
Securing ports, waterways and coastal corridors	Conducting port patrols, evaluating weak points, collecting data, and other tasks to prevent terrorist attacks and reduce the harms of such attacks.
Preventing drugs	Using fast vessels and planes in the highlands and regions of the drug trade, collecting data and standing up against the spread of drugs in the KSA through the maritime frontier.
Preventing migration	Using patrols and planes to reduce the number of illegal migrants who try to enter the KSA via the sea.
Preventing piracy	Using daily patrols, planes and fast vessels, and cooperating with the governments of neighbouring countries.

Table 2-1: Task and activities of the SBG.

In order to answer the question ‘what is the role of the SBG in fighting maritime terrorism, illegal trade and illegal migration?’ a questionnaire has been designed to indicate the effective role of the SBG. The researcher discusses the questionnaire and presents the questionnaire results and analysis in the fourth and fifth chapters of the present study.

2.2.7.6 The Border Patrol's mission in other countries

The Border Patrol's mission differs from country to country, but generally speaking it can perform different jobs related to navigation, national security and ocean safety, beach protection, and the execution of immigration and drugs laws. In the following section, the researcher will shed light on the duties of the Border Patrols in the United States of America and Japan.

The Border Patrol in the United States of America

The Border Patrol of the United States of America plays a key role in fighting the security threats against the safety of American ports. The American Border Patrol was established on the 28th of May, 1924 by Congress in response to the increasing number of illegal immigrants entering the USA (Johnson R. Erwin. 1987). Since the attacks of 9/11, the mission of the American Border Patrol has changed to become a deterring force against terrorists and terrorist weapons.

Although the Border Patrol has changed dramatically since its inception more than 75 years ago, its overall mission remains unchanged: to detect and prevent the illegal entry of aliens into the United States. Together with other law enforcement officers, the Border Patrol helps maintain borders that work - facilitating the flow of legal immigration and goods while preventing the illegal trafficking of people and contraband. The American Border Patrol is responsible for the safety and security of 6000 km of the international borders with Mexico and Canada, and 2000 km of coasts around the islands of Florida and Puerto Rico (Gottschalk and Brian. 2000).

One of the most important activities of a Border Patrol Agent is line watch. This involves the detection, prevention and apprehension of terrorists, undocumented aliens

and smugglers of aliens at or near the land border by maintaining surveillance from a covert position, following up leads, responding to electronic sensor television systems and aircraft sightings, and interpreting and following tracks, marks and other physical evidence. Some of the major activities are farm and ranch checks, traffic checks, traffic observation, city patrol, transportation checks, administration, intelligence, and anti-smuggling activities (Jenifer L. 2009).

- **Fighting against security threats against the safety of American marine ports**

The duties of American border and coast patrols are varied according to the strategic security cooperation between the USA and other governments. However, the security of marine ports is a priority for border and coast patrols. The main duties of border and coast patrols are as follows (Hessman, James. 2002):

- Preventing smuggling illegal goods or untaxed goods into U.S. ports - making sure shipping companies pay all the appropriate tariffs and taxes on goods they ship into the United States is the first job of the Coast Guard.
- Preventing smugglers from bringing drugs into the United States.
- Preventing the illegal dumping of chemicals, illegal fishing or hunting of marine life, and otherwise enforcing marine environmental protection laws.
- Searching for and rescuing anyone who needs help in a marine environment, including storm-wracked boats and ships, refugees and

illegal immigrants trying to float to the United States, and anyone else involved in an accident at sea.

- Preventing illegal immigration.
- Watching out for terrorist attacks and other hostile forces trying to attack the United States by sea.
- Enforcing maritime laws, training civilians and commercial shipping crews in maritime safety, and ensuring the speed, safety and reliability of transportation in United States coastal waters.

The Border Patrol in Japan

The Japanese Border Patrol plays a key role in fighting security threats against the safety of Japanese ports through the continuous spread of patrols along the coasts of Japan (Tessa Morris-Suzuki. 2010). The main duties of the Japanese border and coast patrols in fighting against the security threats against the safety of the Japanese marine ports are as follows (Japan Coast Guard. 2011):

- Maritime patrol – patrolling Japan's territorial seas and Exclusive Economic Zone of 12–200 nautical miles out from the shore, which is approximately 4,470,000 km².
- Countermeasures against smuggling and illegal immigration.
- Countermeasures against piracy (Regional Cooperation Agreement on Combating Piracy and Armed Robbery Against Ships in Asia - ReCAAP).
- Counter terrorism.
- Security against maritime conflict.
- Surveillance of illegal operations by foreign fishing vessels.

- Countermeasures against suspicious vessels and/or spy ships.
- Dealing with unlawful acts by foreign oceanographic research vessels.
- Patrolling and guarding the waters near the Senkaku Islands, Takeshima, and the Northern Territories.
- Search and rescue.
- Hydrographic and oceanographic surveying.
- Maritime traffic management.
- Organization.

Commentary on choosing the duties performed by the border guards in the USA and Japan:

The following section comprises two parts; the first gives the reasons behind choosing the USA and Japan, while the second indicates the differences between the duties of the border guards in the USA, Japan and KSA, and the effect of these differences on the present study.

Why the USA and Japan?

The researcher chose the USA and Japan because of the following reasons:

- The Saudi Ports authority, in its security plan for the year 2010, followed the procedures issued by the border guards in both the USA and Japan to fight against terroristic threats. The preface to this plan reads "The Saudi Ports authority praises the efforts exerted by the border guards in both the USA and Japan to fight against terroristic threats using a group of effective precautionary procedures." (Soltan, Kh. 2010) Thus, the security plan approved by the Saudi Ports authority to fight against terroristic

threats depends greatly on the procedures issued by the border guards of both the USA and Japan.

- The strategic partnership between the KSA and Japan to enhance marine security takes many forms, such as cooperation between Saudi and Japanese border guards in protecting ports against terroristic threats, and the approval of the Japanese experience in protecting ports and applying it to Saudi ports (Mamdoh, G. 2010).
- The USA is considered a pioneering country for fighting terrorism. Moreover, after the attacks of 9/11 the mission of the American border guards changed to become one of deterring potential terroristic attacks. Thus, the researcher chose to consider the procedures followed by the American border guards as they are relevant to the study.
- The USA and Japan have high capabilities and the best means to protect ports and fight against terroristic threats.

The procedures followed by the border guards in the USA and Japan are different from those followed in the KSA in the following ways:

- The main difference is that the USA and Japan depend greatly on high technology and new systems to help protect ports from terroristic threats and fight terrorism. This is not the case with the KSA, as it lacks technology in its fight against terroristic threats.
- The USA always seeks to create initiatives, agreements and international partnerships which will help in the fight against terrorism, such as C-

TPAT (Customs-Trade Partnership Against Terrorism). This is not the case with KSA.

Studying the role of the border guards in the USA and Japan is very important in order to:

- Show the weaknesses of the Saudi border guard system.
- Emphasize the key role played by technology in the fight against terroristic threats and in port protection, and list the technological apparatus that may help KSA protect its ports.

2.3 Risks to maritime security: prevention and readiness

After recognizing maritime security risks such as maritime terrorism, maritime piracy, illegal trade and illegal immigration, the researcher will present some suggestions for confronting maritime security risks.

2.3.1 Laws and legislation

Laws and legislation are considered the main weapons to confront maritime security risks. They may take the form of local, international or regional laws and legislation.

Local legislation

Saudi maritime law is considered the backbone of local legislation as it sets out many principles for confronting maritime security risks. There is also the law of rivers principles and orientations, law of the Gulf Cooperation Council, and the law of ports

principles and orientations. All these laws play a role in confronting maritime security risks such as terrorism, piracy, illegal trade and illegal immigration.

Regional legislation (Arab region)

There is much regional legislation for confronting maritime security risks such as terrorism. KSA has been one of the most prominent countries in setting such legislation, including:

- Rules for members of Arab ministries of interior to confront terrorism.
- Arab strategies for confronting terrorism.
- In addition, there have been many special Arab conventions concerned with confronting illegal trade and illegal immigration in order to overcome these problems.

International legislation

There is much international legislation concerned with sea security and maritime risks. The KSA has joined many conventions, such as the international treaty for spirits safety in seas, signed in London in 1960; it joined this treaty on 3/5/1965. It also joined the 1972 international treaty of rules of preventing collision in seas on 3/7/1978. In addition, it joined the international treaty of preventing pollution of sea water on 30/12/1970, signed in 1954 and its annex in 1969. It also joined a special treaty for establishing international consultative organization for maritime navigation on 25/2/1969; the treaty was signed in Genève in 1948 and amended in 1972. On 5/9/1975 KSA joined the International Treaty for Maritime Lines, signed in London in 1966. On 20/1/1975 it

joined the international treaty for measuring ship weight, signed in 1969. On 5/9/1975 KSA joined the 1972 convention of special passenger ships, and also joined the International Treaty of Tankers Safety 1975. Royal decree No. (39) was issued regarding joining the International Convention of Spirits Safety in seas.

After a quick view of legislation and laws, it is clear that there is a lack of legislation on a local level, as there is no national legislation for confronting terrorism or other maritime security risks. Also, there is a shortage in regional legislation, as there is no legislation concerned with maritime security risks. Thus, the Saudi legislator should enact laws in this field to overcome this gap.

2.3.2 Training of workers at ports

There is a great need to train employees based at Saudi ports on how to protect the ports from maritime terrorism, piracy, illegal trade and illegal immigration. Such training is very important for tackling maritime security risk, as it enables employees to recognize the risks and methods used for criminal acts, in addition to setting a strategy for confrontation.

The KSA has two centres for training employees of ports. The researcher has tackled the topic of employee training in the fifth chapter of this study, but the important question to be asked is: how maritime security risks should be confronted by training port employees? The researcher suggests three steps to answer this question, and the KSA has considered these steps:

- **First step:** setting a plan to train employees at Saudi ports (including methods of training) on how to protect ports from maritime security risks.

- **Second step:** training must be obligatory for all employees at maritime ports.
- **Third step:** using technology in training and using the most advanced instruments for training employees.

2.3.3 Intelligence and exchange of information

Revealing terrorist activities inside the maritime system is not an easy process, and this indicates the importance of sharing information and intelligence when detecting terrorism in an early stage. Many goods come from all over the world and examining such a huge amount of goods requires a lot of time and effort. This highlights the importance of utilizing secret information.

In 2001, Saudi Intelligence discovered terrorists that were targeting Jeddah port; Al Qaeda planned to attack the port via a booby trapped boat (Report of Saudi Ministry of Interior 2002). In 2003, Saudi Intelligence discovered two plans to attack two maritime ships: a Saudi oil ship and an American trade ship. Saudi Intelligence has also played an important role in confronting illegal trade via cooperation with neighbouring countries. In the last few years, hundreds of smuggled drugs and arms have been discovered on Saudi maritime borders.

To reactivate the role of intelligence, the researcher makes the following two suggestions:

First: the KSA must cooperate in the field of intelligence, not only on the regional level but also on an international level, in order to confront maritime security risks.

Second: the country should establish a governmental centre concerned with the exchange of maritime information among countries in order to collect information and data concerning ships coming to Saudi ports, indicating their activities and cargo, in order to recognize the identity of all ships coming to Saudi ports as early as possible.

2.3.4 International cooperation

Terrorist activities are now more of a danger than at any time before. Thus, it is important to ensure cooperation among countries in order to confront terrorism and maintain peace and stability throughout the world. The KSA supports international cooperation among countries and international organizations with an interest in maritime security, and always tries to find common ground with other countries.

The most important question to ask here is, ‘how should cooperation among countries be coordinated?’ To answer this question, the researcher suggests three important points to be considered in order to achieve international coordination among countries in the field of maritime security protection:

First: determining the duties of concerned authorities for the protection of maritime security inside countries in a clear and regular format.

Second: supporting cooperation among these concerned authorities and coordinating their activities.

Third: supporting effective international cooperation among concerned authorities to confront maritime security risks.

There is a need to develop new initiatives to ensure that all countries are able to prevent terrorist attacks, and the KSA must intensively cooperate with all countries

without exception. To support and achieve international cooperation between the KSA and other countries in the region (especially Middle East countries), the researcher suggests the following steps be implemented by KSA:

- Supporting cooperation in the field of information exchange concerning the activities of terrorist groups, their leaders, locations, methods of finance, and weapons and explosives used, and studying how to confront this international phenomenon.
- Submitting and exchanging help in the field of investigative procedures and arresting people.
- Supporting cooperation with other countries in legal, judicial and technological fields.
- Preparing and exchanging studies tackling maritime security risks.
- Preparing Saudi law that confronts terrorism and setting an international convention in order to tackle the problem.

2.3.5 Technology

Technology plays a vital role in protecting the maritime system from the risks of terrorism, piracy, illegal trade and illegitimate immigration, as technology is always able to create new suggestions and creative solutions for all problems of life. The following section will discuss the issue of using technology in protecting maritime ports security in detail.

2.4 Technology and its role in the enforcement and protection of ports' security

Technology is considered a significant factor in human life. It plays a fundamental role in human movement and all fields of development. It has become an important part of life and in conditions of war, peace, development and settlement. However, there is a crucial question that should be answered: how can technology protect maritime ports?

The world of today is fully aware of the different ways technology can be used for security. There are various technological systems and programs that help to maintain security and settlement of maritime ports. Technology helps ships and ports confront terrorist attacks and fight smuggling and illegal trade. Various systems are used universally which help the administration of ships and ports tackle maritime terrorism, piracy, illegal trading, and illegal migration. Some of these systems are as follows:

- **Remote Bridge Monitoring and Control System:** provides operations personnel the ability to perform automatic bridge opening and closing sequences from a local control console, or from any network connected to the bridge via WAN, or via VPN utilizing the internet (Goslin, C. 2007).
- **Secure-ship, the anti-boarding system:** are a series of cameras, blast doors, and weapons placed throughout a ship, assisting the ship's crew in combating unwanted visitors without directly exposing themselves. Each anti-boarding security checkpoint uses canisters with razor wire to prevent pirates from boarding or coming near to the ship. This is one of the newest technologies to fight maritime piracy at high seas (Richardson, M. 2004).

- **Intelligent Digital Video Surveillance System:** enables clients to establish effective risk management strategies that will help them manage and safeguard business information and technology assets, anticipate vulnerabilities and risk, and maintain timely access to information (Russo, S. 2008).
- **International Container Exit System (ICES):** is a completely automated application for tracking and recording intermodal containers entering and exiting a yard. The core technology of the system is the Video Optical Recognition engine. ICES takes video imagery from moving containers, extracts relevant data (user defined), and populates a database with the extracted data (Richardson, M. 2004).
- **Smart Container System:** are smart because they can carry on a conversation. The user or their international control center (“platforms”) can communicate with them, depending on the programming, sensors, and technology used (Joseph, C. 2008).

After introducing the most important technological systems used for the protection of ships and maritime ports, the researcher presents suggestions regarding a system for securing Saudi regional waters against the dangers of piracy and maritime terrorism.

2.4.1 The notion of an early alarm system to discover any terrorist vessel attack

Ships are considered the main weak-point in any system of maritime security. An attack on a maritime port can be carried out using a ship. It is also through the use of ships that terrorist crimes can be committed, and they can also be used as a means to

transfer weapons or nuclear substances in order to execute a terrorist operation. Terrorists may use fast vessels to carry out the terrorist acts against constructions in a port, anchoring ships, or even the port itself. Consequently, it is very important to watch the movement of ships within regional waters and confirm their identity before they enter a port. Thus, the researcher suggests an early alarm system to discover terrorist attacks targeting ports. The idea of this system lies in using remote-sensing apparatuses that contain a group of electronic sensors. These sensors help identify any ship trying to enter the territorial waters. Remote-sensing apparatuses should be attached to the port's watching tower; in such a case, its range is the same as the territorial waters. Thus, it will be able to effectively identify the coming ships and check its legality.

How to implement the concept?

When a ship enters the regional waters of any country, it usually gives a watchtower all requested information. However, some ships get around this requirement or give incorrect information, particularly fast vessels and small fishing boats. They often enter ports without informing the port administration. Therefore, this concept will ensure there is a security barrier covering all regional waters in order to identify ships entering the waters and preventing them from proceeding without first informing the watchtower. This can be achieved through early notification by ships coming to port. This system depends on communication between the ship and the port's watching tower. Every ship must send a 24-hours-before-arrival notification to the watching tower asking for anchorage at the port. The notification must have such essential information as the ship type, cargo type, anchorage reason and the time expected to stay at port. There are three steps needed to carry out this concept:

First: putting a sensitive material in the watchtower that extends cover all regional waters, and which works to identify all maritime transportation entering the waters.

Second: when identifying an incoming ship, the watchtower administration will send a request to the ship captain in order to obtain the required information. The researcher suggests that the watchtower of the port where the ship is coming from is the one that sends information to the watchtower of the port where the ship wishes to enter. This will ensure the credibility of the information sent, since there are many ships that send incorrect data about their cargo as it may contain, for example, dangerous or prohibited materials even though the information sent indicates that the cargo is food stuff.

Third: dealing with unknown ships, in other words ships that do not provide information to the watchtower or that give incorrect information when entering regional waters. These ships should be dealt with by the naval forces or the SBG. When sensitive material is discovered onboard a ship that has refused to give information to the watchtower or has given incorrect information, the operation unit of the SBG should be informed in order to deal with the ship as a prohibited vessel.

In this way an early alarm system can be established to protect ports from terrorist attacks. The researcher will present this idea to the administration of Saudi port security in order to be implemented as soon as possible.

2.5 Summary

In this chapter the researcher has discussed several important issues relating to maritime security and the future security of ports. To deal with points of vulnerability the researcher has made several suggestions and recommendations. The researcher has discussed problems facing maritime security at the present time, and has made proposals that address these issues. Next, the researcher will analyze the future of the local development of Saudi ports in order to extract the most important results.

3. CHAPTER THREE: AN OVERVIEW OF THE FUTURE OF LOCAL DEVELOPMENTS OF SAUDI PORTS

3.1 Introduction

The local development of Saudi ports can be considered the cornerstone of protecting against terrorism, illegitimate immigration and illegal trade. With this in mind, the researcher has allocated this chapter to the study of the status of local developments, demonstrating their potential for ensuring and protecting ports against different crimes, illustrating the main weaknesses of the administrative system used by the SPA, and finally making suitable suggestions to overcome these weaknesses.

3.2 The reality of local development

The KSA has a critical location, having a north eastern boundary with Iraq and a south western boundary with Yemen. The south western boundary represents a real challenge for both the internal and external security of the KSA. For example, more than 22,000 illegal immigrants try to enter the KSA through its south western boundary every month, coming from Sudan, Eretria, Somalia and Yemen. Also, drug smuggling is a serious threat across the south western boundary of the KSA.

The KSA employs an operation control system in order to protect its air, maritime and terrestrial borders. It has the ability to detect, respond to and prevent any border percolation in high risk areas. Operation control lies completely under the power of the Saudi authorities.

The researcher has researched the local development of Saudi ports and discovered how the Saudi authorities, represented by the SPA, have upgraded its human

resource potential and invested in technology in order to provide the required security level.

Local development of Saudi ports carried out during the period 2000 to 2010 has developed ports and raised their capacity and security level, and by examining different stations and bases we can measure the efficiency and ability of local potential.

3.2.1 Operational performance

Over the past ten years, the operational performance of Saudi ports has become distinct in comparison with the surrounding countries within the Arab world. On an international level, Saudi ports do not reach the required level; their operational level in comparison with other countries outside the Arab region is extremely low.

The following is an overview of handling, productivity, maintenance and safety, which can be used to evaluate the operational level of Saudi ports over the past ten years (2000-2010).

3.2.2 Handling

Goods and containers

More than 1,439,760 tons have been handled during the period 2000 to 2010, while the quantities handled in the period 1990 to 1999 amounted to just 984,244 tons, which amounts to a total increase of 31,461 million tons for each financial year (2).

Figure (3-1) illustrates this increase by year.

² - Figure (6-1, 6-2, 6-3,6-4), Prepared by the researcher based on data from reports Saudi Ports Authority, reports from 2000 to 2009.

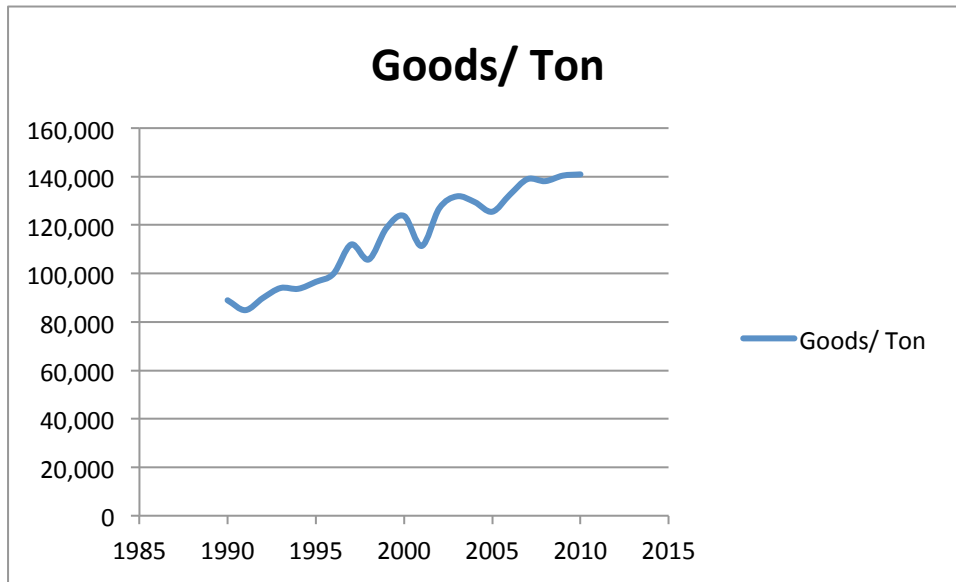


Figure 3-1: Increase in goods/tons by year.

Preparation of ships

During the period 2000 to 2010, Saudi ports have received 123,861 ships, mainly commercial ships, passenger ships, goods ships, petrol ships and others. The year 2009 can be considered the most prosperous year, during which 19,895 ships were received, while in 2007 and 2008 the total number of ships reached 21,844. This decrease occurred due to the managerial and political transformation of the maritime transportation sector.

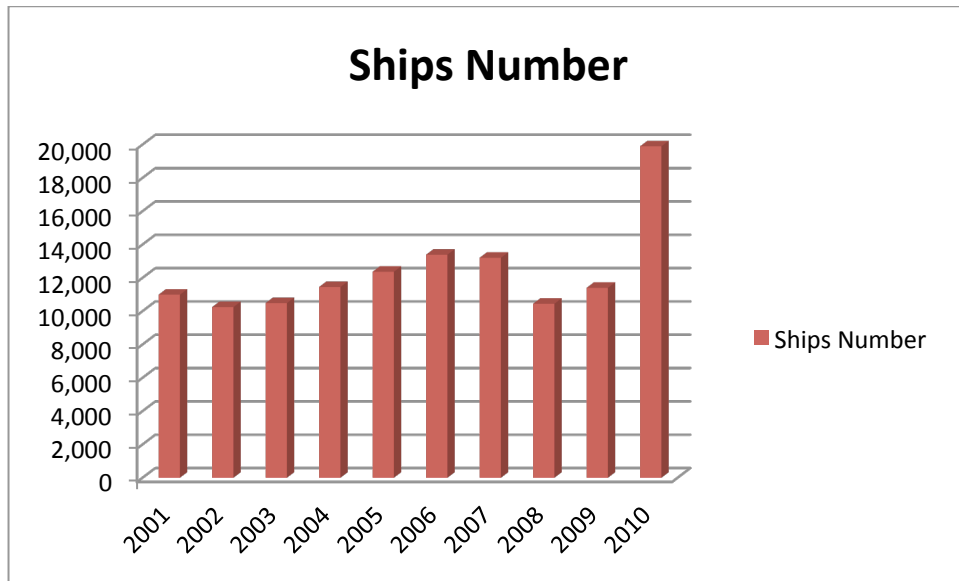


Figure 3-2: Number of ships.

Jeddah and Dammam ports are considered the biggest Saudi ports to receive ships. The number of ships received from 2000 to 2010 by Jeddah Port reached around 45,223 ships. The number of ships received by Dammam Port in the same period reached around 37,451 ships. This represented an increase in the number of ships received by Jeddah and Dammam ports.

Passengers

Saudi ports witnessed a large flow of passengers arriving to and departing from the KSA in the period 2000 to 2005. The total number of passengers amounted to 9,850,546 while in the period from 2006 to 2010 this number amounted to 3,821,735. This noticeable decrease in the number of passengers is due to many passengers abstaining from boarding ships to travel by sea following repeated sinking accidents in previous years.

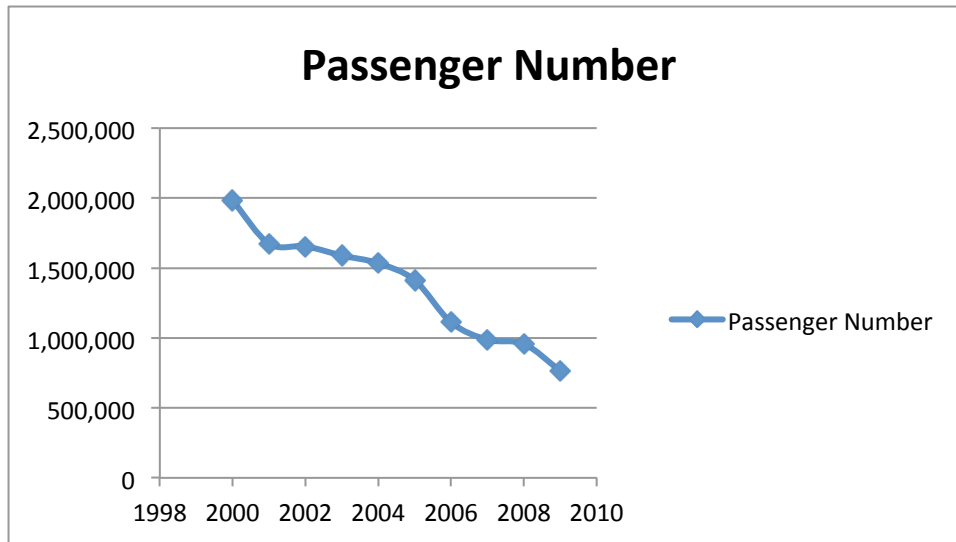


Figure 3-3: Number of passenger.

Jeddah Islamic Port witnessed a larger number of passengers, amounting to 8,372,281 passengers in the period from 2000 to 2010. Dhiba Port was next with a total number of 3,222,000 passengers. Yanbu Port had a total number of 2,078,000 passengers

3.2.3 Period of ship anchoring at port

During the period from 2000 to 2010, the average anchoring time of ships at port was reduced from 96 hours per ship in 2000 to 36.92 hours per ship in 2010. Figure (3-4) illustrates this reduction in the average anchoring time in hours which indicates a positive improvement in handling and transportation. However, the current average time is 36.92 hours per ship. This represents a serious challenge and a real risk for both ships and their cargo.

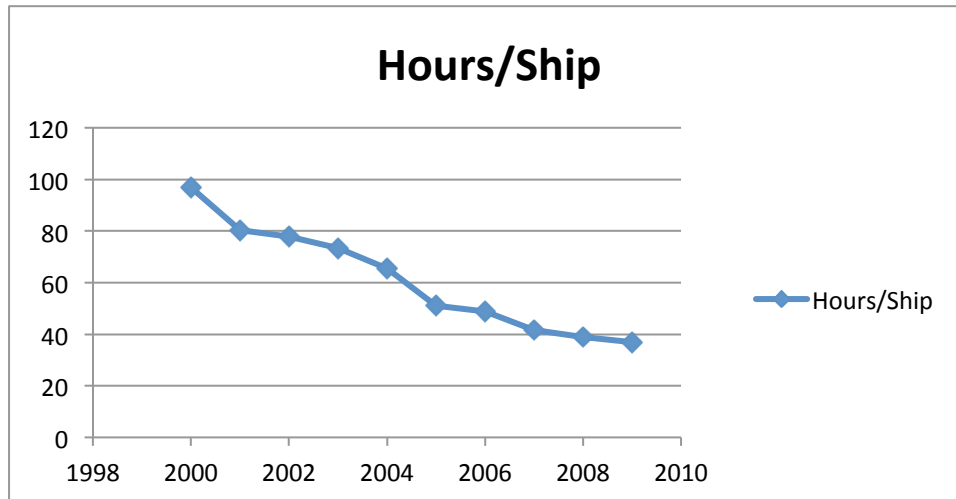


Figure 3-4: Anchoring time in hours per ship.

3.2.4 Maintenance

Maintenance is divided into two parts:

Part one is related to the maintenance of ships. The KSA witnessed the establishment of many ship maintenance projects in the last ten years. Two compounds were established for ship maintenance at both Jeddah Islamic Port and King Abdul Aziz Port in Dammam. Their operation and management were undertaken by the private sector.

During the period from 2000 to 2010, the compounds of King Fahd in Jeddah and Dammam provided maintenance services for 2,350 ships, 1,870 of which were Saudi ships and the rest (480) were foreign ships.

The number of ships maintained at the Jeddah compound was higher than that of Dammam: 1,540 ships were maintained at Jeddah while only 810 ships were maintained at Dammam.

Part two is related to the maintenance of barges. Saudi ports, represented by the SPA, are concerned with the maintenance of barges as they provide essential services

such as guidance, towing, fire fighting and pollution management. The institution has formulated a number of programs and standards for maintenance to ensure the continuity of work. Commercial commitment contracts, mainly maritime facilities contracts, include some items which state that contractors are obliged to perform all maintenance and renewal works for barges that they receive from ports.

Works are to be performed according to timetables, taking into consideration the continuity of work. All maintenance work on barges is completed during the first stages of contracts. Only periodic and routine maintenance is being performed presently.

3.2.5 Safety

Navigation safety

The SPA pays great attention to the safety of navigation in order to protect lives, property and the maritime environment. Navigation safety is discussed in the following section.

Safety of port employees

The SPA has adopted many steps through which it protects the labour force of ports, including engineers, workers, and producers. These steps are as follows:

- Providing the appropriate tools and manual devices to ensure their safety.
- Safety training on the use of manual tools and devices.
- Acquainting producers with the risks and dangers of work using guidance signs and lectures.

- Fencing off and isolating sources of danger relating to machines, such as using covers and metallic networks.
- Providing means of personal safety.
- Ensuring a secure work environment.

Environmental security and safety

The management of Saudi ports have made great efforts in developing the security and safety level of the maritime environment, setting a special plan that includes procedures to protect the environment from pollutants. Among these procedures are the following:

- Isolating sources of pollution and determining types of pollutants in order to decide on the best means to combat them.
- Preventing pollutants from reaching water using mechanical means which help collection of pollutants as well as barriers in cases where collection fails or in cases of leakage.
- Removing pollution from shores and coasts by getting rid of pollutants either temporarily or permanently, and restoring the polluted area to its original state.
- Using detectors, pumps, drainage tubes and floating tanks in the combating process.
- In case of any difficulty in combating pollution using the above means, it is essential to use chemical materials to disperse them inside boats and planes in order to control and avoid pollution of fishing areas and salt lakes.

3.2.6 Emergencies

The SPA has prepared an emergency plan to raise the safety levels of ports and ensure the reduction of any harmful effects that may result from accidents to the minimum, such as the effect on the lives of port employees as well as on goods and equipment. This plan is concerned with:

- Availability of information.
- Setting standards.
- Limitation of the effect of disasters.
- Rapid response to any emergencies.
- Notification of interested companies.

The most important principles listed in the emergency plan are as follows:

- Restriction on the use of lights in port and ships leaving lights switched on so as to avoid fire.
- Prohibition of smoking near danger areas.
- Keeping water taps and fire extinguishers in a standby position around the port.
- Restricting the unloading of damaged goods or those which might cause pollution.
- Captains of ships carrying goods that are easily oxidized or apt to thermal generation are to inform port administration in order for them to take the necessary steps to ensure safety.

- Defining the loads of carriers inside the port and ensuring the safe transportation of unusual carriers and containers, removing any leftovers to avoid pollution.
- Prohibition of removing any leftovers from any ship anchoring in the port.
- Provision of the necessary equipment needed for loading, unloading and storing materials inside the port. The port administration uses movable barriers to prevent the entry of persons or cars to the work area.
- All vehicles (car and trailers) are to stick to safety rules on platforms, during the loading of containers or danger goods, and ensuring all work equipment for safely precautions.
- Using hooks, ropes, chains, winches, and fork cranes in handling processes in a way that ensures port safety.

3.2.7 Industrial security

Industrial security is ranked as the top of interests for the SPA. There are programs, plans, and clear systems set to coordinate competent authorities in order to save lives and property, deal with heavy equipment and dangerous goods, and ensure a safe working environment.

A labour force has been trained to work by the Industrial Security Department. This department holds many specialized courses in the field of industrial security. The courses are held in training centres affiliated to the SPA in locations such as Jeddah Islamic Port, the Public Administration Institute and the Arabic Center of Safety. The Industrial Security Department has achieved many accomplishments during the period

from 2000 to 2010. These accomplishments number more than 350, all of which were aimed at realizing the required industrial level.

3.2.8 Financial performance

The SPA is considered an important revenue source for the country. The annual revenues of the institution are greater than its expenses. The average revenues in the period from 2000 to 2010 amounted to 1.564.000 million Saudi Riyals; the average expenses amounted to 440,668 thousand Riyals, with an excess of 1.124.68 million Riyals.

3.3 Legislation and bylaws

Legislation and internal as well as external bylaws that are concerned with maritime security play an important role in the development and advancement of the security and administrative system. The following section will discuss the legislation of the International Organization for Migration (IMO), Saudi Maritime Law, and the rules and instructions of the SPA. Finally, the future of legal reforms will be discussed.

3.3.1 IMO (International Maritime Organization)

In 1968 the KSA joined the IMO. Since then the KSA has worked to apply the rules and instructions of the IMO. Such rules have become part of Saudi Arabia's laws and systems connected to ports. Therefore, Saudi laws conform to most of the organization's rules. For example, in the section on port security there is a part entitled "conformity with the international security requirements", in which articles 1 and 2 state: "Every ship that seeks an authorization to enter the port, and every user of a port utility is

to commit to the security requirements of ships and port utilities that are stipulated in the SOLAS for the year 1984, issued by the IMO and any subsequent amendments. Also, every port authority is to work according to these rules and regulations and is to realize the objectives of the IMO and the International Labour Organization (ILO) regarding safety and security of ports issued in 2004 including any subsequent amendments. These objectives provide guiding instructions for government, businessmen, employees and others who are interested in minimizing the risks of ports arising from threats and illegal acts”.

In 2002, IMO issued the International Ship and Port Facility Security Code. ISPS is a group of steps that, if followed, should enhance the safety of ships and port facilities. This Code is an amendment to the Safety of Life at Sea (SOLAS) Convention (1974/1988). ISPS asserts that governments, shipping companies, workers on board and port workers have the responsibility of dealing with security threats and taking the necessary precautionary steps against accidents that may affect ships or port facilities that are used in international trade. This law aims at distributing the responsibility of marine security on governments, local authorities and national as well as international ports as well. The application of this law by international ports has become obligatory since July 2004.

It is worth mentioning that the KSA, long before July 2004, had committed itself to the full application of ISPS on the Saudi commercial, industrial and petroleum ports (Hashmiy, K. 2003).

3.3.2 The Rules and Instructions of the SPA

The rules and instructions of the SPA include many legal principles and articles that are related to port laws. These rules and instructions are divided into 11 sections; the study is concerned with section 6 which handles the security of Saudi ports. This section is divided into four parts:

- Entry to port facilities and buildings.
- Conformity with international security requirements.
- Notification of security issues.
- Security control over ships inside the port.

These four parts cover 12 articles which are general and abstract, without going into specific detail. For example, the part on ‘entry to port facilities and buildings’ states the necessity of obtaining official authorization for entry to air, terrestrial or maritime ports. However, this does not require any other procedures. In the part on ‘conformity with international security requirements’ the presence of security prerequisites for both ships and facilities is stipulated. In the part on ‘notification of security issues’, it is stipulated that the owner of the ship or its agent is to seek an authorization to enter Saudi ports; however, the law does not stipulate any other requirements. In the part on ‘security control over ships inside the port’ the law stipulates that the ship and its captain are to be under the control of local authorities.

3.3.3 C-TPAT

U.S. Customs have issued a new strategy to achieve the security required to transport goods and cargos in response to the security threats that goods and cargos may face from terrorists. This strategy is a partnership between the U.S. Government and the private sector against terrorism. This partnership is called the Customs-Trade Partnership Against Terrorism (C-TPAT). C-TPAT enrolls compliant, low security risk companies which are directly responsible for importing, transporting, or coordinating commercial imported cargo into the United States. Through the partnership, the U.S. Customs and Border Patrol identify trusted import traders with good supply chain security protocols, thereby reducing its need to screen their imported cargo. In doing so, U.S. (Edward, Mayer. 2008) customs are able to focus their efforts on imported cargo involving unknown or high-risk importers. C-TPAT has many advantages:

- An active role in the war against terrorism
- A reduced number of CBP inspections.
- Priority processing for CBP inspections.
- Reduced customs inspections.
- Reduced border delays.
- Eligibility for account-based processes.

The influence of C-TPAT on trade will continue to expand in the coming years with the development of the program including more participants and an extension of its membership in more areas of industry. Currently, membership is open only to importers, brokers and service providers and shamrock. In the future the C-TPAT will expand to

others of industry including commercial exporters and other suppliers. Despite the importance of this partnership on the international level, the private sector and commercial companies in KSA have not participated much in it and participation has so far been very limited (Hosny, Abdallah. 2010).

3.3.4 The future of legal updates

Saudi laws on maritime ports and maritime security require various reforms and updates, especially the Saudi maritime law and the rules and instructions of the SPA. These laws require further updates and amendments in order to conform to the field's ever changing needs. There are two main concerns that should be considered when updating these laws:

- The reforms should link national laws with international systems, and should include all rules and instructions issued by the IMO.
- The reforms should include recent security strategies and put them into effect.

3.4 New technologies

Saudi ports need to consider various technological factors. They already have great technological facilities but they lack the equipment needed to deal with future technological challenges in Saudi ports. Therefore, the following suggestions should be considered:

- A large amount of money from the revenues of the SPA is to be allocated for the purchase of new technological equipment.

- A sum of four billion Riyals is to be deducted from the total revenues of the SPA to provide 9 ports with new technologies.
- The KSA is to provide ten airplanes UAV during the period 2010 to 2015 to watch over its maritime coasts.
- Continuous training of the labour force in the use of new technological equipment is to take place.

3.5 SBG

3.5.1 Committees

There are many committees inside the border guards department. They are: the training and qualification committee, the appointment committee, the SBG research committee, and the budget committee. The researcher suggests the addition of two more committees, as follows:

- The terrorism and piracy combat committee - its tasks will be to combat maritime terrorism and piracy, conduct research, and set proper plans to fight terrorism and piracy.
- The smugglers and sneakers combat committee - its tasks will be to combat smugglers and sneakers, conduct research, and set a strategy to combat smugglers and sneakers.

3.5.2 The accomplishments of the SBG from 2000-2010

The boundaries guard department, affiliated to the Saudi Ministry of Interior, has achieved many accomplishments that were important and crucial for enhancing the Saudi security system. During the period from 2000 to 2010, 3,000,000 smugglers and sneakers were arrested. Also, about 5,368 explosives were seized, and 7,650 tons of ammunition and 89,775,793 tons of drugs were recovered (Reports of SPA, 2009).

3.6 Political forecasts

The future of local development is greatly connected to political forecasts, both domestically and internationally. There are many political forecasts that are related to the KSA, such as forecasts related to Saudi ports and the Saudi Border Guard.

On an international level, due to the economic crisis that has recently affected the world it is predicted that the crisis will influence the KSA and Saudi ports and their revenues. The geographical position of KSA, especially its southern border with Yemen and proximity to Somalia, places the KSA in a critical situation.

The sixth Yemeni war in 2010 affected the KSA and so it became a part of the war. Yemeni rebels escaped to Saudi Arabia's border area and this forced KSA to defend its frontiers with Yemen. The SBG played a great role in this regard. It is expected that the war will continue, especially because the rebels are still occupying their positions in Yemen and are representing a real challenge to internal and external Yemeni security, as well as Saudi internal stability.

The American war on Iraq and the unstable security situation inside Iraq have had a negative influence on the KSA. Iraq shares a south eastern border with the KSA which is 912 kilometres in length. The unstable security and economy of Iraq has forced many

Iraqi people to escape into KSA in the hope of finding a better life. Some of these Iraqi people have become involved in drug dealing and smuggling weapons and explosives into KSA.

The critical situation, both politically and economically, of Somalia will negatively affect the security of the KSA in years to come. Also, Somali pirates represent a great challenge to the security of the KSA as the KSA is located on the Red Sea. They transport goods across the Red Sea, Aden Bay and the Africa of Horn. This threatens the KSA. One of the most serious kidnapping cases was the kidnap of a huge Saudi petroleum vessel that was carrying one hundred million dollars worth of petroleum. It was released after the payment of 25 million dollars as a ransom.

3.7 Some suggestions to improve future local development

After examining the current status of Saudi ports in terms of local development, and highlighting the weaknesses of the SPA, the researcher proposes the following suggestions to improve local future development:

- Continuous development of the administrative and operational system of Saudi ports in order to attract international trade.
- Stabilization of the administrative and political position of the maritime transportation industry in KSA.
- Insurance of passenger ships and ensuring the presence of all safety equipment required onboard ships.
- Minimizing the duration of time spent by ships inside ports to avoid risks. It should be reduced from 36 hours to 24 hours by the year 2015.

- The establishment of ship maintenance in Yanbu Industrial and Commercial Port.
- A continuous development plan to provide protection to workers in Saudi ports.
- An effective plan to protect workers in Saudi ports from the threat of terrorists.
- Development of an emergency strategy to be followed by the SPA.
- Investing revenues of the SPA to bring about more technological tools.
- Amending local laws and legislation to conform to the latest legal amendments.
- Establishing additional committees in the SBG directorate to overcome shortcomings in the main committees of the directorate.
- Settling political disputes existing in neighbouring countries.

3.8 The strategy

The security strategy suggested by the researcher will have the effect of protecting Saudi ports from terrorism, illegal trade, and illegal immigration. It will also protect them from other risks. The researcher hopes that the strategy will help accelerate the development process of Saudi ports, as well as increase their productivity.

4. CHAPTER FOUR: METHODOLOGY OF STUDY

4.1 Introduction

In this chapter, the researcher presents the methods used in the study. The population and sample of the study are described, and the tools and procedures used to measure validity and reliability are discussed. The researcher also shows how the study can be applied in the field, and the statistical methods used to deal with the data gathered by the research.

4.2 The methods used in the study

The researcher used descriptive and inferential statistics (3), according to the aims of the study in order to recognize the role of the SBG in setting a strategy aimed at protecting Saudi ports from terrorism, and both illegal emigration and trade. This was done by trying to answer the research questions. This method depended on collecting documentation and using data and information from various reference books and previous studies in order to set the theoretical framework. It also included collecting data and information from the population of the study which represents the social phenomenon under investigation. In other words, it does not only describe the problem and collect information to show its various aspects but also analyses the problem and explains it, trying to get results that may help improve life. This method has many approaches, but the researcher decided to use a survey approach, collecting information from the sample to answer the research questions and achieve its aims. Thus, the method

³ - This method describes the problem of the study, showing its general aspects and effects in order to find out its causes and the factors that control it. It also shows the results to make use of them.

involved collecting and analysing the opinions of the sample who represent the border guards of Saudi Arabia and the personnel working at Saudi ports. This sample was seen as the most appropriate due to the fact that the point under investigation is the role of the SBG in setting a strategy aimed at protecting Saudi ports from terrorism, and both illegal emigration and trade.

4.3 Elements of the study

The study includes certain human, place, time and subject elements:

4.3.1 The human element

This study involves the officers and soldiers of the SBG who serve at Saudi ports.

4.3.2 The element of place

The study focuses on nine Saudi ports: Jeddah, Jizan, Dhiba, King Fahd Industrial, Yanbu Industrial, King Abdel Aziz (Dammam), King Fahd Industrial (Jubail), El Jubail Commercial, and Ras Al-Tanura).

Port	No	Percentage
Jubail Industrial Port	14	13,33%
Yanbu Commercial Port	10	9,52%
Dammam Port	14	13,33%
Yanbu Industrial Port	8	7,62%
Jizan Port	11	10,48%
Jeddah Port	26	24,76%
Ras Al-Tanura Port	10	9,52%
Dhiba Port	9	8,57%
Jubail Commercial Port	3	2,86%
Total	105	100%

Table 4-1: Size of the sample at each port.

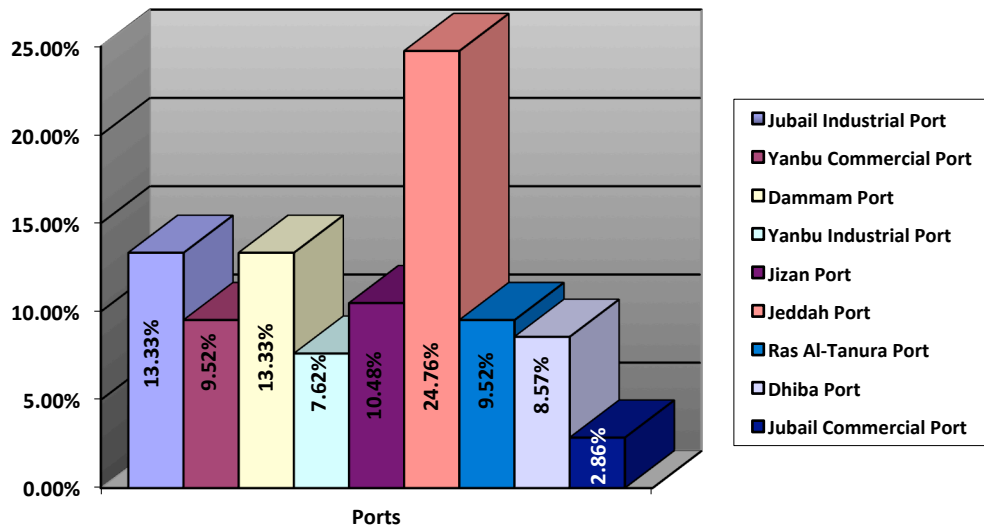


Figure 4-1: Size of the sample at each port.

4.3.3 The element of time

This study was carried out in the field over the period from 15/03/2008 to 15/06/2008.

4.3.4 The element of subject

The study dealt with the role of the SBG in setting a strategy aimed at protecting Saudi ports from terrorism, and both illegal emigration and trade.

4.4 The population of the study

As it was impossible to undertake this study with all Saudi border guards, the study focused on a limited number of highly educated and efficient border guards who serve at Saudi ports.

4.5 The sample of the study

In total, 105 people were involved in the sample. The researcher distributed 140 forms. Any unusable forms were discarded, leaving 105 (the same number as the sample). Statistical analysis was then carried out on this number of forms. The characteristics of sample can be highlighted by comparing between the demographic variables of the sample (such as place of work, military rank, age, level of education, and period of experience).

4.6 The tool used in the study

4.6.1 Designing the questionnaire

After looking at the components of the present study as well as similar previous studies, the researcher designed a questionnaire addressed to the officers and soldiers of the border guard in nine ports of the KSA. The aim was to find out their opinions on how

best to set a strategy aimed at protecting Saudi ports from terrorism, and both illegal emigration and trade.

The researcher designed the questionnaire in a graded scale form which consisted of five levels for each phrase. Then the researcher presented the questionnaire to arbitrators to ensure that the phrases used suited the supposition for which they were designed. Then the researcher amended, omitted and added phrases based on the arbitrators' recommendations. In accordance with instructions given by the supervisor, the researcher designed the questionnaire in its final form to answer the questions of the study and achieve its goals. The questionnaire is discussed in more detail below. The final questionnaire is shown in Appendix A.

Demographic variables

These variables are independent, nominal and separate. They include personal data such as military rank, age, educational level and period of service.

The main variables of the study

These variables are dependent and connected. They include the main data, consisting of 159 phrases distributed in 11 questions, as follows:

1. From your point of view, what is the meaning of the word "terrorism"?
2. What are the threats or potential terrorist operations affecting Saudi Ports?
3. What is the extent of the commitment to security and protection against terrorist attacks at Saudi Ports?

4. What is the role of SBG in combating terrorism, illegal trade and illegal immigration at Saudi Ports?
5. What is the role of SBG in the fight against terrorism and illegal trade, and the monitoring of illegal immigration vessels, cruise boats, yachts and fishing boats at Saudi Ports?
6. What are the preventive measures necessary to combat terrorism, illegal trade and illegal immigration at Saudi Ports?
7. What are the problems faced by SBG in the performance of their duties at Saudi Ports?
8. What is the extent of the impact of technology and modern port security in the fight against terrorism, illegal trade and illegal immigration at Saudi Ports?
9. What are the reasons and motives underlying the existence of terrorism, illegal trade and illegal immigration in KSA?
10. How best can the rules of safety and security, and combating emergencies be followed at Saudi Ports?
11. From your point of view, should any of these steps be taken by KSA to confront terrorism, illegal trade and illegal immigration?

The researcher chose to use a close-ended questionnaire so as to determine the possible responses for each question. A Likert (4) scale of five graded responses was

⁴ - Likert: A taxonomy of characteristics and phenomena to study the quantity and quality of data used in the study.

used on the study's sample. It included the main variables. The study sample was allowed to answer each phrase of the questionnaire using the five graded responses, which were 'strongly agree', 'agree', 'I have no opinion', 'disagree', 'no absolute importance'. Number 5 represented the highest mark (strongly agree) and number 1 represented the lowest mark (no absolute importance).

4.6.2 The questionnaire's reliability and validity

4.6.2.1 The reliability of the questionnaire

The researcher calculated the scale's reliability by using the method of scale half division, dealing with all the questions as a whole unit. The odd items were added as the first half and the even items as the second half. The correlation coefficient was calculated between the two values.

The researcher measured the scale reliability by the half division method. The length was corrected using the Spearman–Brown formula. The correlation coefficient was (0.91) before correction and it reached (0.95) after correction.

4.6.2.2 The validity of the questionnaire

The researcher measured the scale validity by using the method of arbitrators' validity and their special questions (5), and the eleventh dimension and the total mark. The researcher also ensured the scale statistical validity by distinguishing between

⁵ - Validity of inner content: A test which indicates the extent of compatibility between the items and phrases of the questionnaire.

various groups (higher quartile, lower quartile), whether the whole mark or marks on the eleventh dimension of the scale.

Priori validity (arbitrators' validity)

The researcher tested the study tool in its primary form on a group of arbitrators experienced in the field of scientific research. They expressed their opinions and concerns about the validity of the questionnaire phrases as well as its suitability to investigate the variables of the study. In the light of the recommendations made by the arbitrators, the researcher amended, omitted and added some phrases.

Validity of the inner content

Researcher relies at the expense of the correlation coefficient of the paragraphs confirmed in a statement on the Validity of the inner content between every dimension and the total mark, and Validity of the inner content between all paragraphs and the dimension (the question related to them).

Validity of the inner content between every dimension and the total mark

Statistical analysis results revealed that the scale was highly valid for the inner content between the dimension mark (question) and the scale of total mark. Table (4-2) shows the correlation coefficient and significance for each dimension as well as the total mark.

Question	Number of items	Correlation coefficient	Significance
1	15	0.812	0,01
2	12	0.865	0,01
3	11	0.322	0,01
4	18	0.811	0,01
5	12	0.901	0,01
6	15	0.259	0,05
7	12	0.571	0,01
8	7	0.622	0,01
9	24	0.833	0,01
10	12	0.421	0,01
11	10	0.629	0,01

Table 4-2: Correlation coefficients between each item and the total mark.

It is clear from table (4-2) that the coefficient between the total mark of dimensions and the total mark of the scale is high with a significance 0.01 except for the sixth question with a significance 0.05. This is an evidence of the validity of the scale. By using the coefficient between the total mark of dimensions and the total mark of the scale, the researcher was able to approve the validity of the internal consistency between each dimension and the total mark of the scale.

Validity of the inner content between all paragraphs and the dimension (the questions related to them)

The researcher measured the scale's validity using the method of inner content between the mark of every paragraph and the total mark of the dimension. Table (4-3) shows the correlation between every paragraph and the total mark of its special dimension. The results presented in Table (4-3) are an assessment of the responses given

to the questionnaire, as listed in Appendix A. The correlation revealed that there was high validity among most paragraphs although some paragraphs have poor correlation with their special dimension. Thus, the researcher omitted these paragraphs for the poor correlation they had with their dimensions, because the formulation of these paragraphs did not agree with the questions of scale.

Question	Correlation coefficient	Level significance	Question	Correlation coefficient	Level significance	Question	Correlation coefficient	Level significance
Question No. (1)			8	0,652	0,01	7	0,266	0,01
1	0,182	0,05	9	0,782	0,01	8	0,025	No significance
2	0,744	0,01	10	0,354	0,01	9	0,693	0,01
3	0,489	0,01	11	0,445	0,01	10	0,585	0,01
4	0,021	No significance	12	0,633	0,01	11	0,295	0,01
5	0,032	No significance	Question (3)			12	0,488	0,01
6	0,421	0,01	1	0,255	0,01	13	0,315	0,01
7	0,572	0,01	2	0,295	0,01	14	0,122	No significance
8	0,685	0,01	3	0,335	0,01	15	0,605	0,01
9	0,667	0,01	4	0,347	0,01	16	0,587	0,01
10	0,680	0,01	5	0,404	0,01	17	0,472	0,01
11	0,690	0,01	6	0,422	0,01	18	0,442	0,01
12	0,692	0,01	7	0,466	0,01	Question (5)		
13	0,458	0,01	8	0,387	0,01	1	0,933	0,01
14	0,698	0,01	9	0,351	0,01	2	0,781	0,01
15	0,698	0,01	10	0,366	0,01	3	0,833	0,01

Question	Correlation coefficient	Level significance	Question	Correlation coefficient	Level significance	Question	Correlation coefficient	Level significance
Question (2)			11	0,526	0,01	4	0,738	0,01
1	0,135	No significance	Question (4)			5	0,515	0,01
2	0,583	0,01	1	0,144	No significance	6	0,782	0,01
3	0,695	0,01	2	0,612	0,01	7	0,177	No significance
4	0,578	0,01	3	0,402	0,01	8	0,166	No significance
5	0,458	0,01	4	0,082	No significance	9	0,865	0,01
6	0,780	0,01	5	0,011	No significance	10	0,597	0,01
7	0,578	0,01	6	0,257	0,01	11	0,135	No significance
12	0,498	0,01	9	0,577	0,01	14	0,392	0,01
Question (6)			10	0,141	No significance	15	0,088	No significance
1	0,055	No significance	11	0,090	No significance	16	0,182	No significance
2	0,244	0,05	12	0,162	No significance	17	0,092	No significance
3	0,355	0,01	Question (8)			18	0,532	0,01
4	0,220	0,05	1	0,685	0,01	19	0,635	0,01
5	0,454	0,01	2	0,478	0,01	20	0,288	0,01
6	0,384	0,01	3	0,054	0,01	21	0,489	0,01

Question	Correlation coefficient	Level significance	Question	Correlation coefficient	Level significance	Question	Correlation coefficient	Level significance
7	0,087	No significance	4	0,547	0,01	22	0,693	0,01
8	0,298	0,01	5	0,344	0,01	23	0,082	No significance
9	0,442	0,01	6	0,647	0,01	24	0,468	0,01
10	0,345	0,01	7	0,586	0,01	Question (10)		
11	0,344	0,01	Question (9)			1	0,122	No significance
12	0,602	0,01	1	0,354	0,01	2	0,399	0,01
13	0,244	0,05	2	0,284	0,01	3	0,293	0,01
14	0,078	No significance	3	0,553	0,01	4	0,320	0,01
15	0,433	0,01	4	0,147	No significance	5	0,133	No significance
Question (7)			5	0,547	0,01	6	0,305	0,01
1	0,379	0,01	6	0,226	0,05	7	0,118	No significance
2	0,585	0,01	7	0,677	0,01	8	0,295	0,01
3	0,656	0,01	8	0,378	0,01	9	0,292	0,01
4	0,687	0,01	9	0,488	0,01	10	0,588	0,01
5	0,420	0,01	10	0,153	No significance	11	0,219	0,05
6	0,646	0,01	11	0,799	0,01	12	0,585	0,01
7	0,662	0,01	12	0,684	0,01	Question (11)		
8	0,391	0,01	13	0,747	0,01	1	0,582	0,01
2	0,500	0,01	5	0,064	No	8	No	0,01

Question	Correlation coefficient	Level significance	Question	Correlation coefficient	Level significance	Question	Correlation coefficient	Level significance
					significance		significance	
3	0,701	0,01	6	0,172	No significance	9	0,287	0,05
4	0,022	No significance	7	0,384	0,01	10	0,589	0,01

Table 4-3: Correlation coefficients between each item and the total mark of its question, in addition to the level of significance.

It is clear from table (4-3) that shows the coefficient level between the phrases (paragraphs) and its dimensions that the coefficient level in most cases is 0.01- 0.05. This is an indication of the validity of these phrases to measure their dimensions. It is worth mentioning that the researcher discarded from the questionnaire the phrases that have no coefficient.

The correlation matrix for the inner content between paragraphs and the total mark of the dimension revealed that the scale had good psychometric characteristics. Also, through inner compatibility it was noted that some paragraphs had poor correlation, thus they were omitted from the scale, as indicated in table (4-4).

After calculating the questionnaire validity, 30 phrases were ruled out of the questionnaire phrases. They were among the first stage (159) phrases. Thus, after ruling out 30 phrases, the final questionnaire was left with 129 phrases.

Serial	Paragraph No.	Paragraph
Question (1)		
1	4	Using violence for political goals.
2	5	Intentional attacks on the life and safety of persons detained for kidnapping, to be held hostage or killed.
Question (2)		
1	1	Terrorist acts against port facilities.
Question (4)		
1	1	To conduct searches along the port.
2	4	Cooperating with the official bodies inside Saudi Arabia.
3	5	Regulating the coast guard, port locations, appointing leaders, units, centres and checkpoints, and securing communication among them.
4	8	Seizure of contraband and prohibited items, arresting smugglers and holders, and the media transfer and inspection of contraband and prohibited items inside the port.
5	14	Controlling the use of any explosives or any weapons shipments.
Question (5)		
1	7	Ensure the captain of the medium knows about security aspects of the medium during sailing.
2	8	Vehicle inspections on the open sea.
3	11	To ascertain the existence of wireless devices required.
Question (6)		
1	1	Access control.
2	7	The use of fixed and mobile radars.
3	14	Increasing the number of border guards.
Question (7)		
1	10	Lack of new procedures and technology systems at ports.
2	11	The need for new methods and ways of doing business.

3	12	The need for modern equipment and devices to assist in the performance of work.
Question (9)		
1	4	Confusion between jihad and terrorism.
2	10	Unemployment.
3	15	Family disintegration.
4	16	An intellectual superficiality and the wrong understanding of religion.
5	17	Tightening and extremism in religion.
6	23	Too many migrants trying to reach the Kingdom of Saudi Arabia.
Question (10)		
1	1	Using the latest tools in the management of the port.
2	5	Availability of materials used for extinguishing fires in shipments.
3	7	Commitment of shipmasters carrying hazardous materials to inform the management of the port.
Question (11)		
1	4	The Kingdom not to accept the recourse of any terrorist element.
2	5	Controlling and preventing the media from providing any kind of support to terrorist elements.
3	6	Take benefit from the experiences of others and exchange information and experience.
4	8	Tightening of control of the borders of the Kingdom; land, sea, ports and airports.

Table 4-4: The items omitted according to the coefficients of the internal consistency validity between the items and their questions.

The scale's statistical validity

By statistical validity, the researcher means the scale's ability to distinguish in a statistical way between the groups that will get a higher mark and those that will get a lower mark according to the whole scale or the scale's sub-dimensions. The researcher divided the sample into four sections and selected the lower quartile and higher quartile

to find out differences between means so as to measure the scale's statistical ability to distinguish between various groups.

Question	Group	Sample	Arithmetic mean	Standard deviation	T-Test	Significance	In favour of
Total	Upper quartile	26	47.15	2.74	11.883	0,001	Upper quartile
	Lower quartile	26	55.19	2.11			
Question 1	Upper quartile	26	40.38	2.45	12.199	0,001	Upper quartile
	Lower quartile	26	46.81	1.10			
Question 2	Upper quartile	26	40.81	3.31	9.522	0,001	Upper quartile
	Lower quartile	26	48.2	2.24			
Question 3	Upper quartile	26	48.88	2.89	15.080	0,001	Upper quartile
	Lower quartile	26	58.77	1.68			
Question 4	Upper quartile	26	28	0.28	23.796	0,001	Upper quartile
	Lower quartile	26	39.81	2.51			
Question 5	Upper quartile	26	44.38	2.12	15.395	0,001	Upper quartile
	Lower quartile	26	52.15	1.46			
Question 6	Upper quartile	26	33.96	2.24	11.055	0,001	Upper quartile
	Lower quartile	26	39.54	1.27			
Question 7	Upper quartile	26	26.04	1.66	21.030	0,001	Upper quartile
	Lower quartile	26	33.08	0.39			

Question 8	Upper quartile	26	64.34	4.44	13.829	0,001	Upper quartile
	Lower quartile	26	77.80	2.21			
Question 9	Upper quartile	26	32.42	2.08	19.487	0,001	Upper quartile
	Lower quartile	26	41.08	0.89			
Question 10	Upper quartile	26	21.35	1.90	11.934	0,001	Upper quartile
	Lower quartile	26	27	1.50			
Question 11	Upper quartile	26	4.47	12.81	17.007	0,001	Upper quartile
	Lower quartile	26	5	9.44			

Table 4-5: Indicating mean differences between the lower quartile and the higher quartile for the scale's total mark and the mark for each question.

To identify the degree of the validity of the scale, the marks of the study sample were ordered ascending on each dimension of the scale and the total mark. 25% of those who got low marks on each dimension were chosen to represent lower quartile, while 25% of those who got high marks on each dimension were chosen to represent Upper quartile. To test the validity of the scale in recognizing the differences between upper and lower quartile on the dimensions of the scale, the researcher compared the two groups. The results of the comparison were all in favour of the upper quartile. Thus, the scale is highly discriminative.

4.7 Methods of statistical treatment

After collecting data for the study (i.e. the answers given by the sample to the phrases in the questionnaire), they were entered into the computer, and using the statistical program known as SPSS a number of statistical tests were carried out:

- A Pearson correlation coefficient was used to ensure the validity and reliability of the tool used for the study. The Pearson correlation coefficient is considered one of the most common ways to measure the correlation coefficient between two variables.
- Frequencies and percentages were calculated to highlight the responses of the sample to the phrases which represent the variables of the study.
- Weighted mean was calculated.
- Standard deviation was calculated. It is considered the most widely used method for measuring the extent of statistical scattering. Standard deviation is one of the best scales of scattering.
- A T-Test (⁶) was used to indicate the differences between contradictory groups and measure statistical validity of the scale.
- Variance analysis (⁷) (one-way ANOVA) was used to show the differences between the sample responses according to the demographic variables among the study variables. This was to find out the statistical significance when a variable is composed of three or more categories.
- A Mann-Whitney (⁸) test was used to find out the statistical differences among study groups.

⁶ - A T-test is used if there are significant differences between the means of two dependant groups concerning their effect on a secondary variable.

⁷ - Variance analysis is a group of statistical models that compare means by dividing the whole variance into different parts to indicate the statistical differences between means.

⁸ - A Mann-Whitney test measures the differences between two independent samples.

5. CHAPTER FIVE: VIEWING AND ANALYSING RESULTS OF THE STUDY

5.1 Introduction

This chapter will shed light on the results of the study which was conducted on the sample of border guards working in Saudi ports through a close-ended questionnaire which asked for primary data such as military rank, age, educational level, and period of service. The questionnaire also included the study's main question about the role of SBG in setting an effective strategy to protect Saudi ports from terrorism, illegal immigration and illegal trade. There were eleven questions in total.

5.2 Overview

In this chapter, the researcher will analyze the responses to the questionnaire through examining the demographic variables of the sample such as work area, military rank, age, educational level, and experience. Then the researcher will perform a statistical analysis to the main variables of the study (i.e. 11 questions and their phrases). A separate table will be devoted to every question indicating the phrases, the five graded items and their percent, the weighted mean, the standard deviation and the percent of every phrase.

5.3 Demographic variables (Primary / Personal)

The society of the study will be recognized by knowing the characteristics of the sample which includes officers and individuals of border guard working in Saudi ports to highlight the important features of this sample to recognize its impact on the main variables of the study. The sample of the study was randomly selected from the workers

in the Saudi ports under study. The sample consisted of officers and soldiers working for the SBG. The total number of subjects was 105 covering 9 ports.

5.3.1 Distribution of study sample according to place of work

Table No. (5-1) indicates the rate of distributing the study sample according to the place of work. The researcher distributed the questionnaires at the most important 9 Saudi ports.

Port	No	Percentage
Jubail Industrial Port	14	13,33%
Yanbu Commercial Port	7	9,52%
Dammam Port	14	13,33%
Yanbu Industrial Port	8	7,62%
Jizan Port	11	10,48%
Jeddah Port	26	24,76%
Ras Al-Tanura Port	10	9,52%
Dhiba Port	9	8,57%
Jubail Commercial Port	3	2,86%
Total	105	100%

Table 5-1: Distribution of sample study by the Area.

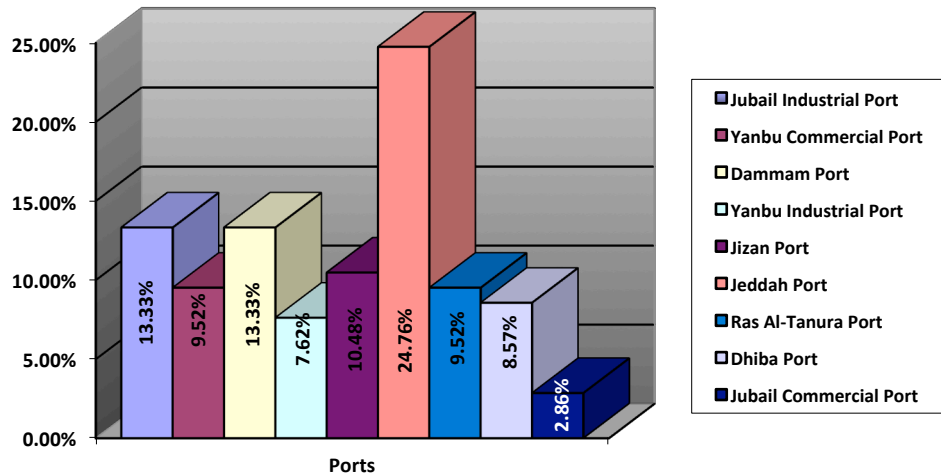


Figure 5-1: Distribution of sample study by the Area.

Table No (5-1) reveals that the Islamic Jeddah Port got the biggest share of the study sample (24.76%) and the concentration of the researcher on this port indicates the importance of this port.

5.3.2 Distribution of study sample according to military rank

Knowing the military rank of the study sample is very important as it sheds light on the study results where the military rank has an impact on their answers.

Rank	No	Percentage
Dean	3	2,86%
Colonel	15	14,29%
Lieutenant Colonel	17	16,19%
Major	13	12,38%
Captain	15	14,29%
First Lieutenant	7	6,67%
Lieutenant(2 nd Lt)	7	6,67%
Chief Sergeant	12	11,43%
Staff Sergeant	8	7,62%
Sergeant	5	4,76%
Under Sergeant	3	2,86%
Total	105	100%

Table 5-2: Indicating sample characteristics: Military Rank.

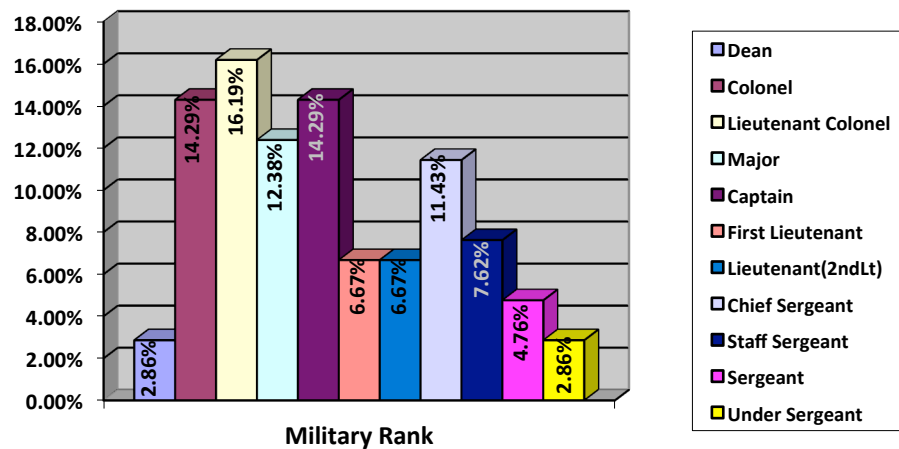


Figure 5-2: Distribution of sample study by Military Rank.

Table No. (5-2) indicates the distribution of the study sample according to the military rank and it reveals that the ranks of colonel and lieutenant colonel were the

largest group (30.48%), followed by the military ranks from major to captain at a rate of (26.67%). The various sergeant ranks amounted to (24.90%).

5.3.3 Distribution of study sample according to Age

There is no doubt that Age has an impact on the responses of study sample as it is indicated in table (5-3) and figure (5-3):

Age	No	Percentage
Less than 20 years	-	-
20 to less than 30 years	20	19,05%
30 years to less than 40 years	27	25,71%
More than 40 years	58	55,24%
Total	105	100%

Table 5-3: Indicating sample characteristics: Age.

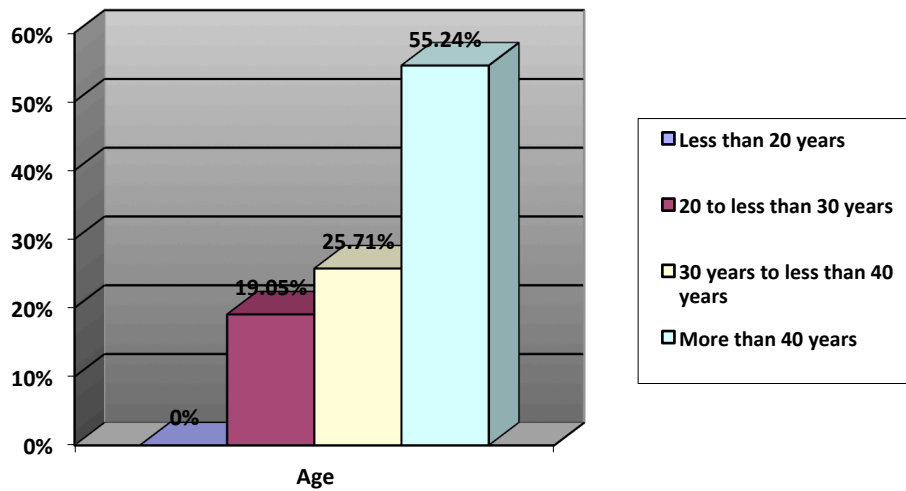


Figure 5-3: The distribution of sample study by Age.

Table (5-3) indicates the distribution of study sample according to age and it is noted that most of the study sample are in the third and fourth categories from 30 years

old and upwards (85 persons) at a percentage of (80.95%) of the whole sample. Hence, it is clear that most of the study samples are experienced individuals in the field.

5.3.4 Distribution of study sample according to Educational level

The educational level of the sample is one of the most important demographic variables. To achieve the best results for the study, given the difficult subject of the study, the researcher has selected those of high-quality scientific expertise.

Educational level	No	Percentage
Primary	-	-
Less than Secondary	-	-
Secondary	13	12,38%
BSc	48	45,71%
Masters	28	26,67%
PhD and higher	16	15,24%
Total	105	100%

Table 5-4: Indicating sample characteristics: Educational level.

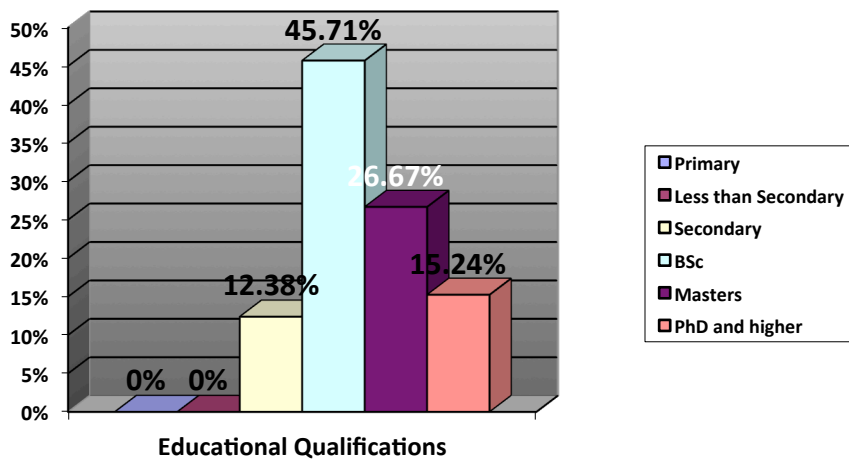


Figure 5-4: Distribution of sample study by Educational level.

Table (5-4) shows members of the study sample in accordance with their level of education, high educational qualifications of a sample study by a percentage of holding a bachelor's degree from (45.71%) of the sample. This indicates the high level of education of the sample and these, of course, will have sufficient awareness and understanding of the requirements to enable them to respond to the questions.

5.3.5 Distribution of study sample according to the period of experience

Knowing the level of experience of the participants in the study sample helps in extracting and concluding the study results and this is indicated in table (5-5) and figure (5-5).

Experience	No	Percentage
Less than 5 years	11	10,48%
From 5 years to less than 10 years	8	7,62%
From 10 to less than 15 years	14	13,33%
From 15 to less than 20 years	12	11,43%
From 20 years and more	60	57,14%
Total	105	100%

Table 5-5: Indicating sample characteristics: Experience.

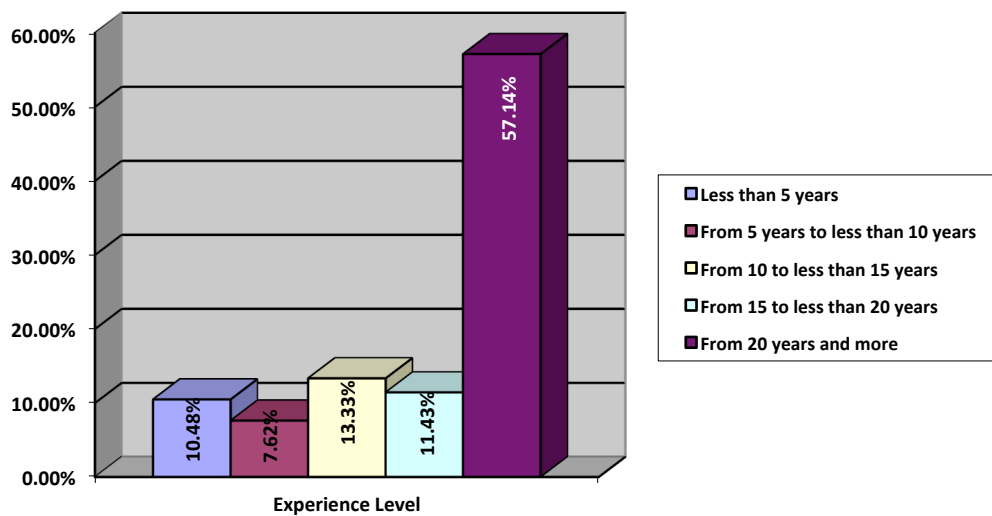


Figure 5-5: Distribution of sample study by Experience.

Table No. (5-5) indicates that the study sample concentrates on the fifth category where persons are (60). This category is distinguished by people with more than 20 years experience in the field of ports and the border guard.

5.4 The Main variables of the study

In order to achieve the objectives of the study, the researcher dealt with the results of a descriptive analysis of the data that represent the responses of the study sample of people who are working in Saudi ports in the role of SBG and are setting effective strategy to protect Saudi ports from terrorism, illegal immigration and illegal trade. The responses and answers of the individuals of the study sample revealed their opinions:

1. From your point of view, what is the meaning of the word ‘terrorism’?

To answer this question, the researcher analyzed the responses of the study sample working in Saudi ports concerning the meaning of the word terrorism via ordering the suggested phrases and indicating the weighted mean and standard deviation for each phrase.

Serial	Question (1)	Study sample	Strongly agree	Agree	I have no opinion	Disagree	No absolute importance	Sum	Average	Percentage	Order	
	Phrase											
1	The use of force or violence, or the threat of a state of terror and panic.	105	Freq	2	18	85	0.00	0.00	105	337	64.19%	12
			%	1.91	17.14	80.95	0.00	0.00	100%	3.21		
2	Illegal act against innocent people.	105	Freq	32	54	19	0.00	0.00	105	433	82.48%	7
			%	30.48	51.43	18.10	0.00	0.00	100%	4.12		
3	Violent	105	Freq	65	18	16	5	1	105	456	86.86%	4

	government.		%	61.91	17.14	15.24	4.76	0.95	100%	4.34		
4	Attacking transport such as the abduction of aircraft and ships.	105	Freq	3	84	16	1	1	105	402	76.57%	10
			%	2.86	80	15.24	0.95	0.95	100%	3.83		
5	Criminal offenses of theft, murder, rape, extortion and destruction of public or private property.	105	Freq	26	58	17	2	2	105	419	79.81%	8
			%	24.76	55.24	16.19	1.91	1.91	100%	3.99		
6	Information Crimes.	105	Freq	58	32	11	3	1	105	458	87.24%	2
			%	55.24	30.48	10.48	2.86	0.95	100%	4.36		
7	Family violence.	105	Freq	70	15	12	7	1	105	461	87.81%	1
			%	66.67	14.29	11.43	6.67	0.95	100%	4.39		
8	Drug or arms trafficking.	105	Freq	57	33	11	3	1	105	457	87.05%	3
			%	54.29	31.43	10.48	2.86	0.95	100%	4.35		
9	The manufacture or possession of explosive devices or machines.	105	Freq	58	26	17	3	1	105	452	86.10%	5
			%	55.24	24.76	16.19	2.86	0.95	100%	4.30		
10	Environmental pollution.	105	Freq	22	13	5	50	15	105	292	55.62%	13
			%	20.95	12.38	4.76	47.62	14.29	100%	2.78		
11	The use of firearms, bombs or explosives without the right to create a state of emergency.	105	Freq	1	43	61	0.00	0.00	105	360	68.57%	11
			%	0.95	40.95	58.10	0.00	0.00	100%	3.43		

12	Providing support, sponsoring or contributing to threats, conspiracies, planning or recruitment of persons to commit criminal acts.	105	Freq	8	73	23	1	0.00	105	403	76.76%	9
			%	70.62	69.52	21.19	0.95	0.00	100%	3.84		
13	The armed struggle of peoples against colonialism, aggression or occupation for liberation and self-determination (resisting occupation).	105	Freq	57	25	17	5	1	105	447	85.14%	6
			%	54.29	23.81	16.19	4.76	0.95	100%	4.26		

Table 5-6: Indicates the results concerning their opinions on the meaning of the word terrorism.

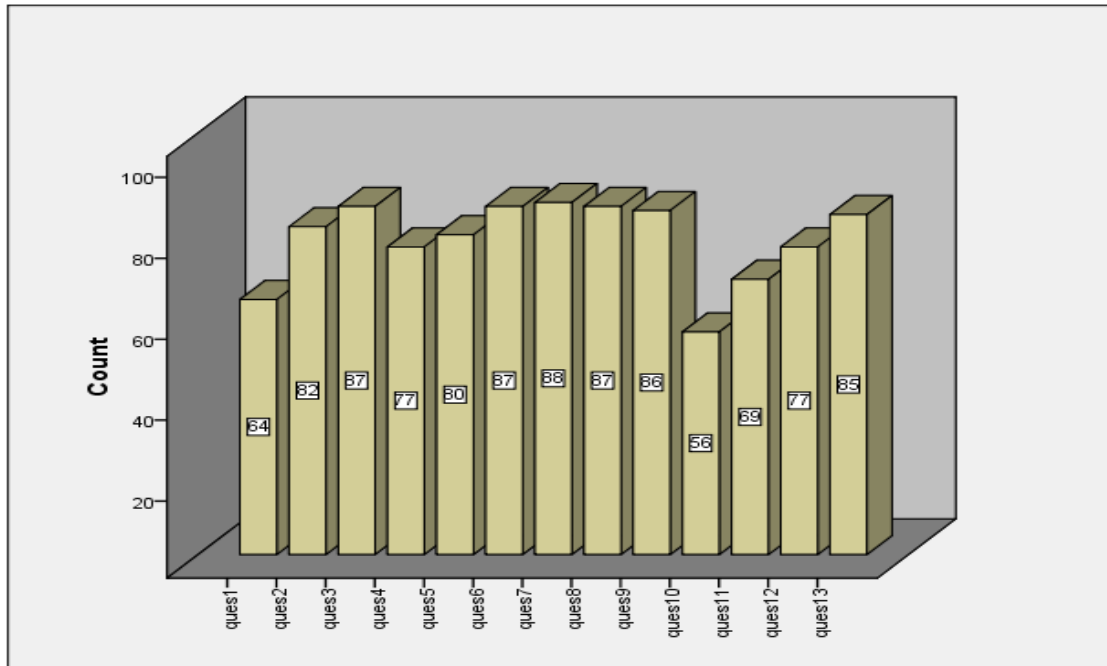


Figure 5-6: Indicate opinions for the meaning of the word terrorism.

Figure (5-6) indicates the following results concerning their opinions the meaning of the word terrorism:

- The phrase “Family violence” is the best phrase to express the meaning of terrorism and this phrase got a rate of (87.81%) of the study sample. Also the phrase “Information Crimes ” got a rate of (87.24%) of the study sample.
- "Drug or arms trafficking” got a percentage of (87.05%).
- “Violent government” got a percentage of (86.86%).
- “Illegal act against innocent people” got a percentage of (82.48%).

2. What are the threats or potential terrorist operations affecting Saudi Ports?

To answer this question, the researcher analyzed the responses of the study sample by ordering the suggested phrases for possible terrorist operations and indicating the weighted mean and standard deviation for each phrase.

Serial	Question (2)	Study sample	Strongly agree	Agree	I have no opinion	Disagree	No absolute importance	Sum	Average	Percentage	Order	
	Phrase											
1	Terrorist acts against companies such as port-based companies (Armco).	105	Freq	22	54	28	1	0.00	105	412	78.48%	6
			%	20.95	51.43	26.67	0.95	0.00	100%	3.92		
2	The use of ships to smuggle chemical, biological, or radiological weapons.	105	Freq	21	34	18	1	31	105	328	62.48%	9
			%	20	32.38	17.14	0.95	29.52	100%	3.12		
3	Abduction of a visiting vessel to the port.	105	Freq	10	54	7	34	0.00	105	355	67.62%	8
			%	9.52	51.43	6.67	32.38	0.00	100%	3.38		
4	Attacking ships using heavy weapons.	105	Freq	16	73	16	0.00	0.00	105	420	80%	3
			%	15.24	69.52	15.24	0.00	0.00	100%	4		
5	Biological attacks on ships' of food and water.	105	Freq	61	23	19	1	1	105	457	87.05%	1
			%	58.10	21.91	18.10	0.95	0.95	100%	4.35		
6	The use of small fishing boats to smuggle men,	105	Freq	4	77	21	3	0.00	105	397	75.62%	7
			%	3.81	73.77	20	2.86	0.00	100%	3.78		

	weapons, ammunition, explosives and materials for weapons of mass destruction.											
7	The use of small and fast boats to attack tankers to influence world oil prices or cause pollution.	105	Freq	25	53	23	4	0.00	105	414	78.86%	5
			%	23.81	50.48	21.91	3.81	0.00	100%	3.94		
8	Attacking cruise ships, tourist ships and ships carrying people, goods, products and warships.	105	Freq	55	20	25	5	0.00	105	440	83.81%	2
			%	52.38	19.10	23.81	4.76	0.00	100%	4.19		
9	The remote Bombing of the ship.	105	Freq	13	76	14	2	0.00	105	415	79.05%	4
			%	12.38	72.38	13.33	1.91	0.00	100%	3.95		
10	Polluting the water of the port.	105	Freq	13	43	12	13	24	105	323	61.52%	10
			%	12.38	40.95	11.43	12.38	22.86	100%	3.08		
11	The incidence of hijacking vessels in territorial waters.	105	Freq	36	39	26	2	2	105	420	80%	3
			%	34.29	37.14	24.76	1.91	1.91	100%	4		

Table 5-7: Indicates the responses of study sample concerning the possible terrorist operations that might take place at Saudi ports.

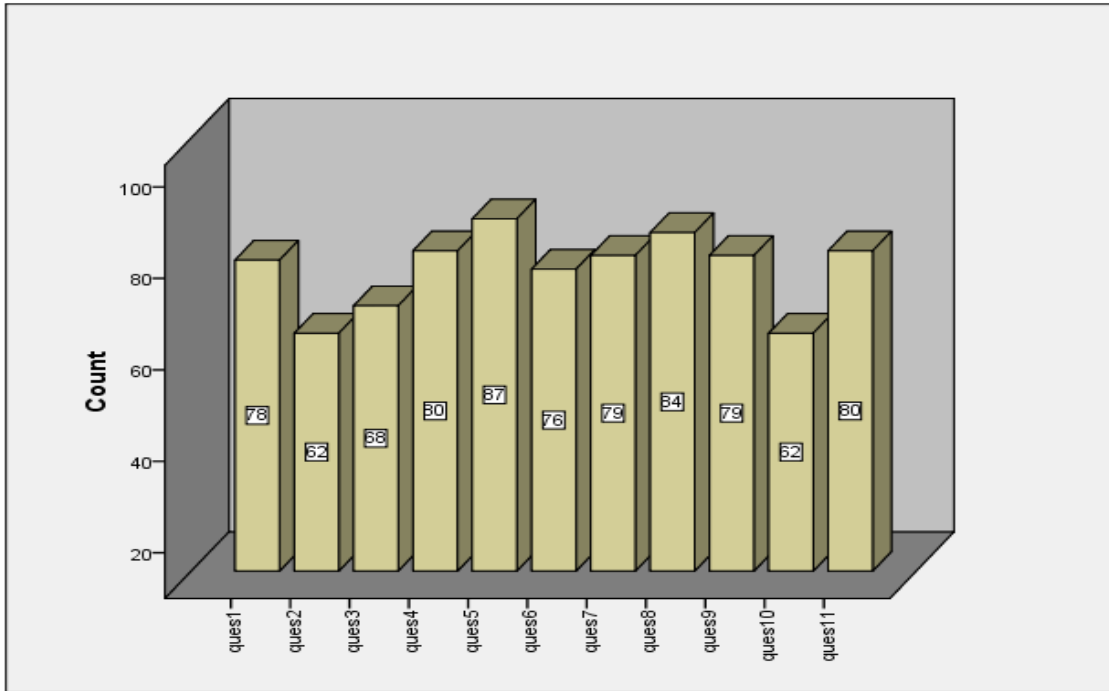


Figure 5-7: Indicates the responses of study sample concerning the possible terrorist operations.

Figure 5-7 indicates the responses of the study sample concerning the possible terrorist operations that might take place at Saudi ports:

- The threat of "Biological attacks on ships of food and water" is considered the most important threat from the point of view of the study sample and got (87.05%) of the responses.
- "Attacking cruise ships, tourist ships and ships carrying people, goods, products and warships" got a percentage of (83.81%).
- "The incidence of hijacking vessels in territorial waters " got a percentage of (80%).

3. What is the extent of the commitment to security and protecting against terrorist attacks at Saudi Ports?

To answer this question, the researcher analyzed the responses of study sample by ordering the suggested phrases concerning the commitment to preventive procedures and indicating the weighted mean and standard deviation for each phrase.

Serial	Question (3)	Study sample		Strongly agree	Agree	I have no opinion	Disagree	No absolute importance	Sum	Average	Percentage	Order
	Phrase											
1	Training workers on how to protect ports against terrorism.	105	Freq	46	57	0.00	1	1	105	461	87.81%	1
			%	43.81	54.29	0.00	0.95	0.95	100%	4.39		
2	Examining the bags of passengers.	105	Freq	0.00	51	54	0.00	0.00	105	366	69.71%	8
			%	0.00	48.57	51.43	0.00	0.00	100%	3.49		
3	Surveillance cameras at the port.	105	Freq	0.00	55	50	0.00	0.00	105	370	70.48%	7
			%	0.00	52.38	47.62	0.00	0.00	100%	3.52		
4	The use of technology to combat terrorism, such as cameras, radar, warning systems and the like.	105	Freq	1	45	59	0.00	0.00	105	362	68.95%	9
			%	0.95	42.86	56.20	0.00	0.00	100%	3.45		
5	Protection necessary for port facilities.	105	Freq	2	79	24	0.00	0.00	105	398	75.81%	4
			%	1.91	75.24	22.86	0.00	0.00	100%	3.79		
6	Putting in forces to protect existing companies at the port.	105	Freq	2	61	41	0.00	0.00	105	377	71.81%	6
			%	1.91	58.10	39.05	0.00	0.00	100%	3.59		
7	Monitoring the quay surrounding the port.	105	Freq	1	82	21	0.00	0.00	105	396	75.43%	5
			%	0.95	78.10	5.52	0.00	0.00	100%	3.77		

8	Continuing inspections of fishing and pleasure boats.	105	Freq	4	44	53	0.00	0.00	105	355	67.62%	10
			%	3.81	41.91	50.48	0.00	0.00	100%	3.38		
9	The availability of a sufficient number of troops to protect the port.	105	Freq	1	29	75	0.00	0.00	105	346	65.90%	11
			%	0.95	27.62	71.43	0.00	0.00	100%	3.30		
10	The presence of vessels to protect territorial waters.	105	Freq	3	79	23	0.00	0.00	105	400	76.19%	3
			%	2.86	75.24	21.91	0.00	0.00	100%	3.81		
11	Having forces trained to deal with terrorists.	105	Freq	4	83	18	0.00	0.00	105	406	77.33%	2
			%	3.81	79.50	17.14	0.00	0.00	100%	3.87		

Table 5-8: Indicates the extent of committing to preventive procedures from terroristic attacks at Saudi ports.

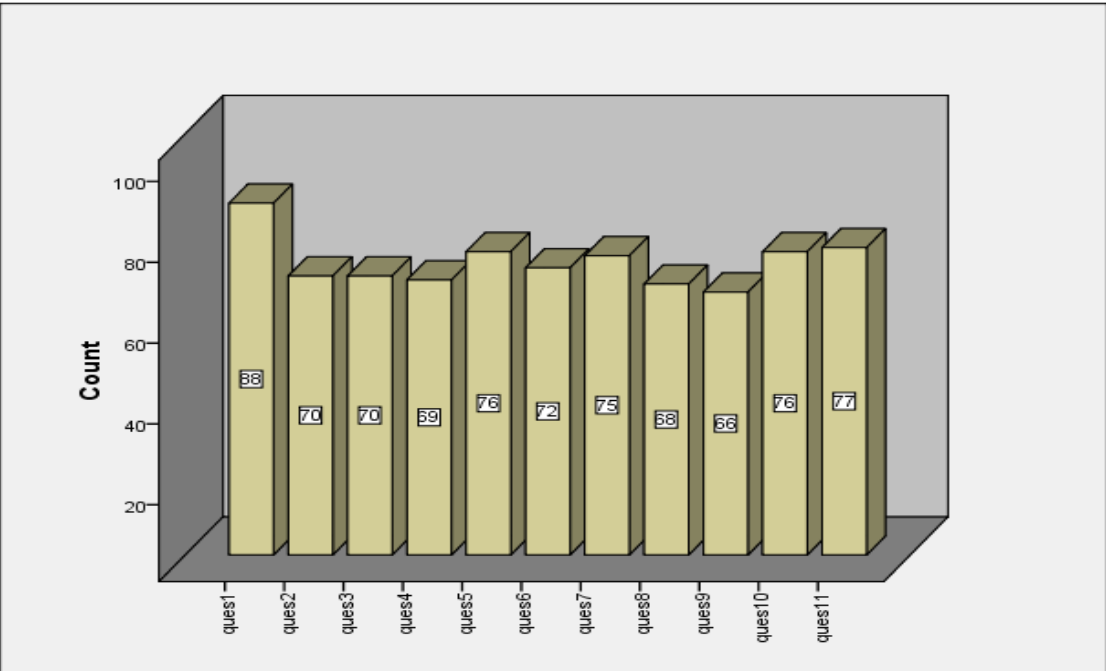


Figure 5-8: Indicates the extent of commitment to preventive procedures from terrorist attacks.

Figure 5-8 indicates the extent of commitment to preventive procedures from terrorist attacks at Saudi ports:

- Commitment to “Training workers on how to protect ports against terrorism” (87.81%).
- Commitment to “Having forces trained to deal with terrorists” got a percent of (77.33%).
- The phrase "The presence of vessels to protect territorial waters" got a percent of (76.19%).

4. What is the role of SBG in combating terrorism, illegal trade and illegal immigration at Saudi Ports?

To answer this question, the researcher analyzed the responses of the study sample the role played by SBG employed to combat terrorism, illegal trade and immigration by ordering the suggested phrases and indicating the weighted mean and standard deviation for each phrase.

Serial	Question (4)	Study sample	Strongly agree	Agree	I have no opinion	Disagree	No absolute importance	Sum	Average	Percentage	Order	
	Phrase											
1	Control of all the border shipments and ensuring their execution of the rules and regulations.	105	Freq	33	52	20	0.00	0.00	105	433	82.48%	1
			%	31.43	49.52	19.10	0.00	0.00	100%	4.12		
2	Keeping security inside the	105	Freq	1	81	23	0.00	0.00	105	398	75.81%	4
			%	0.95	77.14	21.91	0.00	0.00	100%	3.79		

	port and along the coast.											
3	Patrols throughout the day.	105	Freq	1	58	46	0.00	0.00	105	375	71.43%	9
			%	0.95	55.23	43.81	0.00	0.00	100%	3.57		
4	Full cooperation and coordination between forces in the Kingdom.	105	Freq	1	58	46	0.00	0.00	105	375	71.43%	9
			%	0.95	55.23	43.81	0.00	0.00	100%	3.57		
5	Inspection of persons present in the port, and investigating and verifying the identity and whereabouts of persons.	105	Freq	3	76	24	2	0.00	105	395	75.24%	6
			%	2.86	72.38	22.86	1.91	0.00	100%	3.76		
6	Inspection of the maritime transport of fishing boats and cruise tourism.	105	Freq	5	76	22	1	1	105	398	75.81%	4
			%	4.76	72.38	20.95	0.95	0.95	100%	3.79		
7	Guarding maritime modes of transportation and controlling ports located during transit zone navy.	105	Freq	24	28	53	0.00	0.00	105	391	74.48%	7
			%	22.86	26.67	50.48	0.00	0.00	100%	3.72		
8	Inspect all modes of transportation without a maritime flag or that do not	105	Freq	36	46	23	0.00	0.00	105	433	82.48%	1
			%	34.29	43.81	21.91	0.00	0.00	100%	4.12		

	specify their nationality when entering or passing a port, seizing them if they can not prove their nationality.											
9	Controlling fishermen, divers, and hikers' shipments.	105	Freq	33	23	43	5	1	105	397	75.62%	5
			%	31.43	21.91	40.95	4.76	0.95	100%	3.78		
10	Inspecting passengers and personal belongings, ensuring that nothing prohibited is present.	105	Freq	0.00	79	23	2	1	105	390	74.29%	8
			%	0.00	75.24	21.91	1.91	0.95	100%	3.71		
11	Guarding port facilities and all the existing institutions.	105	Freq	2	80	23	0.00	0.00	105	399	76%	3
			%	1.91	76.19	21.91	0.00	0.00	100%	3.80		
12	To ascertain the existence of a license for cruise ships and for tourism.	105	Freq	30	57	13	4	1	105	426	81.14%	2
			%	28.57	54.29	12.38	3.81	0.95	100%	4.06		
13	Ensuring safety equipment required for vessels is present.	105	Freq	0.00	62	21	3	19	105	336	64%	10
			%	0.00	59.05	20	2.86	18.10	100%	3.20		

Table 5-9: Indicates the most important roles of SBG in fighting terrorism, illegal trade and illegal immigration.

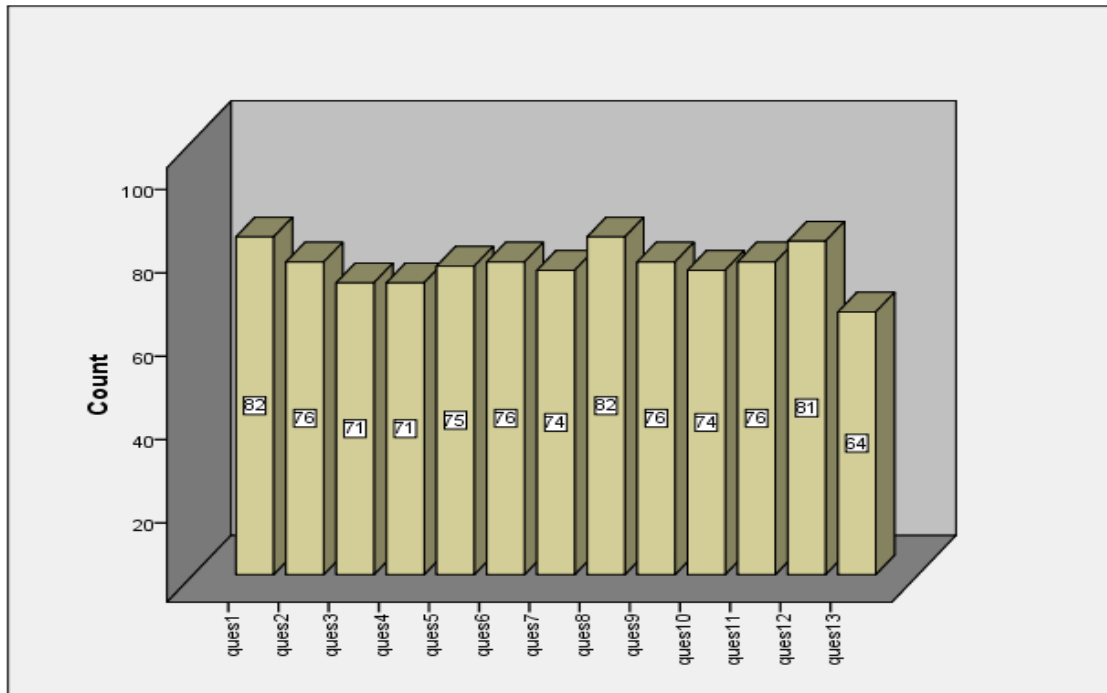


Figure 5-9: Indicates the most important roles of SBG in fighting terrorism.

Figure 5-9 indicates the most important roles of SBG in fighting terrorism, illegal trade and illegal immigration:

- "Control of all the border shipments and ensuring their execution of the rules and regulations" and "Inspect all modes of transportation without a maritime flag or that do not specify their nationality when entering or passing a port, seizing them if they can not prove their nationality" are the most important roles of SBG according to the opinions of the study sample with a percentage of (82.48%).
- "To ascertain the existence of a license for cruise ships and for tourism", got a percentage of (81.14%).
- "Guarding port facilities and all the existing institutions", got (76%).

5. What is the role of SBG in the fight against terrorism and illegal trade, and the monitoring of illegal immigration vessels, cruise boats, yachts and fishing boats at Saudi Ports?

To answer this question, the researcher analyzed the responses of the study sample concerning SBG in fighting terrorism, illegal trade and immigration with ships, cruise boats, yachts and fishing boats and indicating the weighted mean, and standard deviation for each phrase:

Serial	Question (5)	Study sample	Strongly agree	Agree	I have no opinion	Disagree	No absolute importance	Sum	Average	Percentage	Order	
	Phrase											
1	Determining the duration of sailing, the speed of departure and return, and direction.	105	Freq	1	25	23	56	0.00	105	286	54.48%	8
			%	0.95	23.81	21.19	53.33	0.00	100%	2.72		
2	Counting passengers and crew, and making sure data are known before departure and upon return.	105	Freq	37	44	24	0.00	0.00	105	433	82.48%	1
			%	35.24	41.91	22.86	0.00	0.00	100%	4.12		
3	Administering certificates required to provide safety and security.	105	Freq	4	26	24	30	21	105	277	52.76%	9
			%	3.81	24.76	22.86	28.57	20	100%	2.64		
4	Maritime medium inspection before departure and upon return.	105	Freq	6	56	14	29	0.00	105	354	67.43%	5
			%	5.71	53.33	13.33	27.62	0.00	100%	3.37		

5	Make sure there is no presence of any person not authorized to board.	105	Freq	2	78	24	0.00	1	105	395	75.24%	3
			%	1.91	74.29	22.86	0.00	0.95	100%	3.76		
6	Ensure the captain of the medium knows about security aspects of the medium during sailing.	105	Freq	4	52	16	3	30	105	312	59.43%	6
			%	3.81	49.52	15.24	2.86	28.57	100%	2.97		
7	Making sure that sailing is within territorial waters.	105	Freq	9	26	18	51	1	105	306	58.29%	7
			%	8.57	24.76	17.14	48.57	0.95	100%	2.91		
8	To ascertain the existence of wireless devices required.	105	Freq	1	80	23	1	0.00	105	396	75.43%	2
			%	0.95	76.19	21.19	0.95	0.00	100%	3.77		
9	Controlling ships and ensuring the disposal of waste oils or unloading or burning materials that are flammable at sea.	105	Freq	9	54	22	18	2	105	365	69.52%	4
			%	8.57	51.43	20.95	17.14	1.91	100%	3.48		

Table 5-10: SBG roles against terrorism, illegal immigration and trade.

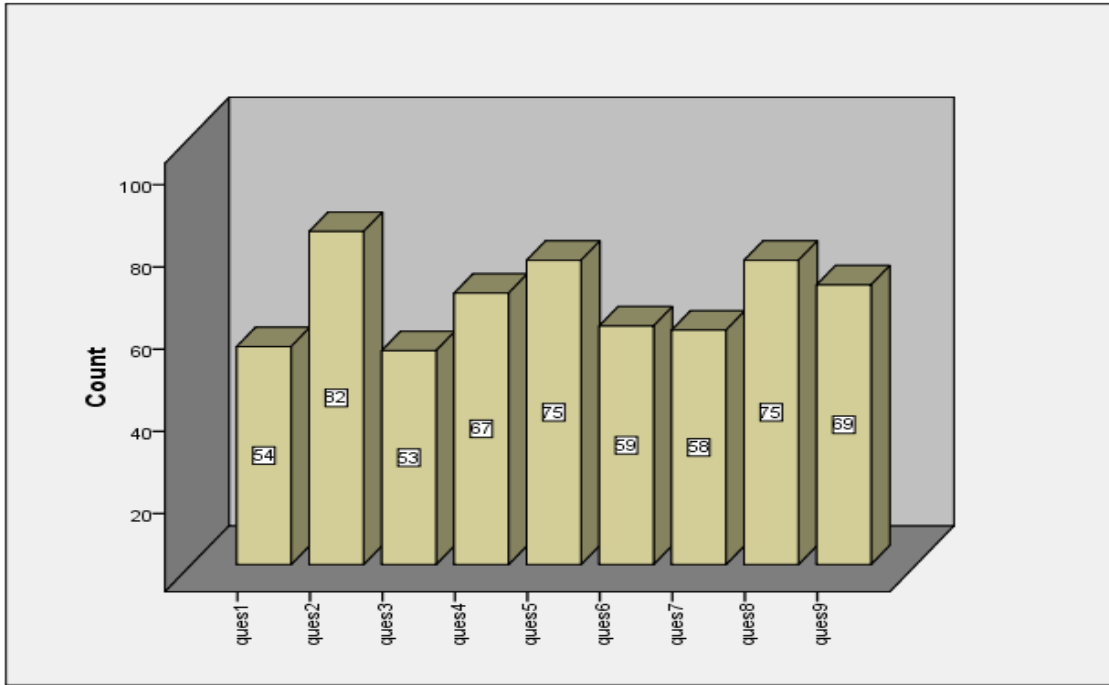


Figure 5-10: SBG roles against terrorism, illegal immigration and trade.

Figure (5-10) Indicates the most important roles of SBG in fighting terrorism, illegal trade and illegal immigration using the ships, cruise boats, yachts and fishing boats at Saudi ports:

- "Counting passengers and crew, and making sure data are known before departure and upon return" is the most important role which got a percentage of (82.48%).
- "To ascertain the existence of wireless devices required", got a percentage of (75.43%).
- "Make sure there is no presence of any person not authorized to board" got a percentage of (75.24%).

6. What are the preventive measures necessary to combat terrorism, illegal trade and illegal immigration at Saudi Ports?

To answer this question, the researcher analyzed the responses of the study sample concerning the required preventive procedures to fight terrorism, illegal trade and illegal immigration by ordering suggested phrases and indicating the weighted mean, and the standard deviation for each phrase.

Serial	Question (6)	Study sample	Strongly agree	Agree	I have no opinion	Disagree	No absolute importance	Sum	Average	Percentage	Order	
	Phrase											
1	Magnetic detectors.	105	Freq	22	77	26	0.00	0.00	105	496	94.48%	1
			%	20.95	73.33	24.76	0.00	0.00	100%	4.72		
2	The development of automatic warning devices.	105	Freq	1	55	49	0.00	0.00	105	372	70.86%	9
			%	0.95	52.38	46.67	0.00	0.00	100%	3.54		
3	Monitoring and intruder detection.	105	Freq	0.00	74	29	2	0.00	105	387	73.71%	7
			%	0.00	70.48	27.62	1.91	0.00	100%	3.69		
4	Monitoring the quay surrounding the port.	105	Freq	2	59	43	0.00	1	105	376	71.62%	8
			%	1.91	56.19	40.10	0.00	0.95	100%	3.58		
5	Controlling coast.	105	Freq	1	23	81	0.00	0.00	105	340	64.76%	12
			%	0.95	21.19	77.14	0.00	0.00	100%	3.24		
6	The use of surveillance cameras along the coast for more than 100 miles.	105	Freq	3	74	24	3	1	105	390	74.29%	5
			%	2.86	70.48	22.86	2.86	0.95	100%	3.71		
7	Rapid reporting of incidents.	105	Freq	1	32	71	1	0.00	105	348	66.29%	10
			%	0.95	30.48	67.62	0.95	0.00	100%	3.31		
8	The use of thermal cameras.	105	Freq	16	55	32	0.00	2	105	398	75.81%	3
			%	15.24	52.38	30.48	0.00	1.91	100%	3.79		

9	Inspection of fishing boats and passengers boats, searching bags and visiting vessels.	105	Freq	21	45	37	2	0.00	105	400	76.19%	2
			%	20	42.86	35.24	1.91	0.00	100%	3.81		
10	Controlling coasts of ports.	105	Freq	2	28	73	0.00	2	105	343	65.33%	11
			%	1.91	26.67	69.52	0.00	1.91	100%	3.27		
11	Controlling and inspecting ships and boats.	105	Freq	1	73	30	1	0.00	105	389	74.10%	6
			%	0.95	69.52	28.57	0.95	0.00	100%	3.70		
12	Cooperation with other armed forces.	105	Freq	3	75	25	1	1	105	393	74.86%	4
			%	2.86	71.43	23.81	0.95	0.95	100%	3.74		

Table 5-11: The required preventive procedures to fight terrorism, illegal trade and illegal immigration.

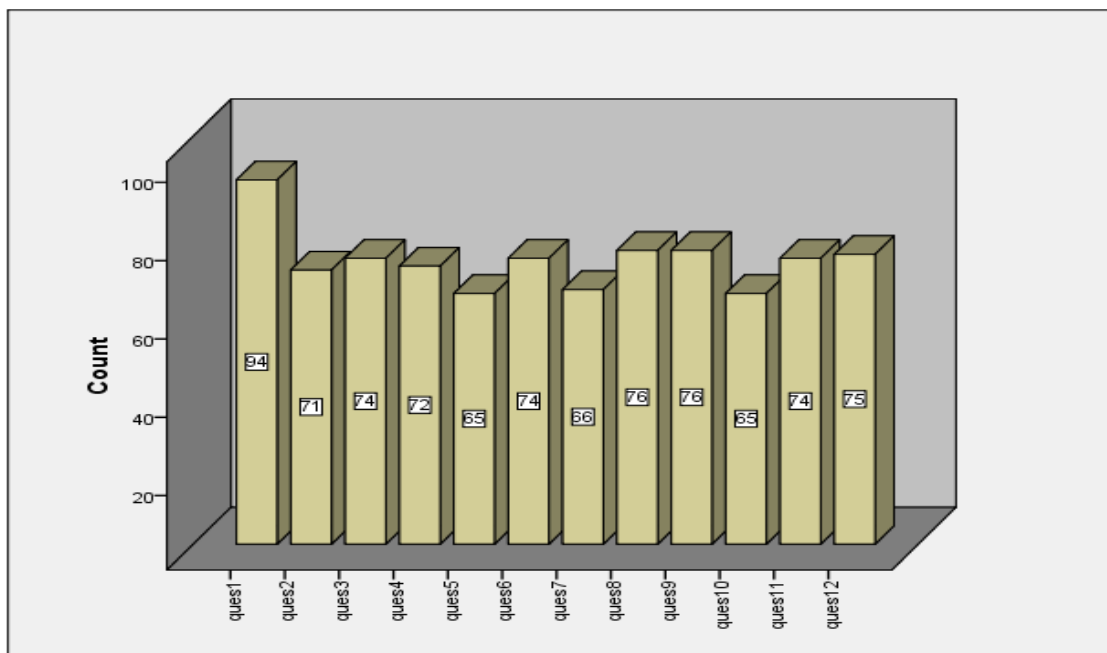


Figure 5-11: The required preventive procedures to fight terrorism, illegal trade and illegal immigration.

Figure. (5-11) indicates and the most important required preventive procedures are:

- "Magnetic detectors", got a percentage of (94.48%).

- "Inspection of fishing boats and passengers boats, searching bags and visiting vessels", got a percentage of (76.19%).
- "The use of thermal cameras", got a percentage of (75.81%).
- "Cooperation with other armed forces", got a percentage of (74.86%).

7. What are the problems faced by SBG working in the performance of their duties at Saudi Ports?

To answer this question, the researcher analyzed the responses of study sample concerning the problems confronting SBG during their work at Saudi ports by ordering the suggested phrases and indicating the weighted mean and the standard deviation for each phrase.

Serial	Question (7)	Study sample	Strongly agree	Agree	I have no opinion	Disagree	No absolute importance	Sum	Average	Percentage	Order	
	Phrase											
1	Lack of team work.	105	Freq	15	42	48	0.00	0.00	105	387	73.71%	9
			%	14.29	40	45.51	0.00	0.00	100%	3.69		
2	Lack of services.	105	Freq	18	78	9	0.00	0.00	105	429	81.71%	4
			%	17.14	74.29	8.57	0.00	0.00	100%	4.09		
3	Too many fishing and pleasure boats.	105	Freq	62	24	17	1	1	105	460	87.62%	1
			%	59.05	22.86	16.19	0.95	0.95	100%	4.38		
4	The coasts of the Kingdom are too long.	105	Freq	56	25	17	7	0.00	105	445	84.76%	3
			%	53.33	23.81	16.19	6.67	0.00	100%	4.24		
5	Lack of technology.	105	Freq	43	27	34	1	0.00	105	427	81.33%	5
			%	40.95	25.71	32.38	0.95	0.00	100%	4.07		
6	Lack of	105	Freq	16	71	16	2	0.00	105	416	79.24%	7

	training and experience.		%	15.24	67.62	15.24	1.91	0.00	100%	3.96		
7	Lack of knowledge.	105	Freq	18	69	14	3	1	105	415	79.05%	8
			%	17.14	65.61	13.33	2.86	0.95	100%	3.95		
8	Poor communication between border guards and leadership.	105	Freq	43	27	33	1	1	105	425	80.95%	6
			%	40.95	25.71	31.43	0.95	0.95	100%	4.05		
9	Working conditions.	105	Freq	61	26	12	6	0.00	105	457	87.05%	2
			%	58.10	24.76	11.43	5.71	0.00	100%	4.35		

Table 5-12: The most important problems that are confronting the employees at Saudi ports.

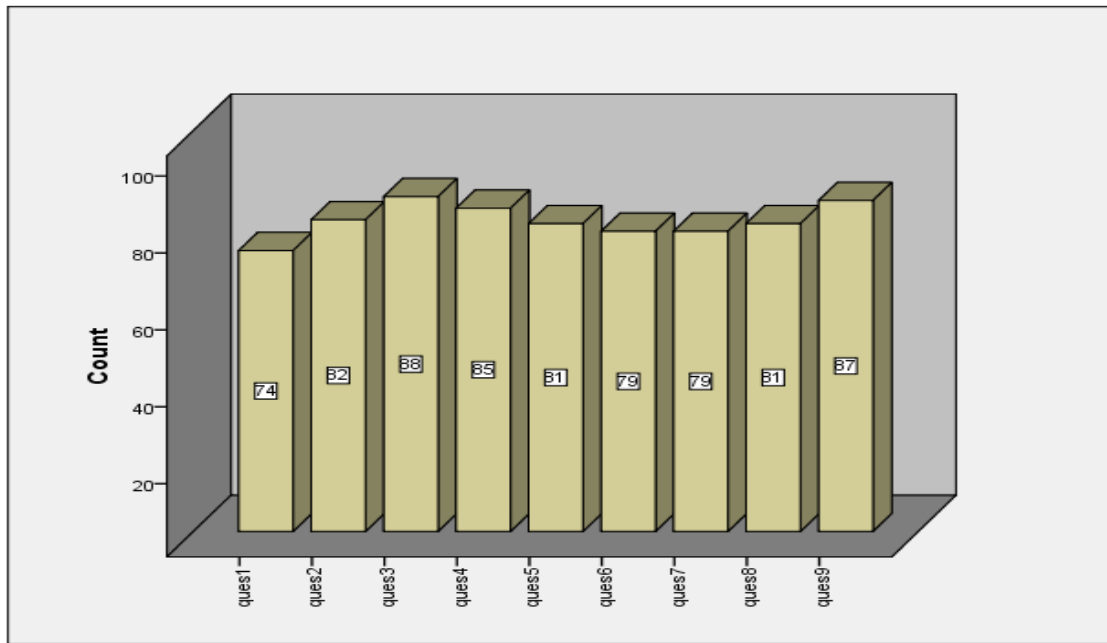


Figure 5-12: The most important problems that are confronting the employees at Saudi ports.

Table (5-12) indicates the most important problems that confront the employees at Saudi ports. These problems can be summarized into the following points:

- "Too many fishing and pleasure boats" is one of the most important problems and it got a percentage of (87.62%).
- "Working conditions" with a percentage of (87.05%).

- "The coasts of the Kingdom are too long" with a percentage of (84.76%).

8. What is the extent of the impact of technology and modern port security in the fight against terrorism, illegal trade and illegal immigration at Saudi Ports?

To answer this question, the researcher analyzed the responses of the study sample concerning the impact of modern technology for port security on fighting terrorism, illegal trade and illegal immigration by ordering the suggested phrases and indicating the weighted mean and standard deviation for each phrase.

Serial	Question (8)	Study sample	Strongly agree	Agree	I have no opinion	Disagree	No absolute importance	Sum	Average	Percentage	Order	
	Phrase											
1	Help control ports.	105	Freq	0.00	80	25	0.00	0.00	105	395	75.24%	3
			%	0.00	76.19	23.81	0.00	0.00	100%	3.76		
2	Working on the speed of early warning.	105	Freq	0.00	55	50	0.00	0.00	105	370	70.48%	6
			%	0.00	52.38	47.62	0.00	0.00	100%	3.52		
3	Working on the speed of service leaders.	105	Freq	0.00	47	58	0.00	0.00	105	362	68.95%	7
			%	0.00	44.76	55.24	0.00	0.00	100%	3.45		
4	Help communication among border guards and other forces.	105	Freq	0.00	83	22	0.00	0.00	105	398	75.81%	1
			%	0.00	79.50	20.95	0.00	0.00	100%	3.79		
5	Verification speed in the performance of work.	105	Freq	0.00	56	49	0.00	0.00	105	371	70.67%	5
			%	0.00	53.33	46.67	0.00	0.00	100%	3.53		
6	Help	105	Freq	3	75	27	0.00	0.00	105	396	75.43%	2

	coordination between border guards and other armed forces in Saudi Arabia.		%	2.86	71.43	25.71	0.00	0.00	100%	3.77		
7	Verification surveillance required at the port.	105	Freq	0.00	78	27	0.00	0.00	105	393	74.86%	4
			%	0.00	74.29	25.71	0.00	0.00	100%	3.74		

Table 5-13: Impact of modern technology on fighting terrorism, illegal trade and illegal immigration.

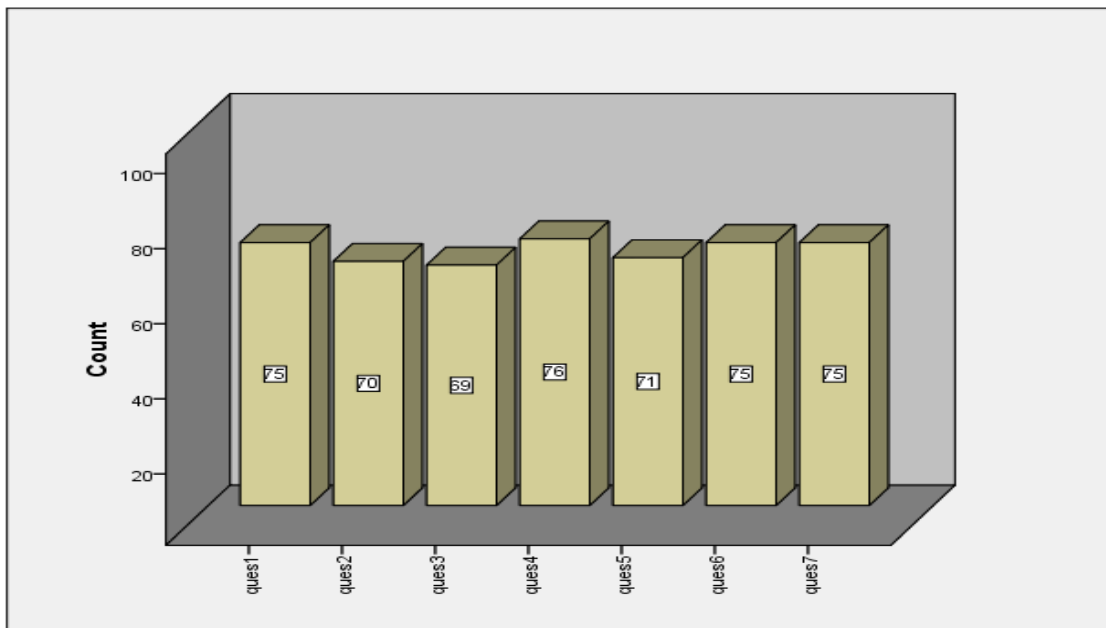


Figure 5-13: Impact of modern technology on fighting terrorism, illegal trade and illegal immigration.

Table (5-13) indicates the impact of modern technology on fighting terrorism, illegal trade and illegal immigration and this impact can be summarized in the following points:

- "What is your opinion about that?" with a percentage of (76%).
- "Help communication among border guards and other forces" with a percentage of (75.81%).

- "Help coordination between border guards and other armed forces in Saudi Arabia" with a percentage of (75.43%).

9. What are the reasons and motives underlying the existence of terrorism, illegal trade and illegal immigration in KSA?

To answer this question, the researcher analyzed the responses of the study sample concerning the motives of terrorism, illegal trade and illegal immigration in the KSA, by ordering the suggested phrases and indicating the weighted mean and the standard deviation for each phrase.

Serial	Question (9)	Study sample		Strongly agree	Agree	I have no opinion	Disagree	No absolute importance	Sum	Average	Percentage	Order
	Phrase											
1	Poverty.	105	Freq	11	14	80	0.00	0.00	105	351	66.86%	15
			%	10.48	13.33	76.19	0.00	0.00	100%	3.34		
2	A kind of political frustration.	105	Freq	12	70	22	1	0.00	105	408	77.71%	10
			%	11.43	66.67	20.95	0.95	0.00	100%	3.89		
3	Ignorance of ethics and the rules of Islam.	105	Freq	5	65	34	1	0.00	105	389	74.10%	14
			%	4.76	61.91	32.38	0.95	0.00	100%	3.70		
4	Wrong understanding of the concept of jihad among the general people.	105	Freq	5	72	28	0.00	0.00	105	397	75.62%	13
			%	4.76	68.57	26.67	0.00	0.00	100%	3.78		
5	There are many psychological reasons, such as love, among the young and a desire for fame.	105	Freq	38	22	41	4	0.00	105	409	77.90%	9
			%	36.19	20.95	39.05	3.81	0.00	100%	3.90		
6	Psychological frustration among young people.	105	Freq	66	23	11	5	0.00	105	465	88.57%	1
			%	62.29	21.19	10.48	4.76	0.00	100%	4.43		
7	Spare time.	105	Freq	7	78	17	3	0.00	105	404	76.95%	11

			%	6.67	74.29	16.19	2.86	0.00	100%	3.85		
8	The dismantling of society and a lack of interdependency.	105	Freq	40	36	15	12	2	105	415	79.05%	8
			%	38.10	34.29	14.29	11.43	1.91	100%	3.95		
9	Economic reasons such as a lack of justice in the distribution of wealth.	105	Freq	6	21	19	3	56	105	233	44.38%	16
			%	5.71	20	18.10	2.86		100%	2.22		
10	Educational reasons such as the absence of good education.	105	Freq	53	30	17	5	0.00	105	446	84.95%	2
			%	50.48	28.57	16.19	4.76	0.00	100%	4.25		
11	Shortages or lack of education.	105	Freq	53	27	17	3	1	105	431	82.10%	5
			%	50.48	25.71	16.19	2.86	0.95	100%	4.10		
12	Intellectual deviation.	105	Freq	6	77	18	3	1	105	399	76%	12
			%	5.71	73.77	17.14	2.86	0.95	100%	3.80		
13	The foreign policy of hegemony within the Arab states.	105	Freq	40	35	29	2	0.00	105	431	82.10%	5
			%	38.10	33.33	27.62	1.91	0.00	100%	4.10		
14	Distortion of the image of Islam and Muslims.	105	Freq	52	24	26	2	1	105	439	83.62%	4
			%	49.52	22.86	24.76	1.91	0.95	100%	4.18		
15	The emergence of different political trends.	105	Freq	7	24	21	2	1	105	199	37.90%	17
			%	6.67	22.86	20	1.91	0.95	100%	1.90		
16	Feeling shortages and a sense of deprivation and injustice.	105	Freq	29	51	25	0.00	0.00	105	424	80.76%	6
			%	27.62	48.57	23.81	0.00	0.00	100%	4.04		
17	Scientific and technical development.	105	Freq	63	13	21	6	2	105	444	84.57%	3
			%	60	12.38	20	5.71	1.91	100%	4.23		
18	The absence of adequate protection along the coasts of the Kingdom.	105	Freq	23	60	19	2	1	105	417	79.43%	7
			%	21.19	57.14	18.10	1.91	0.95	100%	3.97		

Table 5-14: Motives of terrorism, illegal trade and illegal immigration in the KSA.

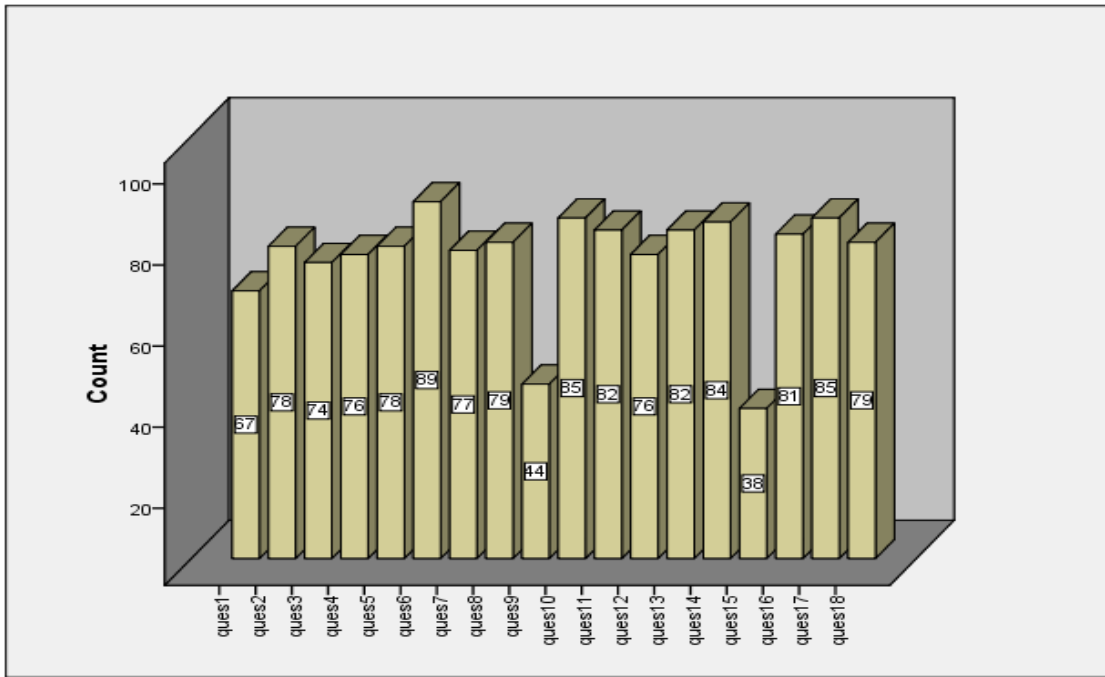


Figure 5-14: Motives of terrorism, illegal trade and illegal immigration in the KSA.

Table No. (5-14) indicates the motives of terrorism, illegal trade and illegal immigration in the KSA. These motives can be summarized in the following points:

- "Psychological frustration among young people" is the most important motive according to the opinion of the study sample with a percentage of (88.57%).
- "Educational reasons such as the absence of good education" with a percentage of (84.95%).
- "Scientific and technical development" with a percentage of (84.57%).
- "Distortion of the image of Islam and Muslims" with a percentage of (83.62%).

10. How best can the rules of safety and security and combating emergencies be followed at Saudi Ports?

To answer this question, the researcher analyzed the responses of the study sample concerning the extent of following the rules of safety and confronting emergency cases at Saudi ports by ordering the suggested phrases and indicating the weighted mean and standard deviation for each phrase.

Serial	Question (10)	Study sample	Strongly agree	Agree	I have no opinion	Disagree	No absolute importance	Sum	Average	Percentage	Order	
	Phrase											
1	Port management commitment to provide protection for installations, ships and cargo.	105	Freq	1	84	20	0.00	0.00	105	401	76.38%	1
			%	0.95	80	19.04	0.00	0.00	100%	3.82		
2	The obligation not to smoke in hazardous areas.	105	Freq	2	78	24	1	0.00	105	396	75.43%	2
			%	1.91	74.29	22.86	0.95	0.00	100%	3.77		
3	The presence of all possible devices to meet the needs of emergencies.	105	Freq	0.00	27	77	0.00	1	105	340	64.76%	7
			%	0.00	25.71	73.77	0.00	0.95	100%	3.24		
4	Shipmasters' commitment to sending	105	Freq	1	41	61	2	0.00	105	356	67.76%	6
			%	0.95	39.05	58.10	1.91	0.00	100%	3.39		

	information required by the management of the port before entering.											
5	Dealing with all hazardous materials that are banned.	105	Freq	0.00	25	80	0.00	0.00	105	340	64.76%	7
			%	0.00	23.81	76.19	0.00	0.00	100%	3.24		
6	Commitment to a conservation service for closed hazardous materials to prevent diversion	105	Freq	1	72	31	0.00	1	105	387	73.71%	3
			%	0.95	68.57	29.52	0.00	0.95	100%	3.69		
7	Border guards obliged to ensure that licenses for fishing and cruise and tourist ships are issued from the Department of Border Guards.	105	Freq	0.00	70	33	2	0.00	105	383	72.95%	4
			%	0.00	66.67	31.43	1.91	0.00	100%	3.65		

8	The commitment of fishing cruise ships to know about safety equipment and the means necessary for rescue and fire fighting.	105	Freq	2	47	55	1	0.00	105	365	69.52%	5
			%	1.91	44.76	52.38	0.95	0.00	100%	3.48		
9	The need for wireless devices on ships.	105	Freq	2	78	24	1	0.00	105	396	75.43%	2
			%	1.91	74.29	22.86	0.95	0.00	100%	3.77		

Table 5-15: Safety rules and confronting emergency cases at Saudi ports.

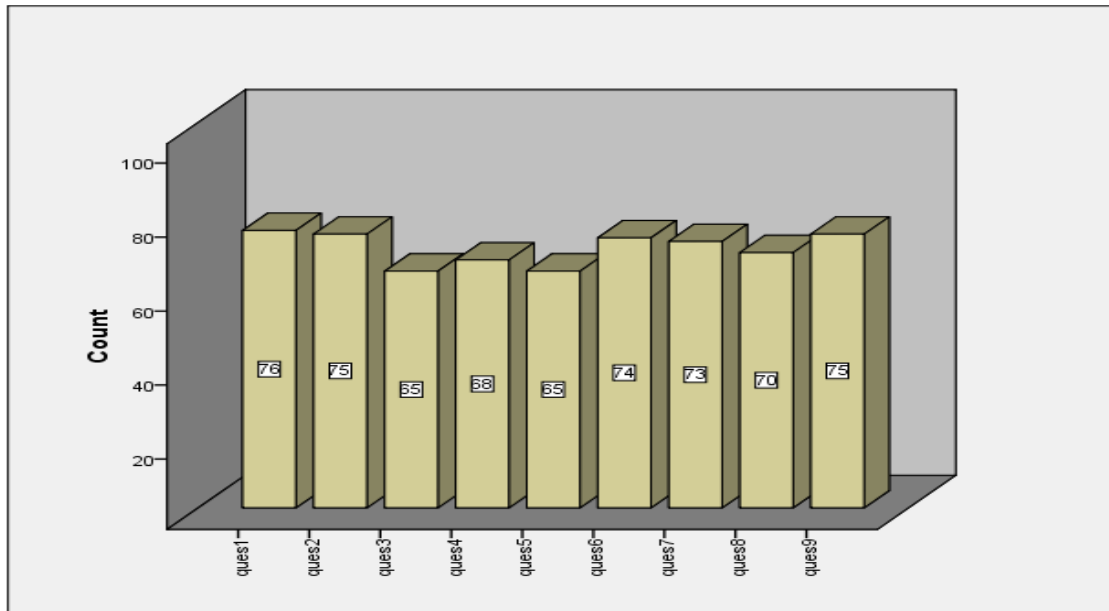


Figure 5-15: Safety rules and confronting emergency cases at Saudi ports.

Table No. (5-15) indicates the extent of following safety rules and confronting emergency cases at Saudi ports. These rules can be summarized in the following points:

- "Port management commitment to provide protection for installations, ships and cargo" with a percentage of (76.38%).
- "The obligation not to smoke in hazardous areas" and" The need for wireless devices on cruise and fishing ships ", with a percentage of (75.43%).
- "Commitment to a conservation service for closed hazardous materials to prevent diversion" with a percentage of (73.71%).

11. From your point of view, should any of these steps be taken by KSA to confront terrorism, illegal trade and illegal immigration?

To answer this question, the researcher analyzed the responses of the study sample concerning the steps which KSA should make to confront terrorism, illegal trade and illegal immigration by ordering the suggested phrases and indicating the weighted mean and standard deviation for each phrase.

Serial	Question (11)	Study sample	Strongly agree	Agree	I have no opinion	Disagree	No absolute importance	Sum	Average	Percentage	Order	
	Phrase											
1	Addressing the conditions and problems of social and economic hardship, unemployment and the like.	105	Freq	2	47	55	1	0.00	105	365	69.52%	4
			%	1.91	44.76	52.38	0.95	0.00	100%	3.48		
2	The exchange of information with other States.	105	Freq	3	80	21	1	0.00	105	400	76.19%	1
			%	2.86	76.19	20	0.95	0.00	100%	3.81		
3	Government control of the movement of funds and control of	105	Freq	6	26	24	49	0.00	105	304	57.90%	6
			%	5.71	24.76	22.86	46.67	0.00	100%	2.90		

	banks, companies and voluntary control.											
4	Tightening of controls on the sources of arms and explosives.	105	Freq	0.00	56	49	0.00	0.00	105	371	70.67%	3
			%	0.00	53.33	46.67	0.00	0.00	100%	3.53		
5	The establishment of an international center to combat terrorism.	105	Freq	0.00	41	64	0.00	0.00	105	356	67.81%	5
			%	0.00	39.05	60.95	0.00	0.00	100%	3.39		
6	Paying attention to the youth and their problems, and working to promote their needs.	105	Freq	0.00	80	25	0.00	0.00	105	395	75.24%	2
			%	0.00	76.19	23.81	0.00	0.00	100%	3.76		

Table 5-16: The steps that must be done by the KSA to confront terrorism.

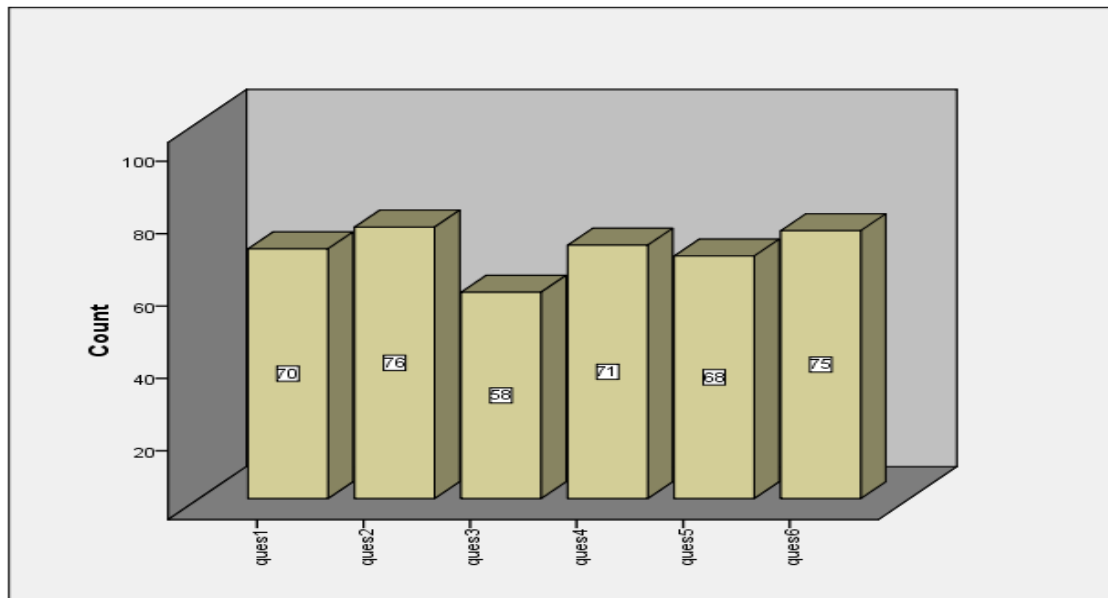


Figure 5-16: The steps that must be done by the KSA to confront terrorism.

Table No. (5-16) indicates the steps that must be done by the KSA to confront terrorism. These steps can be summarized in the following points:

- "What is your opinion about that?" with a percentage of (79.05%).
- "The exchange of information with other States" with a percentage of (76.19%).

5.5 The relation between study variables

To answer the Twelfth question which is: What are the significant differences of the opinions of officers and individuals working in Saudi ports concerning the pivots of SBG role in setting efficient strategy to protect Saudi ports from terrorism illegal trade and illegal immigration? The researcher used the method of variance analysis (Age – Educational level – Experience, Rank ... etc.) as the main variable (11 pivots and the scale's total mark). The researcher also used a Mann-Whitney Test to reveal the significant differences of the study sample concerning the main variables of study (Pivots) on the role of SBG in putting effective strategy to protect Saudi ports from terrorism, illegal trade and illegal immigration according to their demographic characteristics using the following variably:

5.5.1 Place of work variable (port)

Table (5-17) indicates the impact of the variable of work area (port) on every dimension of the dimensions of the security of marine ports against terrorism, illegal trade and illegal immigration (sample = 105).

Serial	Question	Variance source	Freedom degrees	Total of squares	Average of squares	Frate	Significance level
1	From your point of view, what is the meaning of the word terrorism?	Between groups	8	150.510	18.814	1.775	0.091
		Inside groups	96	1017.680	10.601		
		Total	104	1168.190	12.139		
2	What are the threats or potential terrorist operations affecting Saudi Ports?	Between groups	8	97.112	7.278	1.668	0.116
		Inside groups	96	698.736	24.382		
		Total	104	795.848	11.132		
3	What is the extent of the commitment to security and protecting against terrorist attacks at Saudi Ports?	Between groups	8	195.059	12.195	2.190	0.035
		Inside groups	96	1068.655	16.686		
		Total	104	1263.714	25.675		
4	What is the role of SBG in combating terrorism, illegal trade and illegal immigration at Saudi Ports?	Between groups	8	97.563	20.465	0.731	0.664
		Inside groups	96	1601.828	8.971		
		Total	104	1699.390	10.480		
5	What is the role of SBG in the fight against terrorism and illegal trade, and the monitoring of illegal immigration vessels, cruise boats, yachts and fishing boats at Saudi Ports?	Between groups	8	205.404	3.727	1.255	0.276
		Inside groups	96	1964.653	6.071		
		Total	104	2170.057	3.887		
6	What are the preventive measures necessary to combat terrorism, illegal trade and illegal immigration at Saudi Ports?	Between groups	8	71.768	8.360	0.856	0.556
		Inside groups	96	1006.079	51.315		
		Total	104	1077.848	30.182		
7	What are the problems faced by SBG in the performance of their duties at Saudi Ports?	Between groups	8	29.818	29.030	0.614	0.764

		Inside groups	96	582.811	9.512		
		Total	104	612.629	4.543		
8	What is the extent of the impact of technology and modern port security in the fight against terrorism, illegal trade and illegal immigration at Saudi Ports?	Between groups	8	31.093	5.664	0.465	0.878
		Inside groups	96	802.564	962.164		
		Total	104	833.657	437.634		
9	What are the reasons and motives underlying the existence of terrorism, illegal trade and illegal immigration in KSA?	Between groups	8	410.522	18.814	1.700	0.108
		Inside groups	96	2897.439	10.601		
		Total	104	3307.962	12.139		
10	How best can the rules of safety and security, and combating emergencies be followed at Saudi Ports?	Between groups	8	232.240	7.278	3.052	0.004
		Inside groups	96	913.150	24.382		
		Total	104	1145.390	11.132		
11	From your point of view, should any of these steps be taken by KSA to confront terrorism, illegal trade and illegal immigration?	Between groups	8	36.345	12.195	0.802	0.602
		Inside groups	96	543.788	16.686		
		Total	104	580.133	25.675		
12	Total mark for scale	Between groups	8	7697.311	20.465	2.199	0.034
		Inside groups	96	42012.879	8.971		
		Total	104	49710.190	10.480		

Table 5-17: Work area (port) on every dimension of the dimensions of protecting sea ports from terrorism, illegal trade and illegal immigration.

Table (5-17) shows that the variable of work area has an impact only on the third and the tenth dimension and the total mark of the measure of marine port security against terrorism, illegal trade and illegal immigration. It is worth mentioning that the researcher used Mann-Whitney test to identify the nature of this impact and its indications.

Table (5-18) indicates the differences between the groups' average performance according to the variable of work area by using Mann-Whitney test on the third dimension of the security of marine ports against terrorism, illegal trade and illegal immigration. (Sample = 105).

Group	Sample	Rank average	Variance mean value	Significance level	In favour of
Jubail Industrial Port	11	12.14	0.305	Nothing	-
Yanbu Commercial Port	10	13			
Jubail Industrial Port	26	11.21	2.301	0,05	Dammam Port
Dammam Port	10	17.79			
Jubail Industrial Port	10	10.89	0.603	Nothing	-
Yanbu Industrial Port	10	12.56			
Jubail Industrial Port	9	11.46	0.203	Nothing	-
Jizan Port	10	14.95			
Jubail Industrial Port	3	17.57	1.232	Nothing	-
Jeddah Port	14	22.08			
Jubail Industrial Port	8	7.50	0.00	Nothing	-
Ras Al-Tanura Port	14	0			
Jubail Industrial Port	11	11	1.297	Nothing	-
Dhiba Port	14	14.60			
Jubail Industrial Port	26	11.11	0.807	Nothing	-
Jubail Commercial Port	14	13.39			
Yanbu Commercial Port	10	9.10	2.295	0,05	Dammam Port

Dammam Port	14	14.93			
Yanbu Commercial Port	9	9.05	0.433	Nothing	-
Yanbu Industrial Port	14	10.06			
Yanbu Commercial Port	3	9.45	1.066	Nothing	-
Jizan Port	8	12.41			
Yanbu Commercial Port	11	15.75	1.054	Nothing	-
Jeddah Port	8	19.56			
Yanbu Commercial Port	26	10	0.00	Nothing	-
Ras Al-Tanura Port	8	0			
Yanbu Commercial Port	10	9.20	1.081	Nothing	-
Dhiba Port	8	11.80			
Yanbu Commercial Port	9	9.35	0.555	Nothing	-
Jubail Commercial Port	8	10.72			
Dammam Port	3	13.29	1.984	0.05	Dammam Port
Yanbu Industrial Port	11	8.38			
Dammam port	26	14.29	1.246	Nothing	-
Jizan Port	11	11.36			
Dammam Port	10	23.57	1.380	Nothing	-
Jeddah Port	11	18.85			
Dammam Port	9	7.50	0.00	Nothing	-

Ras Al-Tanura Port	11	0.00			
Dammam Port	3	13.43	0.908	Nothing	-
Dhiba Port	26	11.20			
Dammam Port	10	13.07	1.048	Nothing	-
Jubail Commercial Port	26	10.33			
Yanbu Industrial Port	9	8.75	0.956	Nothing	-
Jizan Port	26	10.91			
Yanbu Industrial Port	3	15.62	1.523	Nothing	-
Jeddah Port	10	18.08			
Yanbu Industrial Port	9	4.50	0.00	Nothing	-
Ras Al-Tanura Port	10	0.00			
Yanbu Industrial Port	3	8.56	0.734	Nothing	-
Dhiba Port	9	10.25			
Yanbu Industrial Port	3	8.81	0.150	No thing	-
Jubail Commercial Port	11	9.17			
Jizan Port	10	19.45	0.187	Nothing	-
Jeddah Port	26	18.81			
Jizan Port	10	6	0.00	Nothing	-
Ras Al-Tanura Port	10	0.00			
Jizan Port	10	10.86	0.126	Nothing	-
Dhiba Port	9	11.15			

Jizan Port	10	10.77	0.250	Nothing	-
Jubail Commercial Port	3	10.17			
Jeddah Port	14	13.50	0.00	Nothing	-
Ras al-Tanura Port	8	0.00			
Jeddah Port	14	18.21	0.291	Nothing	-
Dhiba Port	11	19.25			
Jeddah Port	14	17.98	0.020	Nothing	-
Jubail Commercial Port	26	18.06			
Ras Al-Tanura Port	14	0.00	0.00	Nothing	-
Dhiba Port	10	5.50			
Ras Al-Tanura Port	14	0	0.00	Nothing	-
Jubail Commercial Port	9	5			
Dhiba Port	14	10.45	0.389	Nothing	-
Jubail Commercial Port	3	9.50			

Table 5-18: Indicates the differences performance according to the variable of work area on the third dimension.

Table (5-18) shows that Dammam port ranks first with a significance of 0.05 when compared to Jubail industrial port, Yanbu commercial port and Yanbu industrial port concerning the impact of the variable of work area on the 3rd dimension of the security of marine ports .

Table (5-19) shows the differences between the averages of the groups' performance according to the variable of work area (port) by using Mann-Whitney test on the tenth dimension of the dimensions of the security of marine ports against terrorism, illegal trade and illegal immigration (Sample = 105).

Group	Sample	Rank average	Variance mean value	Significance level	In favour of
Jubail Industrial Port	14	11.79	0.627	Nothing	-
Yanbu Commercial Port	10	13.50			
Jubail Industrial Port	14	10	2.970	0.01	Dammam Port
Dammam Port	14	19			
Jubail Industrial Port	14	10.96	0.532	Nothing	-
Yanbu Industrial Port	8	12.44			
Jubail Industrial Port	14	11.39	1.250	Nothing	-
Jizan Port	11	15.05			
Jubail Industrial Port	14	14.07	2.630	0.01	Jeddah Port
Jeddah Port	26	23.96			
Jubail Industrial Port	14	7.50	0.00	Nothing	-
Ras Al-Tanura Port	10	0			
Jubail Industrial Port	14	8.79	3.166	0.01	Dhiba Port
Dhiba Port	9	17.70			
Jubail Industrial Port	14	12.14	0.129	Nothing	-
Jubail Industrial Port	3	11.78			
Yanbu Commercial Port	10	8.15	2.698	0,01	Dammam Port
Dammam Port	14	15.61			
Yanbu Commercial Port	10	9.40	0.101	Nothing	-
Yanbu Industrial Port	8	9.62			
Yanbu Commercial Port	10	9.55	1.066	Nothing	-
Jizan Port	11	12.32			
Yanbu Commercial Port	10	13	2.059	0,05	Jeddah Port
Jeddah Port	26	20.62			
Yanbu Commercial Port	10	10	0.00	Nothing	-
Ras Al-Tanura Port	10	0			
Yanbu Commercial Port	10	7.25	2.776	0.01	Dhiba Port

Dhiba Port	9	13.75			
Yanbu Commercial Port	10	10.60	0.530	Nothing	-
Jubail Commercial Port	3	9.33			
Dammam Port	14	13.57	2.088	0,05	Dammam Port
Yanbu Industrial Port	8	7.88			
Dammam port	14	14.82	1.466	Nothing	-
Jizan Port	11	10.68			
Dammam Port	14	23.75	1.344	Nothing	-
Jeddah Port	26	18.75			
Dammam Port	14	7.50	0.00	Nothing	-
Ras Al-Tanura Port	10	0.00			
Dammam Port	14	12.43	0.062	Nothing	-
Dhiba Port	9	12.60			
Dammam Port	14	15	2.731	0.01	Dammam Port
Jubail Commercial Port	3	7.33			
Yanbu Industrial Port	8	8.88	0.759	Nothing	-
Jizan Port	11	10.82			
Yanbu Industrial Port	8	13	1.523	Nothing	-
Jeddah Port	26	18.88			
Yanbu Industrial Port	8	4.50	0.00	Nothing	-
Ras Al-Tanura Port	10	0.00			
Yanbu Industrial Port	8	6.62	2.190	0,05	Dhiba Port
Dhiba Port	9	11.80			
Yanbu Industrial Port	8	9.62	0.500	No thing	-
Jubail Commercial Port	3	8.44			
Jizan Port	11	17.59	0.528	Nothing	-
Jeddah Port	26	19.60			
Jizan Port	11	6	0.00	Nothing	-

Ras Al-Tanura Port	10	0			
Jizan Port	11	9.32	1.337	Nothing	-
Dhiba Port	9	12.85			
Jizan Port	11	11.91	1.194	Nothing	-
Jubail Commercial Port	3	8.78			
Jeddah Port	26	13.50	0.00	Nothing	-
Ras al-Tanura Port	10	0.00			
Jeddah Port	26	17.25	1.200	Nothing	-
Dhiba Port	9	21.75			
Jeddah Port	26	20.23	2.256	Nothing	-
Jubail Commercial Port	3	11.56			
Ras Al-Tanura Port	10	0.00	0.00	Nothing	-
Dhiba Port	9	5.50			
Ras Al-Tanura Port	10	0.00	0.00	Nothing	-
Jubail Commercial Port	3	5			
Dhiba Port	9	10.45	2.720	0.01	Dhiba Port
Jubail Commercial Port	3	9.50			

Table 5-19: Indicates the differences performance according to the variable of work area on the tenth dimension.

It is concluded from table (5-19) that the variable of work area (port) has an impact on the tenth dimension of the dimensions of the security of marine ports against terrorism, illegal trade and illegal immigration. The comparison between Yanbu Industrial Port, Jubail commercial port, Jubail Industrial Port, Yanbu Commercial Port and Dhiba port on the 10th dimension showed that there is a significant difference between these ports in favour of Dhiba port (⁹) with a significance of (0.05-0.01). While

⁹ - In favour of Dhiba: means that Dhiba port ranks the first concerning the differences, it has the highest difference of all ports.

the comparisons between Jubail industrial Port, Yanbu Commercial Port, Yanbu industrial Port, Jubail commercial port and Dammam port on the 10th dimension showed that there is a significant difference between these ports in favour of Dammam port with a significance of (0.05-0.01). Moreover, the comparisons between Jubail Industrial Port, Yanbu commercial Port and Jeddah port on the 10th dimension showed that there is a significant difference between these ports in favour of Jeddah port.

Table (5-20) shows the differences between the averages of the groups' performance according to the variable of work area (port) by using Mann-Whitney test on the total degree of the security of marine ports against terrorism, illegal trade and illegal immigration (Sample = 105).

Group	Sample	Rank average	Variance mean value	Significance level	In favour of
Jubail Industrial Port	14	14.25	1.436	Nothing	-
Yanbu Commercial Port	10	10.05			
Jubail Industrial Port	14	11.54	1.910	Nothing	-
Dammam Port	14	17.46			
Jubail Industrial Port	14	12.07	0.548	Nothing	-
Yanbu Industrial Port	8	10.50			
Jubail Industrial Port	14	12.93	0.055	Nothing	-
Jizan Port	11	13.09			
Jubail Industrial Port	14	20.18	0.128	Nothing	-
Jeddah Port	26	20.67			
Jubail Industrial Port	14	7.50	0.00	Nothing	-
Ras Al-Tanura Port	10	0			
Jubail Industrial Port	14	10.71	1.467	Nothing	-

Dhiba Port	9	15			
Jubail Industrial Port	14	12.46	0.410	Nothing	-
Jubail Industrial Port	3	11.28			
Yanbu Commercial Port	10	7.15	3.138	0,01	Dammam Port
Dammam Port	14	16.32			
Yanbu Commercial Port	10	9.10	0.356	Nothing	-
Yanbu Industrial Port	8	10			
Yanbu Commercial Port	10	9.15	1.305	Nothing	-
Jizan Port	11	12.68			
Yanbu Commercial Port	10	14.15	1.538	Nothing	-
Jeddah Port	26	20.17			
Yanbu Commercial Port	10	5.50	0.00	Nothing	-
Ras Al-Tanura Port	10	0.00			
Yanbu Commercial Port	10	7.25	2.462	0,05	Dhiba Port
Dhiba Port	9	13.75			
Yanbu Commercial Port	10	8.75	1.022	Nothing	-
Jubail Commercial Port	3	11.39			
Dammam Port	14	13.89	2.292	0,05	Dammam Port
Yanbu Industrial Port	8	7.31			
Dammam port	14	15.61	2.004	0,05	Dammam Port
Jizan Port	11	9.68			
Dammam Port	14	26.57	2.414	0,05	Dammam Port

Jeddah Port	26	17.23			
Dammam Port	14	7.50	0.00	Nothing	-
Ras Al-Tanura Port	10	0.00			
Dammam Port	14	13.32	0.676	Nothing	-
Dhiba Port	9	11.35			
Dammam Port	14	14.75	2.428	0,05	Dammam Port
Jubail Commercial Port	3	7.72			
Yanbu Industrial Port	8	9.12	0.580	Nothing	-
Jizan Port	11	10.64			
Yanbu Industrial Port	8	15	0.814	Nothing	-
Jeddah Port	26	18.27			
Yanbu Industrial Port	8	4.50	0.00	Nothing	-
Ras Al-Tanura Port	10	0.00			
Yanbu Industrial Port	8	6.75	1.962	0,05	Dhiba Port
Dhiba Port	9	11.70			
Yanbu Industrial Port	8	8.62	0.290	No thing	-
Jubail Commercial Port	3	9.33			
Jizan Port	11	19	0.00	Nothing	-
Jeddah Port	26	19			
Jizan Port	11	6	0.00	Nothing	-
Ras Al-Tanura Port	10	0.00			
Jizan Port	11	9.50	1.168	Nothing	-
Dhiba Port	9	12.85			
Jizan Port	11	11.32	0.685	Nothing	-
Jubail Commercial Port	3	9.50			

Jeddah Port	26	13.50	0.00	Nothing	-
Ras al-Tanura Port	10	0.00			
Jeddah Port	26	16.73	1.627	No thing	-
Dhiba Port	9	23.10			
Jeddah Port	26	18.62	0.605	Nothing	-
Jubail Commercial Port	3	16.22			
Ras Al-Tanura Port	10	0.00	0.00	No thing	-
Dhiba Port	9	5.50			
Ras Al-Tanura Port	10	0.00	0.00	Nothing	-
Jubail Commercial Port	3	5			
Dhiba Port	9	12.35	1.924	0,05	Dhiba Port
Jubail Commercial Port	3	7.39			

Table 5-20: Indicates the differences performance according to the variable of work area on the total degree.

It is concluded from table (5-20) that the total degree has an impact on the measure of the security of marine ports against terrorism, illegal trade and illegal immigration. The comparisons between Yanbu Industrial Port, Jubail commercial port, Yanbu Commercial Port and Dhiba port showed that there is a significant difference between these ports in favour of Dhiba port with a significance of (0.05-0.01). While the comparisons between Yanbu Commercial Port, Yanbu industrial Port, Jubail commercial Port, Jeddah port, Jizan Port and Dammam port on the total degree of the security of marine ports against terrorism, illegal trade and illegal immigration showed that there is a significant difference between these ports in favour of Dammam port with a significance of (0.05-0.01).

5.5.2 The variable of Military Rank

Table No. (5-21) indicates the impact of military rank on each dimension of the questionnaire for protecting sea ports from terrorism illegal trade and illegal immigration (sample = 105).

Serial	Question	Variance source	Freedom degrees	Total of squares	Average of squares	Frate	Significance level
1	From your point of view, what is the meaning of the word terrorism?	Between groups	10	179.152	17.915	1.703	0.091
		Inside groups	94	989.038	10.522		
		Total	104	1168.190	3.967		
2	What are the threats or potential terrorist operations affecting Saudi Ports?	Between groups	10	39.669	8.044	0.493	0.891
		Inside groups	94	756.179	10.453		
		Total	104	795.848	12.332		
3	What is the extent of the commitment to security and protecting against terrorist attacks at Saudi Ports?	Between groups	10	104.526	10.547	0.848	0.584
		Inside groups	94	1159.188	16.957		
		Total	104	1263.714	6.135		
4	What is the role of SBG in combating terrorism, illegal trade and illegal immigration at Saudi Ports?	Between groups	10	105.474	22.433	0.622	0.792
		Inside groups	94	1593.916	10.940		
		Total	104	1699.390	10.303		
5	What is the role of SBG in the fight against terrorism and illegal trade, and the monitoring of illegal immigration vessels, cruise boats, yachts and fishing boats at Saudi Ports?	Between groups	10	61.346	3.051	0.273	0.986
		Inside groups	94	2108.711	6.193		
		Total	104	2170.057	6.462		
6	What are the preventive measures necessary to combat terrorism, illegal trade and illegal immigration at Saudi Ports?	Between groups	10	109.404	8.181	1.062	0.399
		Inside groups	94	968.443	36.883		
		Total	104	1077.848	31.267		
7	What are the problems faced by SBG in the performance	Between groups	10	30.508	11.069	0.493	0.891
		Inside groups	94	582.121	11.007		

	of their duties at Saudi Ports?	Total	104	612.629	4.761		
8	What is the extent of the impact of technology and modern port security in the fight against terrorism, illegal trade and illegal immigration at Saudi Ports?	Between groups	10	64.625	5.665	0.790	0.638
		Inside groups	94	769.032	440.383		
		Total	104	833.657	481.983		
9	What are the reasons and motives underlying the existence of terrorism, illegal trade and illegal immigration in KSA?	Between groups	10	368.832	17.915	1.180	0.314
		Inside groups	94	2939.130	10.522		
		Total	104	3307.962	3.967		
10	How best can the rules of safety and security, and combating emergencies be followed at Saudi Ports?	Between groups	10	110.693	8.044	1.006	0.445
		Inside groups	94	1034.698	10.453		
		Total	104	1145.390	12.332		
11	From your point of view, should any of these steps be taken by KSA to confront terrorism, illegal trade and illegal immigration?	Between groups	10	47.610	10.547	0.840	0.591
		Inside groups	94	532.523	16.957		
		Total	104	580.133	6.135		
12	Total mark for scale	Between groups	10	4403.829	22.433	0.914	0.524
		Inside groups	94	45306.361	10.940		
		Total	104	49710.190	10.303		

Table 5-21: Variable of military rank.

Table (5-21) shows that the variable of military rank has no impact on any of the dimensions of the security of marine ports against terrorism, illegal trade and illegal immigration (sample = 105).

5.5.3 The variable of Age

Table (5-22) indicates the impact of the variable of Age on each dimension of the dimensions of the security of marine ports against terrorism, illegal trade and illegal immigration (sample = 105).

Serial	Question	Variance source	Freedom degrees	Total of squares	Average of squares	Frate	Significance level
1	From your point of view, what is the meaning of the word terrorism?	Between groups	2	8.666	4.333	0.381	0.684
		Inside groups	102	1159.524	11.368		
		Total	104	1168.190			
2	What are the threats or potential terrorist operations affecting Saudi Ports?	Between groups	2	6.927	3.463	0.448	0.640
		Inside groups	102	788.921	7.735		
		Total	104	795.848			
3	What is the extent of the commitment to security and protecting against terrorist attacks at Saudi Ports?	Between groups	2	15.199	7.599	0.621	0.540
		Inside groups	102	1248.516	12.240		
		Total	104	1263.714			
4	What is the role of SBG in combating terrorism, illegal trade and illegal immigration at Saudi Ports?	Between groups	2	9.211	4.605	0.278	0.758
		Inside groups	102	1690.180	16.570		
		Total	104	1699.390			
5	What is the role of SBG in the fight against terrorism and illegal trade, and the monitoring of illegal immigration vessels, cruise boats, yachts and fishing boats at Saudi Ports?	Between groups	2	5.755	2.877	0.136	0.873
		Inside groups	102	2164.302	21.219		
		Total	104	2170.057			
6	What are the preventive measures necessary to combat terrorism, illegal trade and illegal immigration at Saudi Ports?	Between groups	2	1.386	0.693	0.066	0.936
		Inside groups	102	1076.461	10.554		
		Total	104	1077.848			
7	What are the problems faced by SBG in the performance of their duties at Saudi Ports?	Between groups	2	878.	0.439	0.073	0.929
		Inside groups	102	611.750	5.998		
		Total	104	612.629			
8	What is the extent of the impact of technology and	Between groups	2	049.	0.025	0.003	0.997

	modern port security in the fight against terrorism, illegal trade and illegal immigration at Saudi Ports?	Inside groups	102	833.608	8.173		
		Total	104	833.657			
9	What are the reasons and motives underlying the existence of terrorism, illegal trade and illegal immigration in KSA?	Between groups	2	87.022	43.511	1.378	0.257
		Inside groups	102	3220.940	31.578		
		Total	104	3307.962			
10	How best can the rules of safety and security, and combating emergencies be followed at Saudi Ports?	Between groups	2	13.996	6.998	0.631	0.534
		Inside groups	102	1131.395	11.092		
		Total	104	1145.390			
11	From your point of view, should any of these steps be taken by KSA to confront terrorism, illegal trade and illegal immigration?	Between groups	2	5.928	2.964	0.527	0.592
		Inside groups	102	574.205	5.629		
		Total	104	580.133			
12	Total mark for scale	Between groups	2	300.244	150.122	0.310	0.734
		Inside groups	102	49409.947	484.411		
		Total	104	49710.190			

Table 5-22: Variable of Age.

Table (5-22) shows that the variable of Age has no impact on any of the dimensions of the security of marine ports against terrorism, illegal trade and illegal immigration (sample = 105).

5.5.4 The variable of Educational Level

Table (5-23) indicates the impact of the variable of Educational Level on each dimension of the dimensions of the security of marine ports against terrorism, illegal trade and illegal immigration (sample = 105).

Serial	Question	Variance source	Freedom degrees	Total of squares	Average of squares	Frate	Significance level
1	From your point of view, what is the meaning of the word terrorism?	Between groups	3	47.574	15.858	1.429	0.239
		Inside groups	101	1120.617	11.095		
		Total	104	1168.190			
2	What are the threats or potential terrorist operations affecting Saudi Ports?	Between groups	3	6.258	2.086	0.267	0.849
		Inside groups	101	789.590	7.818		
		Total	104	795.848			
3	What is the extent of the commitment to security and protecting against terrorist attacks at Saudi Ports?	Between groups	3	56.927	18.976	1.588	0.197
		Inside groups	101	1206.788	11.948		
		Total	104	1263.714			
4	What is the role of SBG in combating terrorism, illegal trade and illegal immigration at Saudi Ports?	Between groups	3	61.695	20.565	1.268	0.289
		Inside groups	101	1637.695	16.215		
		Total	104	1699.390			
5	What is the role of SBG in the fight against terrorism and illegal trade, and the monitoring of illegal immigration vessels, cruise boats, yachts and fishing boats at Saudi Ports?	Between groups	3	34.707	11.569	0.547	0.651
		Inside groups	101	2135.350	21.142		
		Total	104	2170.057			
6	What are the preventive measures necessary to combat terrorism, illegal trade and illegal immigration at Saudi Ports?	Between groups	3	45.364	15.121	1.479	0.225
		Inside groups	101	1032.484	10.223		
		Total	104	1077.848			
7	What are the problems faced by SBG in the performance of their duties at Saudi Ports?	Between groups	3	21.642	7.214	1.233	0.302
		Inside groups	101	590.987	5.851		
		Total	104	612.629			

8	What is the extent of the impact of technology and modern port security in the fight against terrorism, illegal trade and illegal immigration at Saudi Ports?	Between groups	3	24.276	8.092	1.010	0.392
		Inside groups	101	809.381	8.014		
		Total	104	833.657			
9	What are the reasons and motives underlying the existence of terrorism, illegal trade and illegal immigration in KSA?	Between groups	3	50.577	16.859	0.523	0.668
		Inside groups	101	3257.385	32.251		
		Total	104	3307.962			
10	How best can the rules of safety and security, and combating emergencies be followed at Saudi Ports?	Between groups	3	89.195	29.732	2.843	0.042
		Inside groups	101	1056.195	10.457		
		Total	104	1145.390			
11	From your point of view, should any of these steps be taken by KSA to confront terrorism, illegal trade and illegal immigration?	Between groups	3	7.283	2.428	0.428	0.733
		Inside groups	101	572.850	5.672		
		Total	104	580.133			
12	Total mark for scale	Between groups	3	1749.991	583.330	1.228	0.303
		Inside groups	101	47960.200	474.853		
		Total	104	49710.190			

Table 5-23: Educational Level.

It is concluded from table (5-23) that there is an impact for educational level on the tenth dimension of the security of marine ports against terrorism, illegal trade and illegal immigration. While it has no impact on the total degree or the other dimensions. To recognize these differences and their indications, the researcher used a Mann-Whitney Test.

Table (5-24) indicates the differences between the performance of groups according to the educational level by using a Mann-Whitney Test on the 10th dimension

of the security of marine ports against terrorism, illegal trade and illegal immigration.
(Sample = 105).

Group	Sample	Rank average	Variance mean value	Significance level	In favour of
Secondary	13	31.27	0.064	Nothing	-
Bsc	48	30.93			
Secondary	13	21	0.00	Nothing	-
Master	28	21			
Secondary	13	11.85	1.924	0.05	phD and higher
phD and higher	16	17.56			
Bsc	48	38.80	0.160	Nothing	-
Master	28	37.98			
Bsc	48	29.23	2.508	0.01	phD and higher
phD and higher	16	42.31			
Master	28	19.12	2.385	0.05	phD and higher
phD and higher	16	28.41			

Table 5-24: Indicates the differences according to the educational level 10th dimension.

It is concluded from table (5-24) that there is a significant level (0.01-0.05) in favour of Doctorate degree when compared to Secondary school degree, Bachelor degree and Master degree. Thus the variable of educational level has impact on the 10th dimension of the security of marine ports against terrorism, illegal trade and illegal immigration.

5.5.5 The variable of experience period

Table (5-25) indicates the impact of the variable of Experience period on each dimension of the dimensions of the security of marine ports against terrorism, illegal trade and illegal immigration (sample = 105).

Serial	Question	Variance source	Freedom degrees	Total of squares	Average of squares	Frate	Significance level
1	From your point of view, what is the meaning of the word terrorism?	Between groups	4	109.653	27.413	2.590	0.041
		Inside groups	100	1058.538	10.585		
		Total	104	1168.190			
2	What are the threats or potential terrorist operations affecting Saudi Ports?	Between groups	4	26.629	6.657	0.865	0.488
		Inside groups	100	769.219	7.692		
		Total	104	795.848			
3	What is the extent of the commitment to security and protecting against terrorist attacks at Saudi Ports?	Between groups	4	81.979	20.495	1.734	0.148
		Inside groups	100	1181.735	11.817		
		Total	104	1263.714			
4	What is the role of SBG in combating terrorism, illegal trade and illegal immigration at Saudi Ports?	Between groups	4	148.501	37.125	2.394	0.056
		Inside groups	100	1550.889	15.509		
		Total	104	1699.390			
5	What is the role of SBG in the fight against terrorism and illegal trade, and the monitoring of illegal immigration vessels, cruise boats, yachts and fishing boats at Saudi Ports?	Between groups	4	43.330	10.832	0.509	0.729
		Inside groups	100	2126.727	21.267		
		Total	104	2170.057			
6	What are the preventive measures necessary to combat terrorism, illegal trade and illegal	Between groups	4	45.917	11.479	1.112	0.355
		Inside groups	100	1031.931	10.319		

	immigration at Saudi Ports?	Total	104	1077.848			
7	What are the problems faced by SBG in the performance of their duties at Saudi Ports?	Between groups	4	41.320	10.330	1.808	0.133
		Inside groups	100	571.308	5.713		
		Total	104	612.629			
8	What is the extent of the impact of technology and modern port security in the fight against terrorism, illegal trade and illegal immigration at Saudi Ports?	Between groups	4	46.469	11.617	1.476	0.215
		Inside groups	100	787.188	7.872		
		Total	104	833.657			
9	What are the reasons and motives underlying the existence of terrorism, illegal trade and illegal immigration in KSA?	Between groups	4	355.114	88.778	3.007	0.022
		Inside groups	100	2952.848	29.528		
		Total	104	3307.962			
10	How best can the rules of safety and security, and combating emergencies be followed at Saudi Ports?	Between groups	4	63.000	15.750	1.455	0.222
		Inside groups	100	1082.391	10.824		
		Total	104	1145.390			
11	From your point of view, should any of these steps be taken by KSA to confront terrorism, illegal trade and illegal immigration?	Between groups	4	1.931	0.483	0.083	0.987
		Inside groups	100	578.202	5.782		
		Total	104	580.133			
12	Total mark for scale	Between groups	4	5561.855	1390.464	3.150	0.017
		Inside groups	100	44148.336	441.483		
		Total	104	49710.190			

Table 5-25: Experience period.

It is concluded from table (5-25) that the variable of experience has impact only on the first and ninth dimensions and the total degree of the security of marine ports against terrorism, illegal trade and illegal immigration with a significance level 0.05. To recognize these differences, The Mann- Whitney test was used.

Table (5-26) indicates the differences between the performance of groups according to the experience by using a Mann-Whitney Test on the first dimension of the dimensions of the security of marine ports against terrorism, illegal trade and illegal immigration. (Sample = 105).

Group	Sample	Rank average	Variance mean value	Significance level	In favour of
Less than 5 years	11	10.09	0.084	Nothing	-
from 5 to 10 years	8	9.88			
Less than 5 years	11	16.23	1.968	0,05	From 10 to 15 years
From 10 to 15 years	14	10.46			
Less than 5 years	11	13.95	1.349	Nothing	-
From 15 to 20years	12	10.21			
Less than 5 years	11	41.64	1.013	Nothing	-
From 20 years and more	60	34.97			
from 5 to 10 years	8	15	1.95	0,05	from 5 to 10 years
From 10 to 15 years	14	9.50			
from 5 to 10 years	8	12.69	1.386	Nothing	-
From 15 to 20years	12	9.04			
from 5 to 10 years	8	40	0.864	Nothing	-
From 20 years and more	60	33.77			
From 10 to 15 years	14	12.54	0.707	Nothing	-
From 15 to 20years	12	14.62			
From 10 to 15 years	14	27.36	2.014	0,05	From 20 years and more
From 20 years and more	60	39.87			
From 15 to 20years	12	31.58	0.919	Nothing	-
From 20 years and more.	60	37.48			

Table 5-26: Indicates the differences according to the experience on the first dimension.

It is concluded from table (5-26) that the comparison between the experience categories 'less than 5 years' and 'from 10 to 15 years' showed that there was a significant level of 0.05 in favour of the second category. The comparison of the experience categories 'from 5 to 10 years' and 'from 10 to 15 years' showed that there

was a significant level of 0.05 in favour of the first category. Moreover, the comparison between the experience categories ‘from 10 to 15 years’ and ‘from 20 years and more’ showed that there was a significant level of 0.05 in favour of the second category.

Table (5-27) indicates the differences between the performance of groups according to the variable of experience by using Mann-Whitney test on the ninth dimension of the dimensions of the security of marine ports against terrorism, illegal trade and illegal immigration. (Sample = 105).

Group	Sample	Rank average	Variance mean value	Significance level	In favour of
Less than 5 years	11	11.14	1.044	Nothing	-
from 5 to 10 years	8	8.44			
Less than 5 years	11	17.18	2.533	0,01	Less than 5 years
From 10 to 15 years	14	9.71			
Less than 5 years	11	13	0.682	Nothing	-
From 15 to 20years	12	11.08			
Less than 5 years	11	38.18	0.385	Nothing	-
From 20 years and more	60	35.60			
from 5 to 10 years	8	14.62	1.725	Nothing	-
From 10 to 15 years	14	9.71			
from 5 to 10 years	8	10.38	0.078	Nothing	-
From 15 to 20years	12	10.58			
from 5 to 10 years	8	30.25	0.653	Nothing	-
From 20 years and more	60	35.07			
From 10 to 15 years	14	10.93	1.859	Nothing	-
From 15 to 20years	12	16.50			
From 10 to 15 years	14	22.07	3.004	Nothing	-
From 20 years and more	60	41.10			
From 15 to 20years	12	33.42	0.563	Nothing	-
From 20 years and more.	60	37.12			

Table 5-27: Indicates the differences according to the experience on the ninth dimension.

It is concluded from table (5-27) that there was a significance level on the ninth dimension of the security of marine ports against terrorism, illegal trade and illegal

immigration when comparing workers with ‘less than 5 years’ experience and ‘from 10 to 15 years’ experience in favour of the first group.

Table (5-28) indicates the differences between the performance of groups according to the variable of experience by using Mann-Whitney test on the total degree of the security of marine ports against terrorism, illegal trade and illegal immigration. (Sample = 105).

Group	Sample	Rank average	Variance mean value	Significance level	In favour of
Less than 5 years	11	11.23	1.121	Nothing	-
from 5 to 10 years	8	8.31			
Less than 5 years	11	17.50	2.713	0,01	Less than 5 years
From 10 to 15 years	14	9.46			
Less than 5 years	11	14.36	1.604	Nothing	-
From 15 to 20years	12	9.83			
Less than 5 years	11	42.82	1.194	Nothing	-
From 20 years and more	60	34.75			
from 5 to 10 years	8	15.31	2.085	0,05	from 5 to 10 years
From 10 to 15 years	14	9.32			
from 5 to 10 years	8	11.19	0.426	Nothing	-
From 15 to 20years	12	10.04			
from 5 to 10 years	8	33.50	0.153	Nothing	-
From 20 years and more	60	34.63			
From 10 to 15 years	14	11.04	1.775	Nothing	-
From 15 to 20years	12	16.38			
From 10 to 15 years	14	20.64	3.260	0,01	From 20 years and more
From 20 years and more	60	41.43			
From 15 to 20years	12	31.83	0.848	Nothing	-
From 20 years and more.	60	37.43			

Table 5-28: Indicates the differences according to the experience on the total degree.

It is concluded from table (5-28) that there are differences on the total degree of the security of marine ports against terrorism, illegal trade and illegal immigration. The comparison between the experience categories 'less than 5 years' and 'from 10 to 15 years' showed that there was a significant level in favour of the first category. The comparison of the experience categories 'from 5 to 10 years' and 'from 10 to 15 years' showed that there was a significant level of 0.05 in favour of the first category. Moreover, the comparison between the experience categories 'from 10 to 15 years' and 'from 20 years and more' showed that there was a significant level of 0.05 in favour of the second category.

5.6 Analysis of the questionnaire results

The results of the research have been discussed above. The results expressed the opinions of the SBG regarding the items in the questionnaire concerning the subject of the study. Now, we'll discuss the results concerning the future, to implement an effective strategy in protecting the ports. The researcher will present this study from different sides, to show the range of harmony between the questions of the questionnaire, and the effective steps of putting a strategy inside it. The questionnaire has been divided into many aspects: personal data, intellectual aspect, the security aspect, the security precautions aspect, and the strategic aspect, as follows:

5.6.1 Personal data

The results of the study showed a great effect on a great number of variables in the Saudi ports. This will be shown during the discussion of the results of the study.

Statistical analysis revealed that the variables (Military rank, Age) had no impact on any of the dimensions of securing the Saudi ports under study against terrorism, illegal trade and illegal immigration. Statistical analysis also revealed that the variable of work area had an impact on the third and tenth dimensions and the total degree, the variable of educational level had an impact only on the tenth dimension. The variable of experience had an impact on the first and ninth dimensions and the total degree.

The results of the study showed that the variable of work area had an impact on the third and tenth dimensions and the total degree of the security of marine ports against terrorism, illegal trade and illegal immigration. Dammam port ranks the first with a significance of 0.05 when comparing to Jubail industrial port, Yanbu commercial port and Yanbu industrial port concerning the impact of the variable of work area on the 3rd dimension of the security of marine ports against terrorism, illegal trade and illegal immigration.

The comparison between Yanbu Industrial Port, Jubail Commercial Port, Jubail Industrial Port, Yanbu Commercial Port and Dhiba Port on the 10th dimension of the security of marine ports against terrorism, illegal trade and illegal immigration showed that there is a significant difference between these ports in favour of Dhiba Port with a significance of (0.05-0.01). The comparisons between Jubail Industrial Port, Yanbu Commercial Port, Yanbu Industrial Port, Jubail Commercial Port and Dammam Port on the 10th dimension showed that there is a significant difference between these ports in favour of Dammam port with a significance of (0.05-0.01). Moreover, the comparisons between Jubail Industrial Port, Yanbu commercial Port and Jeddah port on the 10th dimension showed that there is a significant difference between these ports in favour of Jeddah port.

The results also showed that the total degree has an impact on the measure of the security of marine ports against terrorism, illegal trade and illegal immigration. The comparisons between Yanbu Industrial Port, Jubail commercial port, Yanbu Commercial Port and Dhiba port showed that there is a significant difference between these ports in favour of Dhiba port with a significance of (0.05-0.01). The comparisons between Yanbu Commercial Port, Yanbu industrial Port, Jubail commercial Port, Jeddah port, Jizan Port and Dammam port on the total degree of the security of marine ports against terrorism, illegal trade and illegal immigration showed that there is a significant difference between these ports in favour of Dammam port with a significance of (0.05-0.01).

The results also showed that the variable of educational level had an impact on the tenth dimension of the security of marine ports against terrorism, illegal trade and illegal immigration; when comparing Doctorate degree to Secondary school degree, Bachelor degree and Master degree, there was a significant level (0.01-0.05) in favour of Doctorate degree.

The results of the study also showed that the variable of experience had an impact on the first and ninth dimensions and the total degree of the security of marine ports against terrorism, illegal trade and illegal immigration with a significance level 0.05. The comparison between the experience categories 'less than 5 years' and 'from 10 to 15 years' showed that there was a significant level of 0.05 in favour of the second category. The comparison of the experience categories 'from 5 to 10 years' and 'from 10 to 15 years' showed that there was a significant level of 0.05 in favour of the first category. Moreover, the comparison between the experience categories 'from 10 to 15 years' and 'from 20 years and more' showed that there was a significant level of 0.05 in favour of the second category.

As for the ninth dimension of the security of marine ports against terrorism, illegal trade and illegal immigration, the results also showed that there was a significance level when comparing workers with 'less than 5 years' experience and 'from 10 to 15 years' experience in favour of the first group. Moreover, there were differences on the total degree of the security of marine ports against terrorism, illegal trade and illegal immigration. The comparison between the experience categories 'less than 5 years' and 'from 10 to 15 years' showed that there was a significant level in favour of the first category. The comparison of the experience categories 'from 5 to 10 years' and 'from 10 to 15 years' showed that there was a significant level of 0.05 in favour of the first category. Moreover, the comparison between the experience categories 'from 10 to 15 years' and 'from 20 years and more' showed that there was a significant level of 0.05 in favour of the second category.

5.6.2 Intellectual aspect

The questionnaire included two questions (1 and 9) which represented this aspect to obtain the opinions of those sampled. The researcher focused on the Saudi border guards with high qualifications (from BSc degrees and up), who represented about (62, 87%). This can be illustrated by Figure (5-17) which includes the phrases with the highest percentage, the phrases with high significant level and an explanation for the question number (1) and (9). It is worth mentioning that the phrases with low significance level were discarded. (see figure 5-17 of the sample).

Question (1): From your point of view, what is the meaning of the word terrorism?

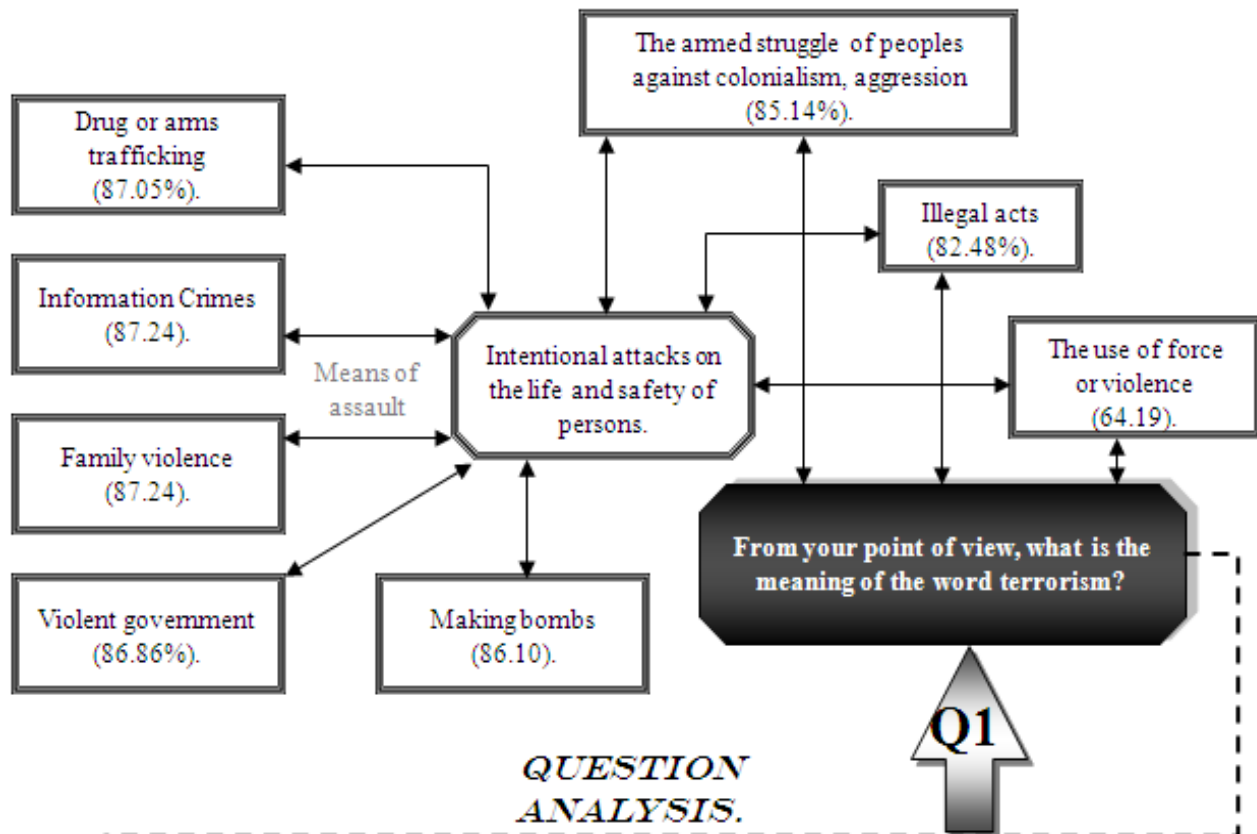
The researcher included 16 items to show which one represents the meaning of terrorism according to the opinions of those sampled.

The statistical analysis of the results showed that the sample agreed, with a percentage of (87.81%) stating that the best meaning for terrorism in their opinions is “Family violence”. Although this is insufficient, the existence of this question is important to show those people (who work as border guards) describing the word “terrorism”. Also “Information Crimes “ got a percentage of (87.24%). The results showed that “Drug or arms trafficking” got a percentage of (87.05%).

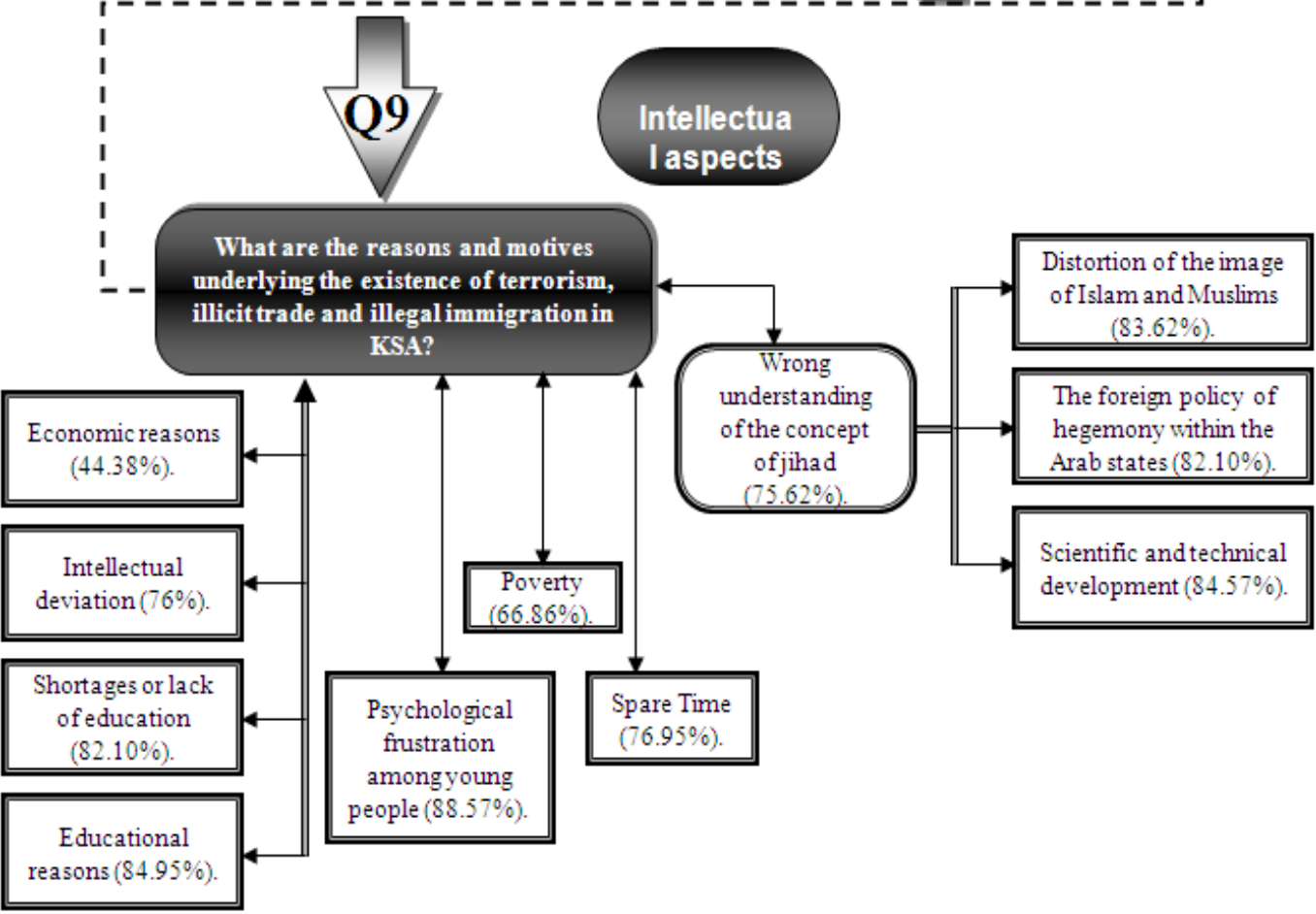
Question (9): What are the reasons and motives underlying the existence of terrorism, illegal trade and illegal immigration in KSA?

The researcher has put 25 items, including the reasons for terrorism in KSA, which has a distinguished geographical location with a great position in the world for oil, besides being the most famous country in the Middle East region for religious tourism.

The statistical analysis of the results showed that “Psychological frustration among young people.” is the most important reason for terrorism in the KSA with a percentage of (88.57%). In addition, “Educational reasons such as the absence of good education” was (84.95%) and “Scientific and technical development” was (84.57%).



QUESTION ANALYSIS.



5-17: Field trip analysis process.

5.6.3 Security aspects

the researcher included two questions (questions 2 and 5) to show to what extent security is maintained in the Saudi ports according to the sample of the study forming the security aspect for the questionnaire. This can be illustrated by Figure (5-18) which includes the phrases with the highest percentage, the phrases with high significant level and an explanation for the question number (2) and (5). It is worth mentioning that the phrases with low significant levels were discarded (see figure 5-18 of the sample).

Question (2): What are the threats or potential terrorist operations affecting Saudi Ports?

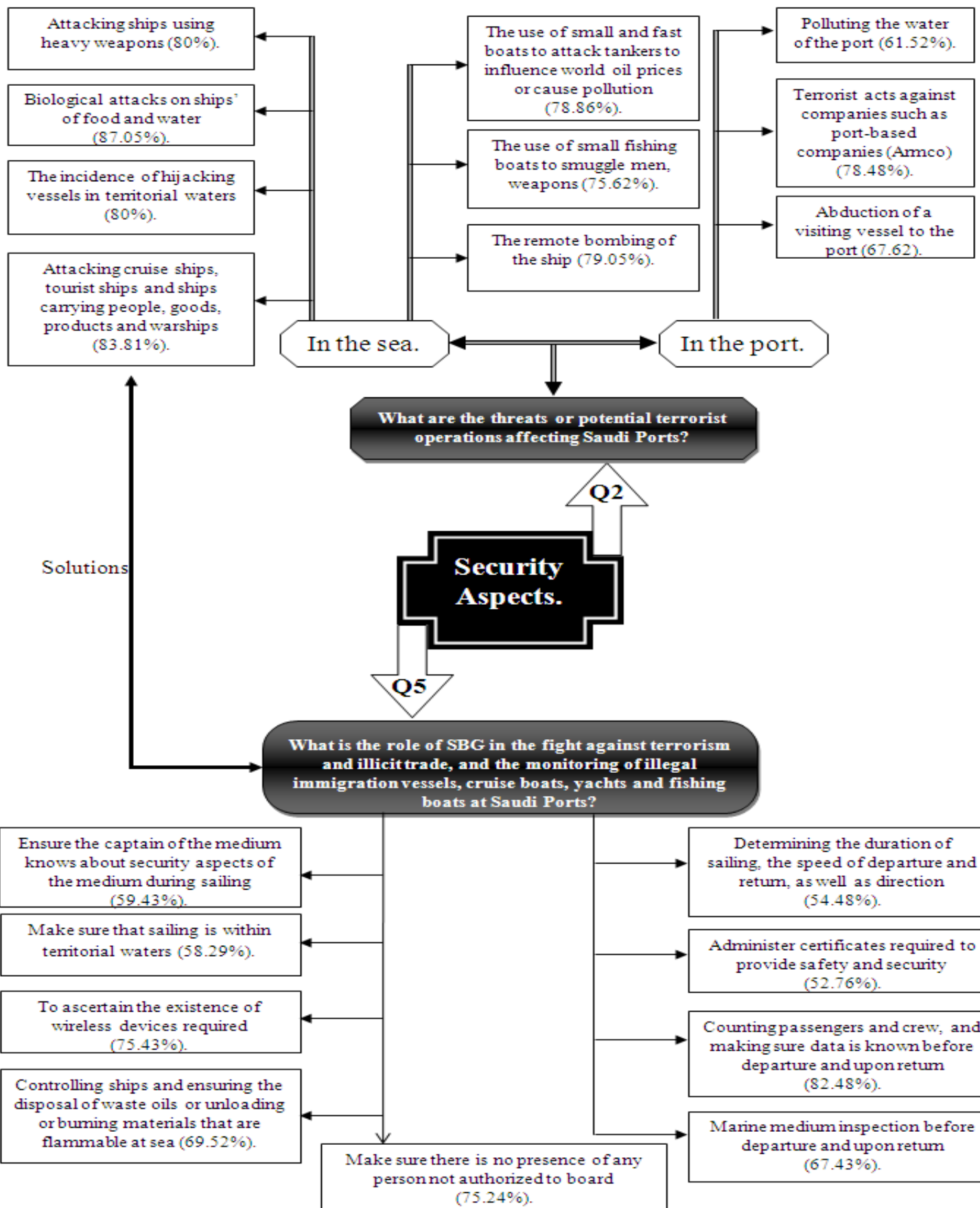
The researcher gave 13 phrases showing possible terrorist threats against the Saudi ports in general and the Islamic Jeddah Port in particular, and divided these phrases into two parts. The first part showed the threats which might happen in the port itself, such as “Terrorist acts against port facilities”, “Terrorist acts against companies such as port-based companies (Armco)”, and “Polluting the water of the port”. These phrases didn’t get high rates of voting, unlike the others, but the researcher thinks that they represent possible threats for the future.

The second part describes the threats which might happen by sea, such as “Biological attacks on ships’ of food and water”. This phrase got the highest number of votes (%87.05) and “Attacking cruise ships, tourist ships and ships carrying people, goods, products and warships” got a percentage of (83.81%).

Question (5): What is the role of SBG in the fight against terrorism and illegal trade, and the monitoring of illegal immigration vessels, cruise boats, yachts and fishing boats at Saudi Ports?

This question completes and explains the last one. It is very important for setting an effective strategy to protect the sea ports from terrorism, illegal trade and immigration.

To answer this question, the researcher used 13 phrases. The two phrases which got the highest votes are "Counting passengers and crew, and making sure data are known before departure and upon return." (82.48%) and "To ascertain the existence of wireless devices required" (75.43%).



5-18: Sources of threat on the SBG Sea ports.

5.6.4 Security precaution aspect

In the field of maritime security, precautions have a great importance in keeping peace and security inside and outside the port, so the researcher put three questions (3, 7 and 10) to see whether all the Saudi ports take precautions to maintain safety. This can be illustrated by Figure (5-19) which includes the phrases with the highest percentage, the phrases with high significant level and an explanation for the questions numbered (3), (7) and (10). It is worth mentioning that the phrases with low significant level were discarded. (see figure 5-19 of the sample).

Question (3): What is the extent of the commitment to security and protecting against terrorist attacks at Saudi Ports?

To answer this question, the researcher used 13 phrases concerning the most important precautions against terrorist attacks that should be available inside ports. The statistical analysis showed that the phrase "Training workers on how to protect ports against terrorism." got the highest votes (%87.81) in addition to the two phrases: "Having forces trained to deal with terrorists" (77.33%) and "The presence of vessels to protect territorial waters" (76.19%) Also got high numbers of votes.

Question (7): What are the problems faced by SBG in the performance of their duties at Saudi Ports?

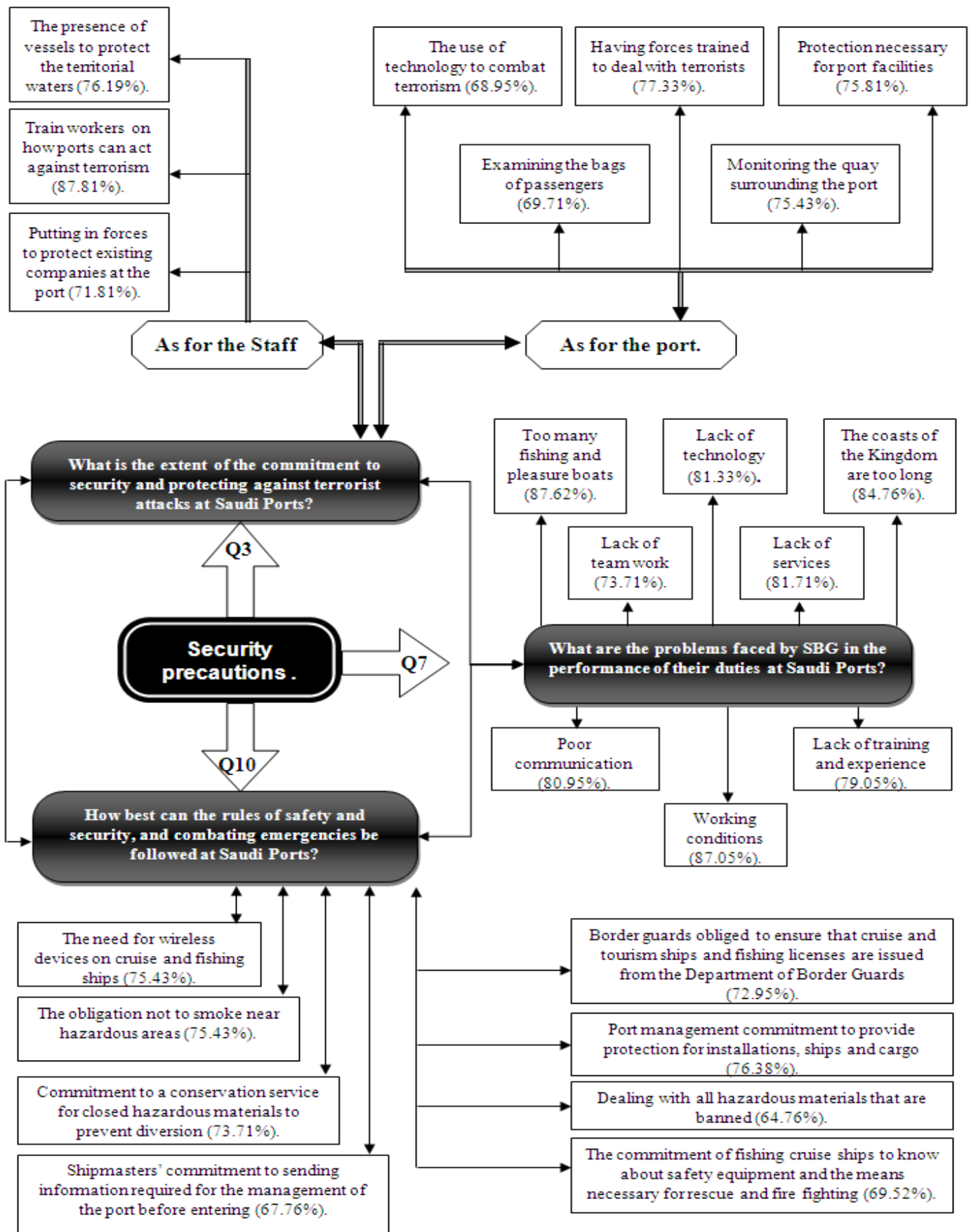
It is important to know the problems these forces encounter in order to help them do their duties and tasks properly, and to encourage the Saudi authorities to solve these problems. The researcher focused on the last idea and used 13 phrases to express this. The statistical analysis showed that the phrase "Too many fishing and pleasure boats."

got the highest votes (87.62%). After that came the two phrases: "Working conditions" (87.05%) and "The coasts of the Kingdom are too long" (84.76%).

Question (10): How best can the rules of safety and security, and combating emergencies be followed at Saudi Ports?

These rules are very important in maintaining security and stability inside ports. To answer this question, the researcher used 13 phrases. The phrase "Port management commitment to provide protection for installations, ships and cargo" is one of the most important rules followed to maintain safety and security in the Saudi ports; this phrase got the highest votes (76.38%).

The two phrases: "The obligation not to smoke in hazardous areas" (75.43%) and "Commitment to a conservation service for closed hazardous materials to prevent diversion" (73.71%) also got high votes. This demonstrates the efforts of the Saudi authorities to maintain security and safety in addition to following the safety rules of the sea at the Saudi ports.



5-19: Security process undertaken by SBG for Saudi Ports.

5.6.5 Strategic aspect

This is considered the backbone of this study on which the researcher focuses on to get as many results as possible. He used 4 questions to represent this aspect. This can be illustrated by Figure (5-20) which includes the phrases with the highest percentage, the phrases with high significance level and an explanation for the question number (4), (6), (8) and (11). It is worth mentioning that the phrases with low significant level were discarded. (see figure 5-20 of the sample).

Question (4): What is the role of SBG in combating terrorism, illegal trade and illegal immigration at Saudi Ports?

To get the opinions of the sample concerning this question, the researcher used 19 phrases to evaluate this role. The statistical analysis showed that the phrases “Control of all the border shipments and ensuring their execution of the rules and regulations” and “Inspect all modes of transportation without a maritime flag or that do not specify their nationality when entering or passing a port, seizing them if they can not prove their nationality” got the highest number of votes (82.48%). In addition, the following two phrases: “To ascertain the existence of a license for cruise ships and for tourism.” (81.14%), and “Guarding port facilities and all the existing institutions” got (76%).

These phrases express the most important roles of the borders guard in fighting terrorism, illegal trade and illegal immigration.

Question (6): What are the preventive measures necessary to combat terrorism, illegal trade and illegal immigration at Saudi Ports?

This question helps the researcher form an effective strategy to protect the Saudi ports from these threats. He uses 16 phrases to help those sampled answer this question.

The statistical analysis showed that the phrase "Magnetic detectors" got the highest votes (94.48), in addition to the two phrases "Inspection of fishing boats and passengers boats, searching bags and visiting vessels" (76.19%) and "The use of thermal cameras" (75.81%). These ideas may show the steps the researcher may follow to form an effective strategy to protect the ports.

Question (8): What is the extent of the impact of technology and modern port security in the fight against terrorism, illegal trade and illegal immigration at Saudi Ports?

To answer this question, the researcher used 8 phrases to show the importance of modern technology in the fields of security and peace. The statistical analysis showed that the phrase: "Help communication among border guards and other forces" got the highest rate (75.81%) in addition to the two phrases: "Help coordination between border guards and other armed forces in Saudi Arabia" (75.43%), and "Help control ports" (75.24%).

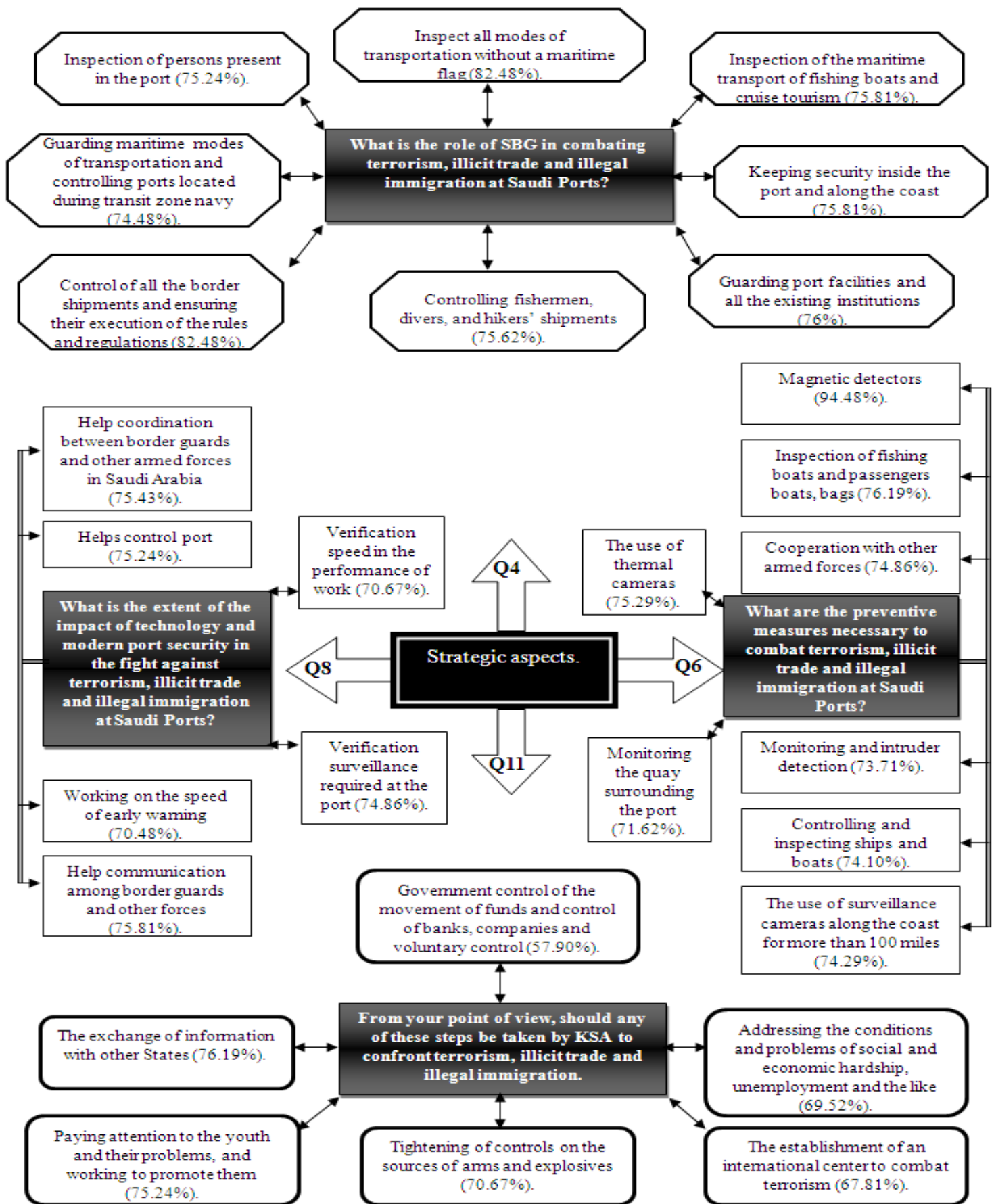
Question (11): From your point of view, should any of these steps be taken by Saudi Arabia to confront terrorism, illegal trade and illegal immigration?

This question shows what the most important steps are which should be followed by the Saudi Arabians to fight these threats in order to eliminate them.

The author used 11 phrases to answer this question. The statistical analysis showed that the two phrases: "The exchange of information with other States" got the highest rate (76.19%) of voting and agreement, as the most important steps which should be followed to fight terrorism. Moreover, the sample of the study with a percentage of (75.24%) agreed with: "Paying attention to the youth and their problems, and working to

promote their needs" as being one of the most important steps which should be followed by the KSA.

After discussing the analysis of the results of the questionnaire, we'll see how the opinions of the sample can help to form an effective strategy to protect the Saudi ports against terrorism, illegal trade and illegal immigration.



5-20: The SBG, strategy of securing the SA Sea Ports.

5.7 Summary

This chapter presents a brief discussion of the results of the study. A more detailed analysis of these results is carried out in chapter 6 where conclusions are drawn from this study covering the organisation and future strategy of KSA sea ports and the SBG.

6. CHAPTER SIX: OVERVIEW OF THE PLANNING AND ORGANISATION FOR FUTURE KSA SEA PORTS SECURITY STRATEGY (SURVEY RESULTS)

6.1 Introduction

Although flourishing, the future planning and organization of Saudi ports need an effective security strategy to protect the sea ports from terrorism, illegal trade and immigration. The researcher will discuss this topic using the following points: politics, geography, the security strategy of the sea ports, development expectations, local development expectations, analysis of the results of the questionnaire, the future employment needs, the required security strategy to develop the sea ports, interior studies and a suggestion for creating an effective security strategy for the Saudi sea ports.

6.2 Geo Political forecasts

The KSA has a distinguished geographical location when compared with other countries in the area. It is surrounded by 13 countries; some of which are rich, whilst the others are poor. These poor countries represent a great problem for the security of the Saudi Arabians illegally searching for work. Those people may be involved in illegal trade or terrorist acts inside the KSA. Those individuals may enter the KSA through using the sea coasts to achieve their illegal aims. Therefore, the ports should be put under great control, which can be done by supporting the SBG and activating their great role in fighting terrorism, illegal trade and immigration, which may occur at the Saudi Arabian ports. It can be said that the KSA may be threatened by individuals or countries as a result of its distinctive location, because it joins South Asia with the North, and joins East

Asia with the West. During the last few years, more than 900,000 people tried to enter the KSA illegally through borders and coasts. Most of them came from neighbouring countries such as Yemen, Sudan, Somalia and other countries for work and illegal trade. Moreover, during the last ten years, more than 200,000 people tried to enter the KSA to conduct illegal activities inside the KSA (see Figure 6-1) (10) illegally.

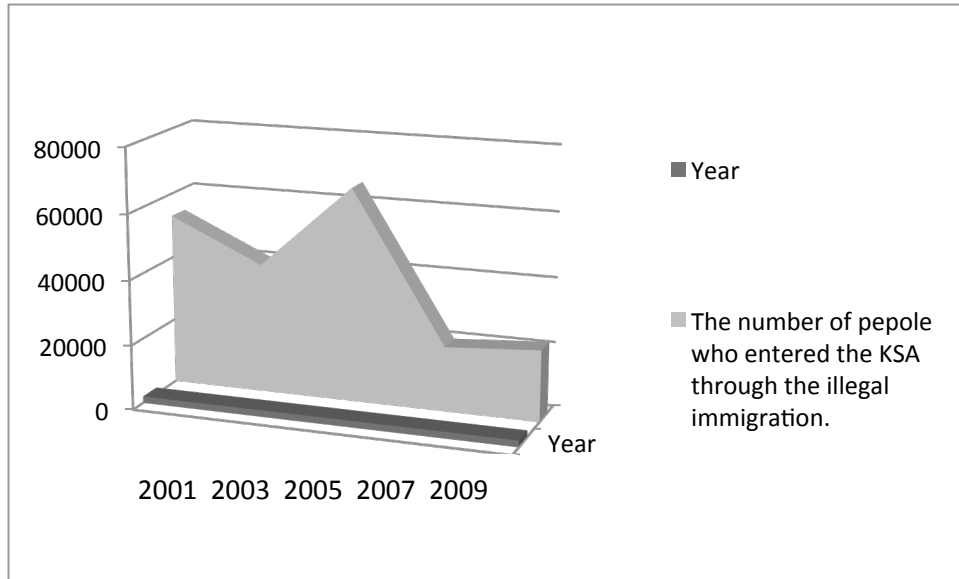


Figure 6-1: Number of people who entered the KSA through illegal immigration.

Moreover, the distinguished location of the KSA makes it possible for a lot of countries to smuggle weapons and drugs to other countries using its land. Throughout the last ten years, many smuggling acts were prevented, and more than 4,500 weapons have been seized. Figure 6-2 shows the number of pieces of weapons smuggled to the KSA.

¹⁰ - Figure (5-1, 5-2), Prepared by the researcher based on data from reports Saudi Ports Authority, reports from 2000 to 2009.



Figure 6-2: The Number of weapons seized.

Besides, there are Somali pirates who threaten the Saudi ports and coasts, as Somalia is near the KSA.

6.3 Sea port security strategy development forecasts

Now, the existence of a security strategy in all the sea ports is a must, which is being discussed as an international matter. An effective security strategy can fight maritime terrorism, illegal trade and illegal immigration, which hinder the movement of international trade and affect the world economy, which loses millions of dollars annually. By putting this strategy into action, the result will be more security and stability, and economic progress in the world. We expect that the size of international trade will be doubled all over the world as well.

6.4 Domestic developments forecasts

By employing this effective security strategy, the KSA will enjoy security and stability along its sea coasts, resulting in flourishing international trade through the Saudi

ports, and this will improve the Saudi national economy. Moreover, the KSA will keep its important position in the world for oil exporting.

6.5 Future operational needs

It became clear after the analysis of the questionnaire, that the Saudi ports lack the necessary numerical power to protect these ports and maintain security. The analysis of the responses to question 7, concerning the problems which face the border guards, showed that the problems are: lack of training, lack of services and lack of staff.

As for the lack of services, this does not help those who work as SBG do their work properly, additional electronic sets and modern equipment should be available in order to save them time and effort. As for the lack of training, there is a training centre in the port of Islamic Jeddah and another one in the port of King Abdel Aziz in Dammam, which delivers training programs in many fields, such as navigational direction, diving, driving sea vehicles, maintenance, handling of goods, watching ship movements (navigation) and industrial security. More than 24,849 trainees have been trained since the two centres were built. This reflects a lack of training as a result of the limited specialized training programs concerning navigation in the KSA (Figure 6-7) (11). The researcher recommends the SPA to set up a training plan in which the responsibilities of specialized education, preparation and training are assumed by great educational and training institutions in the field of managing and running ports.

These institutions should introduce the following programs:

¹¹- Figure (5-7, 5-8), Prepared by the researcher based on data from reports Saudi Ports Authority, reports from 2000 to 2009.

- Training students with general Secondary degrees to get Bachelor degrees in maritime engineering and communication as well as maritime transport.
- Introducing medium technical courses to get Diploma degrees in the different maritime fields.
- Introducing specialized occupational courses for prep school graduates.
- Introducing training courses in maritime security and safety.
- Introducing training courses in the field of dealing with terrorism and terrorists.
- Introducing training courses for states of emergency.

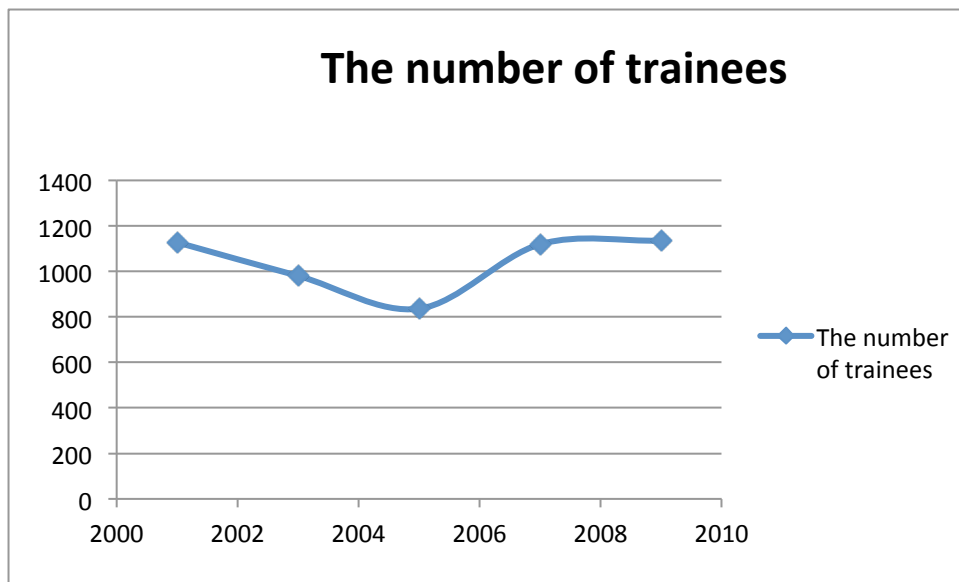


Figure 6-3: The number of the SBG member trainees.

As for the lack of staff, more and more staff are required in the border guard forces to protect the long sea coasts of the KSA and maintain security there, even with the annual increase in staff.

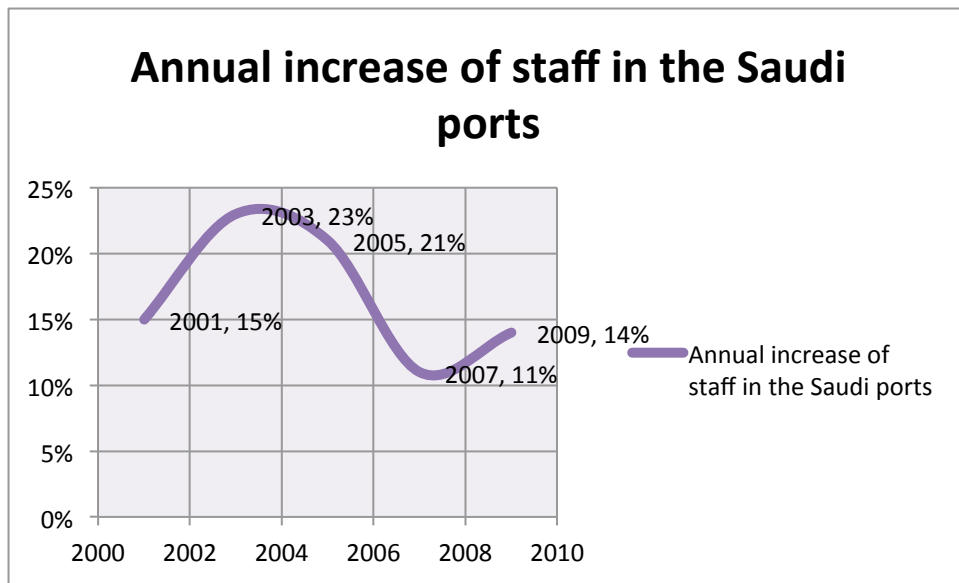


Figure 6-4: The annual increase of staff in the Saudi ports.

6.6 Required sea ports' security strategic developments

Today, the system of maritime transport requires a lot of procedures aimed at supporting maritime security, in addition to preventing and fighting against terrorist acts against the ports. Improving ports is a very important aspect in order to fight terrorist acts aimed against the infrastructure of the port. Improving the port facilities is the most important process of improvement as such facilities can be attacked by terrorists. Therefore, they must be protected against all severe attack. Thus, work plans must be made for the security of the Saudi ports, to fight the states of emergency and terrorist attacks. This work plan depends on preparing sufficient border guard forces and police forces in ports, making use of necessary security equipment and means of communication between the forces as well as employing modern technology.

All these elements are brought together with a work plan to move and distribute the forces around the Saudi ports. Any terrorist threat against the port facilities can be fought by defining the level of danger (1, 2 or 3). Level 1 represents a great threat using

heavy weapons or bombs. Level 2 represents a moderate threat. Level 3 represents a normal threat, such as false threats by telephone. After that, procedures are taken to fight the threat according to the level.

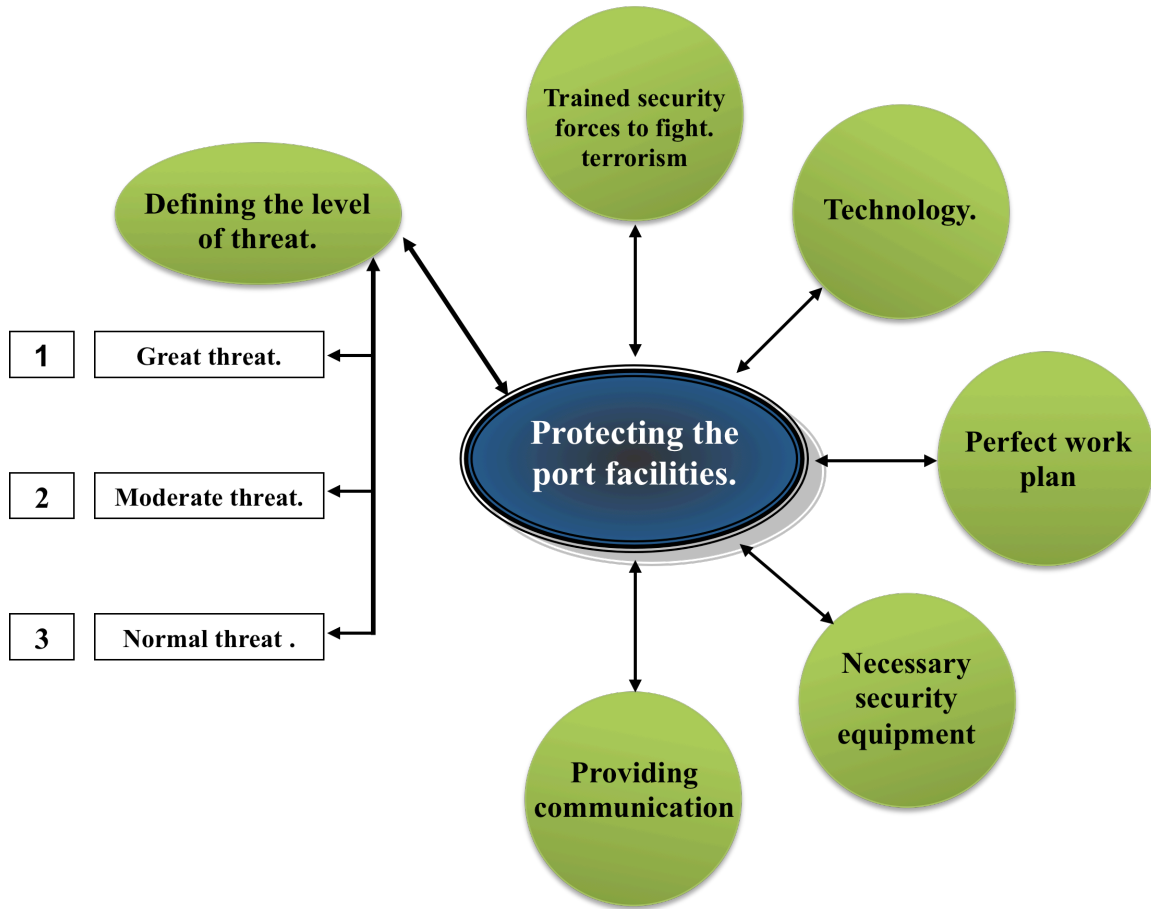


Figure 6-5: Protecting the KSA Sea Ports facilities.

To evaluate the security of the port facilities, it is important to define which facility is exposed to the greatest threat and then to evaluate the nature of the threat. Defining which of these facilities is exposed to the biggest threat helps form and evaluate the security strategy by increasing the forces there and then preparing a security plan for the buildings. This plan must identify the necessary security procedures to provide permanent protection for the facilities. This plan must also include ships as they can be a

source of threat for the facilities. So they must be controlled and investigated by the forces and be exposed to electronic scanning.

6.7 Internal studies

The SPA carries out regular evaluations and annual studies to improve the Saudi ports in line with the latest modern technology concerning port security, maritime safety and industrial security. These studies push for improvements in the ports as they develop programs to raise the ports' abilities and the standard of their services. This attracts the world steamship lines and encourages users to concentrate their activities in the Saudi ports. Many of the latest security systems have been applied after these studies recommended them. One of these systems is the Saudi project to exchange data electronically (Saudi EDI). It is an electronic medium which helps the exchange of documents concerned with moving goods, ports, customs, ships agents, customs agents and the employees of goods stations. The researcher will present the recommendations of this study to the SPA for implementation.

6.8 Proposal for the security strategy of sea ports

Sea ports need special security strategies for maintaining security, development, and increasing the movement of world trade. According to the view of the researcher, the expected strategy must contain some basic aspects, each of which is of great importance and is connected to the others. This security strategy, which can fight terrorism, illegal trade and illegal immigration, must provide security for the three basic aspects: 1 - the ports, which is of prime importance, 2 - the coasts, and 3 - territorial waters (Figure 5-10).

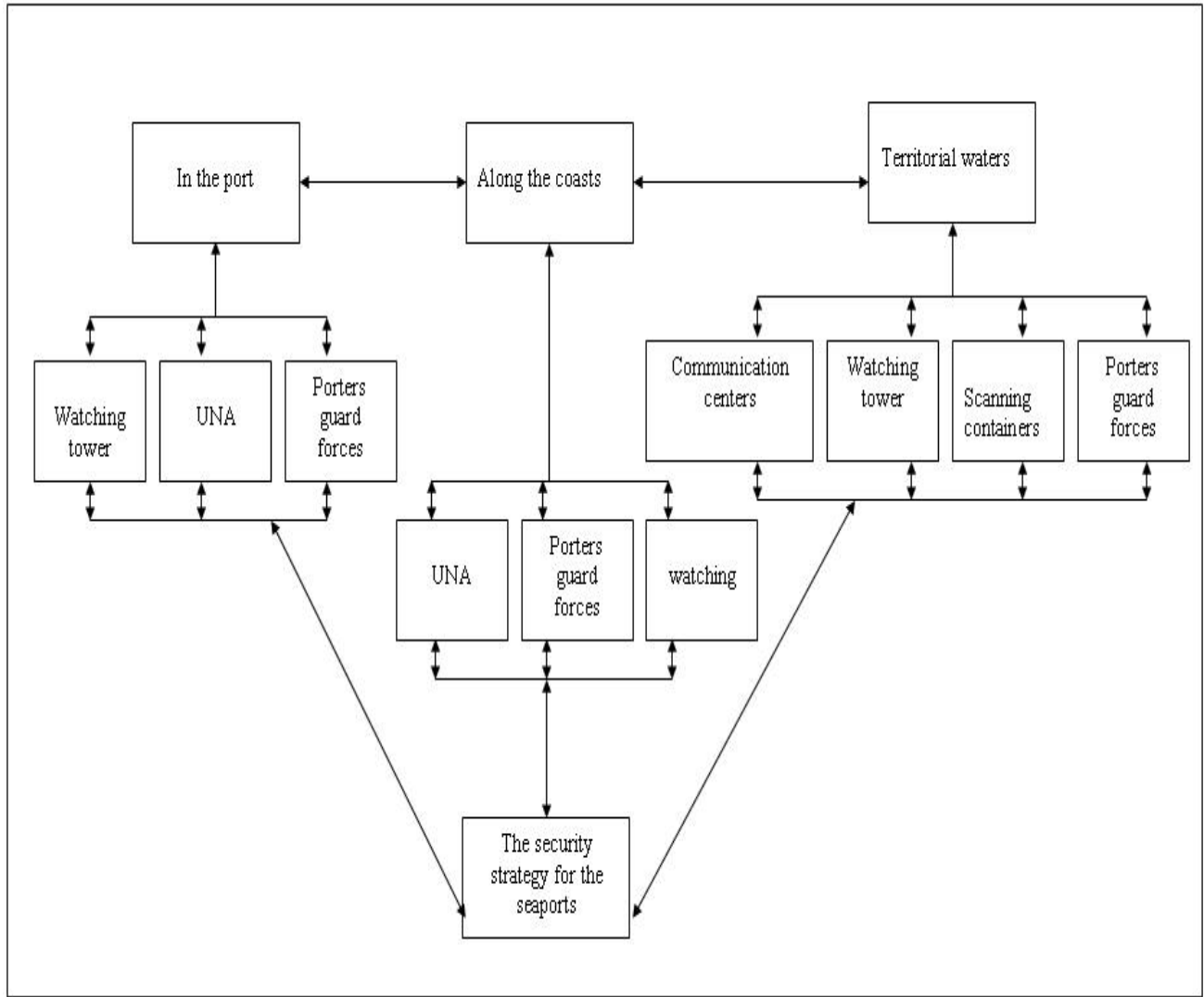


Figure 6-6: Final KSA Sea Ports securing strategy frame work.

This figure shows that the strategy depends on three basic connected aspects to protect the ports: protecting the port, protecting the coasts and protecting the territorial waters. The researcher focuses on formulating plans and new systems to provide security for the Saudi ports and coasts against any threat. The researcher focuses on five basic elements in the strategy: the Saudi border guard forces, the electronic scanning of containers, the watching tower, the communication centres and UAVs. The researcher recommends using these new systems by the Saudi authorities as soon as possible in order to get the best results.

6.8.1 The border guard forces

In chapter 2, the researcher discussed the important role of the SBG in fighting terrorism, illegal trade and illegal immigration. They are the first rescuing power which achieves security in the port. They investigate ships, respond to ships asking for help and fight terrorist attacks. To achieve the proper level of security, this role needs more implementation and control. The researcher introduces a work plan for the border guard forces as part of the suggested security strategy to protect the Saudi ports. This work plan is divided into three basic levels (see Figure 5-11).

The first level represents the Saudi border guard institution: officers, soldiers and persons under the leadership of the higher President of the SAF, who plans with the border guard institutions to fight terrorism, and coordinates between the SBG and the other forces which do that.

The second level establishes, evaluates and coordinates the groups under the leadership of the general manager (the President) of the border guard institution.

The third level includes the processes of deterrence, prevention, reaction and prediction of a terrorist attack, which are done by all the SBG after passing the necessary training to do these tasks.

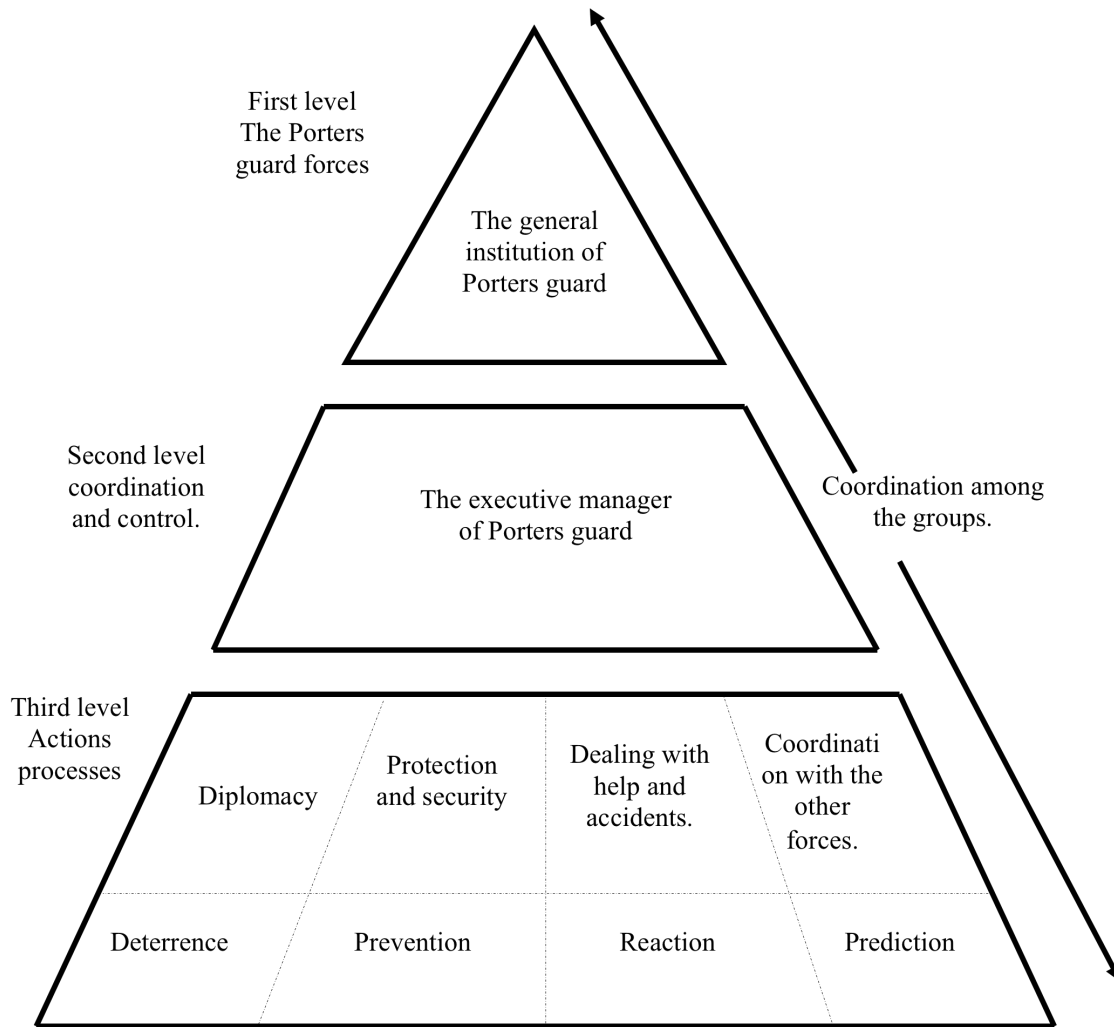


Figure 6-7: Co-operations of the SBG with other domestic forces, in order to secure the Sea Ports.

In the long run, this plan will achieve its aims. It introduces fighting terrorism, illegal trade and illegal immigration in a pyramidal figure, in which the role of fighting terrorism is equal for those who are at the top and those who are at the bottom. The third level is considered the most important one; through which the forces can carry out their fighting. The following Figure (5-12) shows the suggested program that the researcher has made for the border guard forces to follow in order to fight terrorism.

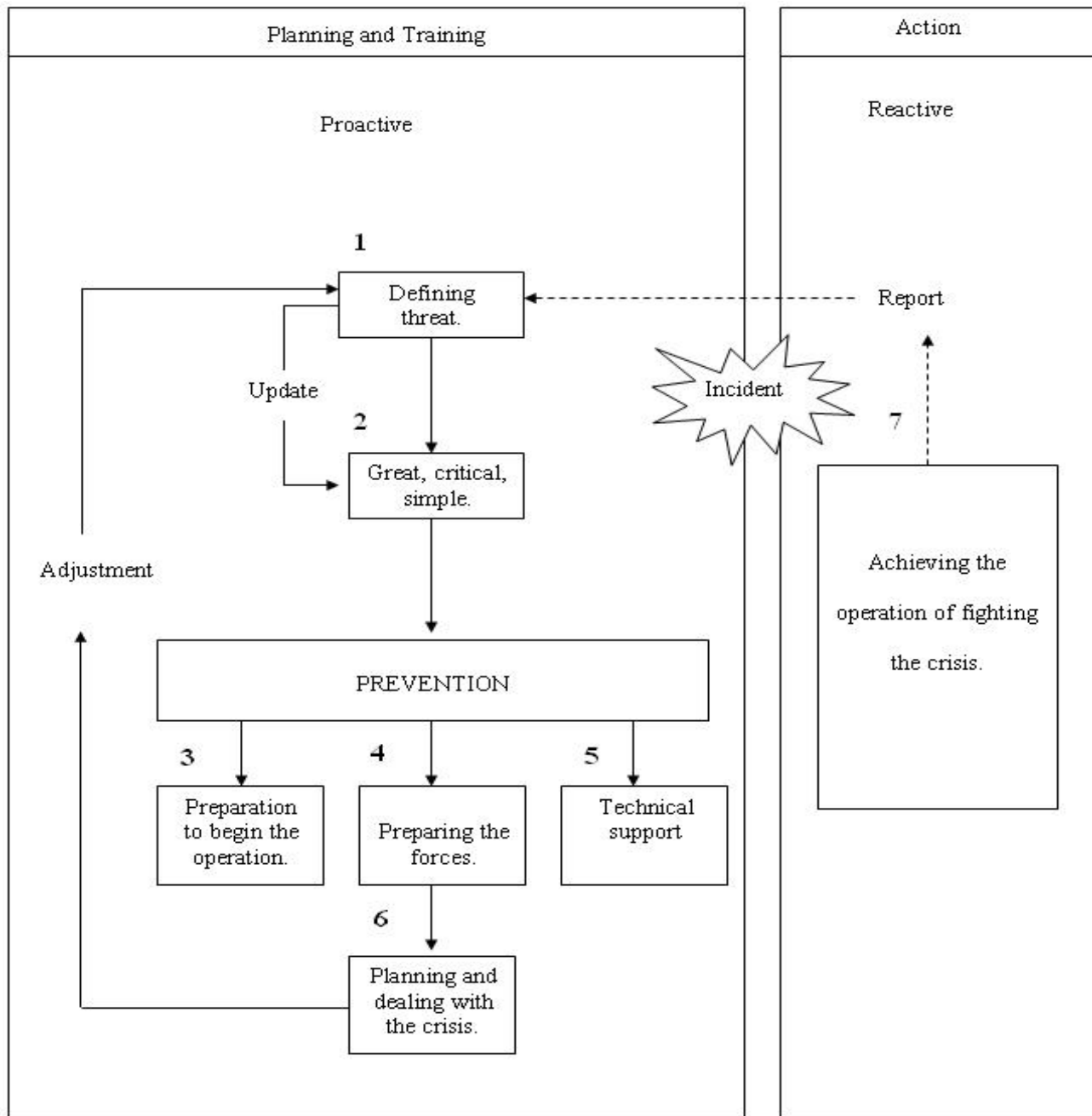


Figure 6-8: The SBG planning and dealing with crisis.

The research divided this programme into the following seven stages which must be followed by the SBG in order to get the best results for fighting sea terrorism:

- Defining the threat / updating the threat level.
- Preparation to begin the operation.

- Preparing the forces.
- Providing technical support.
- Planning and dealing with the crisis.
- Achieving the operation of fighting the terrorism.

It consists of seven basic stages. The first one is defining the threat to the port, whether it is great, medium or normal; this can be done by training and improving the border guard forces to be able to define the threat.

After that, preparation for the operation begins. Next, the forces are prepared and technical support is provided. Then, one of the border guard's leaders directs the planning and deals with the crisis. Finally, the operation of fighting the crisis is successfully carried out.

6.8.2 Scanning containers electronically

The Saudi ports transport about four million containers full of different goods from and to KSA every year. These containers may contain chemical and biological radiation, nuclear substances or explosives that can threaten the security of the Saudi ports. As the terrorists used planes to attack buildings in 2001, they may use ships to achieve the same aim. As a result of the great number of containers which reach and cross the Saudi ports, the level of investigation may be low. It is worth mentioning that the Saudi authorities do their best to block and defeat terrorist efforts even though they do not use the ports. This system of scanning containers electronically is one of the modern

security systems at ports. The security strategy to protect the Saudi ports requires such technology to remain vigilant

6.8.3 Electronic watching tower

This system depends on electronic sets in the tower, which are connected to the approaching ships. Before entering Saudi Territorial Waters (STW) a ship must send all data concerning its name, nationality, purpose of visit and other details to the watching tower which in turn investigates the data sent by sending a fast launch to investigate it. If it were correct, the ship would gain permission to enter the Saudi ports. If the data were incorrect, necessary security procedures would be taken to deal with it. If the ship refused to send the data to the watching tower or entered the territorial waters without sending the necessary data, the tower would observe that and inform the armed forces in order to deal with the ship and prevent it from entering the territorial waters, then check its legality and whether it would represent any threat to the port.

6.8.4 Communication centres

These centres represent a vital element in the maritime security system. Through these centres, coordination among the different forces is achieved. They also receive signals from both the watching tower and the UAV.

Although there are communication centres in the Saudi ports, they are not sufficient to achieve the high levels of security required.

More centres should be provided, especially along the Saudi coasts, to protect them from terrorism, illegal immigration and illegal trade. These centres can receive

requests for aid and report to the Special Forces to save ships in the sea. Thus, the existence of these centres along the Saudi coasts will achieve security and stability there.

6.8.5 UAV (Unmanned Air Vehicles)

The researcher introduced the idea for the security and strategy to be executed by the Saudi authorities in order to maintain maritime security (as a part of the Saudi security system). The abbreviation UAV stands for the words Unmanned Aerial Vehicle and refers to the kind of planes which can fly without pilots and can transport electronic equipment to help carry out its tasks. The information sent by UAVs can be integrated with international data bases to improve our understanding of the threat. The idea of having these planes for military purposes began during the Cold War. After that, they were used by a lot of countries for different tasks. They are equipped with substantial capabilities including an automatic pilot. They can fly from 100m to more than 30,000m, and for a long time (1:48 hours). This enables them to carry out complex operations and observations (Bendea, H. 2005). These planes can carry out tasks through electronic photography as they contain accurate photographing sets. That which has been photographed can be sent to communication centres in ports. They can carry out the following tasks:

- Predicting the crisis before it happens.
- Warning the security forces early against terrorist activity.
- Scanning the sea coasts.
- Watching the territorial waters.

- Watching the movement of ships in the water.
- Watching the port and the surrounding area.
- Help watch remote areas.
- Watching the movement of smuggling weapons and drugs.
- Carrying out the processes of observation and electronic scanning.

Finally, the UAV system saves time, manpower, effort and cost. The researcher recommends that the Saudi authorities utilize this security system to achieve the best level of security at ports.

6.9 Evaluating the strategy

Firstly, the Saudi ports need to apply this security strategy to fight the possible terrorist threats at sea ports. Then, this strategy can double the security levels in Saudi ports in terms of a rapid and controlled execution.

The work plan, designed for the border guard forces for this strategy, can reduce illegal immigration, smuggling and terrorist threats to a great extent. This strategy is dependent upon modern technological systems; it is stated that the Saudi security system may lack things, such as electronic scanning for containers, the UAV system and other electronic elements.

The researcher hopes that this study will help Saudi ports to reach an optimum level. The results of the study showed a great effect on a great number of variables in the Saudi ports. This will be shown while discussing the results of the study.

6.10 Summary

In this chapter, the researcher focused on future planning and organization of a security strategy for Saudi ports, aimed at recognizing the impact of political, geographical, and international developments, as well as local developments, on the future of planning and organization. In addition to analysing the questionnaire and revealing its points of weakness, suggestions were made for setting an effective strategy to protect Saudi ports. The researcher used figures and diagrams to indicate ideas and set plans and programs for the protection of marine ports.

7. CHAPTER SEVEN: CONCLUSIONS AND RECOMMENDATIONS

7.1 Introduction

The aim of this chapter is to concentrate on the objectives and questions of the study which were mentioned in the first chapter of this thesis. The main goal of this study is to evaluate the state of security at Saudi ports and to set an efficient strategy to protect Saudi ports from terrorism, illegal trade and illegal immigration. The conclusions of previous chapters and the various suggestions and topics discussed before this chapter will be presented as a summary of the final conclusion of the thesis.

7.2 Summary

The objective of this study is to set a security strategy for the protection of ports from the dangers of maritime terrorism, illegal trade and illegal immigration, and to indicate the role of the SBG in protecting Saudi ports. The idea of this research arose from the work of the researcher within the border guards in the KSA and his vision concerning the importance of protecting Saudi ports from the danger of maritime terrorism, illegal trade and illegal immigration. The problem addressed by the study is how to set an efficient security strategy to protect Saudi Sea Ports. Consequently, the study tries to solve this severe problem and make important recommendations that can support maritime security and develop the abilities of SBG so as to achieve the best protection. In recent years the KSA has been exposed to many maritime threats, illegal piracy, illegal immigration via maritime ports, and illegal trade of items such as weapons and drugs. Thus, there is a great need for the protection of Saudi ports from these illegal

activities.

This study has discussed the reasons for the defects of the current system of Saudi security and the ability of the border guard to tackle these threats and suggested a security strategy to protect Saudi ports from terrorism, illegal trade and immigration. The main phases of this study have been:

- General sea ports security data collection
- Field work (i.e. survey)
- Data analysis and determination of results
- Application of the results of the field study to achieve maritime security
- Setting a strategy to develop Saudi sea ports, which can be used for any other security issue.

The main conclusions of this study are discussed hereunder.

7.2.1 Field work

The researcher completed the field work over the period of his research during which the researcher visited nine Saudi ports and distributed the study questionnaire to border guards. These questionnaires were then collected and the sample data was registered. Although the researcher faced drastic difficulties due to the distance between ports, data were successfully collected and analyzed. Also during field trips the researcher reviewed the SBG archive in order to collect past and recent procedures of the SBG in securing the borders in general and sea ports in particular.

7.2.2 Obtaining data and field conclusions

After analyzing the data, the researcher reached final conclusions after finishing the statistical analysis using the most advanced global statistical program, namely SPSS. The results of the field work have been discussed in the fifth chapter of this study. In terms of the final conclusions reached from the field work, it can be summarized that Saudi ports have strategic, economic and geographical importance and are thus exposed to maritime terrorism, illegal trade and illegal immigration. Also, the threat of terrorist operations is increasing all over the world, especially in the Arab World. KSA occupies an influential position in the region as it is considered a voice for Islam all over the world, and has an important role as a universal peace maker and settler of disputes. All these factors have made the KSA an attractive target for terrorists who are trying to influence world opinion. This main conclusion leads to minor conclusions related to the fight and struggle against maritime terrorism, illegal trade and illegal immigration.

Fighting maritime terrorism

- It can be concluded that Saudi ports lack the required protection from the danger of maritime terrorism, although Saudi authorities have exerted drastic efforts to protect the ports.
- There is a huge increase in the number of ships visiting the KSA for commercial and tourism purposes, and these ships can be considered targets for terrorists.
- The use of fishing boats to execute terrorist attacks is considered one of the most significant threats facing Saudi ports.

- Biological ships are considered the most important ships that must be protected in a special way; this is what we call ‘Maritime Biological’ terrorism.

Confronting illegal immigration

- In confronting illegal immigration the KSA faces many difficulties, such as the length of Saudi coasts and the geographical location of KSA, which is surrounded by 13 countries.
- There is a shortage in the number of Saudi border guards. According to the results of the questionnaire.
- There is a lack of training.

Confronting illegal trade

- The nature of the mountains in the KSA is considered to be one of the most significant difficulties for illegal trade.
- Many terrorist organizations are involved in facilitating the movement of illegal goods through the borders of the KSA.

What should we do?

The important question that we should ask is how to confront these problems and what are the most suitable solutions? The answer to this question can be obtained through fulfilling the following requirements.

7.2.3 Main requirements

The need for security efficiency and control

Security efficiency and control are considered to be among the main requirements to achieve the required security level to protect Saudi ports from the danger of maritime terrorism, illegal trade and illegal immigration. Implementation of the security plan needs 200 million Saudi riyals approximately. This cost can be saved from the income of the Foundation of the Saudi Ports. To address the topic of security control there are many steps that must be considered.

- **The first step:** is related to port construction. Protection must be ensured by using specialist forces for the construction of ports and activating international rules for safety and security, and singling out specialist forces to deal with terrorists.
- **The second step:** is related to the port itself. To achieve the required security, the number of border guard members must be increased to suit the needs of the port. In addition, there must be adequate training of SBG to deal with possible terrorist attacks.
- **The third step:** is related to the territorial waters of KSA which must be protected by increasing the number of border guard shifts, increasing the number of monitoring ships, and approving the researcher's idea concerning monitoring towers.

The need to activate and use technology

It is known that advanced technology plays an important role in confronting crime in general, as it helps discover crime early on. In the field of port security, technology is considered one of the most important means of ensuring the safety of constructions and the stability of maritime security.

The researcher recommends the approval of multi-technological systems as mentioned in the previous chapters, such as automatic container surveys, watchtower systems, and pilotless planes to scan Saudi ports and regional waters. In addition, there are many newly developed technologies that can be implemented to help secure Saudi sea ports, including UAV.

The need to develop and activate a security strategy

The development and activation of a security strategy are considered among the main procedures necessary to maintain maritime security, thus the Saudi authority has to reorganize the need for a security strategy and continuously update it to cope with changes in the global arena. To improve and activate a security strategy at ports, the Saudi authorities have to consider a number of steps. They must determine port requirements in general, and the requirements of the SBG in particular, and then try to achieve and provide for these needs. Moreover, Saudi authorities should consider the security strategies adopted by other countries in order to benefit from their experience of protecting ports.

To achieve the best security strategy, Saudi authorities should incorporate continuous technological developments in order to protect ports and maritime

constructions, and activate maritime trade and tourism.

7.2.4 Suggestions for setting a security strategy to protect Saudi ports from terrorism and illegal trade and immigration

These suggestions are considered among the most important conclusions of the study. They are based on the provision of security and protection for the following three main elements:

- Sea ports.
- Coasts.
- Saudi economic waters.

The researcher tackled these elements in detail in the Sixth chapter of this thesis and indicated how to protect these elements, as well as how the strategy would affect the security situation of Saudi ports and achieve the required security level. This strategy seeks to provide Saudi ports with a high level of security and safety, as this is very important for Saudi ports. After studying the needs of ports and the state of security inside the regional waters of the KSA, the researcher has made these suggestions to overcome the shortcomings and achieve the best security level for Saudi ports.

Will the Saudi authorities be able to implement this security plan?

The Saudi authorities are always looking forward to achieving the best in various fields of life, as they want to achieve peace and stability. Thus, the researcher thinks that they will be able to execute and implement the presented suggestion concerning a security strategy to protect ports in two years at the most from the date of submitting this

suggestion to the concerned authorities. This is due to the high financial cost and the strategic and administrative arrangements.

To implement and execute this strategy, there are many important steps that must be followed, as discussed herewith.

First: Rehabilitation of the border guard through technical and vocational training on how to fulfil the duties of the strategy, especially the technical points.

Second: Cooperation with all neighbouring countries of the KSA so as to protect land and maritime borders from illegal trade and illegitimate immigration, in addition to making agreements with KSA's neighbouring countries.

7.3 Recommendations

After discussing the results presented in all chapters, the following part presents some recommendations that might improve the protection of Saudi ports from the danger of terrorism, illegal immigration and illegal trade.

7.3.1 Recommendations for implementing the results of the study

- This study focuses on the role of SBG in protecting Saudi ports, thus the researcher advises that the border guard authority to establish a training centre for its employees so that they become aware of how to deal with terrorists and traffickers using advanced technology.
- The researcher recommends the development of a security strategy in the KSA.

7.3.2 Additional recommendations

- Saudi authorities may consider the approval of the strategy suggested by the researcher to protect Saudi ports from maritime terrorism, illegal trade and illegal immigration using the latest technology.
- KSA must further develop and activate this security strategy.
- Saud Arabia should use advanced technology systems for monitoring and protecting ports, especially pilotless planes (UAVs) to monitor the coasts.
- KSA should benefit from the experience of advanced countries in protecting ports and should exchange information and experiences with them.
- The researcher advises the Saudi authorities to approve the following systems for protecting ports:
 - A scan system.
 - Controlling points of entries using highly skilled members.
 - An observation system and intelligence.
- The government of the KSA should fight domestic violence and social disintegration.
- The government of the KSA should fight unemployment, intellectual delinquency and youth's psychological and political frustration.
- The government of the KSA should handle hard conditions of living, social problems and economic hardships.

- Attention must be paid to youth and their problems and work to promote them.
- The government of the KSA should coordinate and exchange information with other countries in the field of security.
- The government of the KSA should observe carefully the movement of money through keeping an eye on banks, corporations and donations to prevent the financing of terrorist cells.
- The government of the KSA should regard attentively the different sources of weapons and explosives.
- The researcher also advises Saudi authorities to establish an international centre for terrorism to undertake:
 - More continuous internal research studies within the SBG in order to avoid shortcoming in securing sea ports.
 - Cooperation with friendly country fleets, as well as with the Saudi Navy in the Red Sea and Gulf of Arabia to fight against piracy and terrorism.
 - The use of the most modern technology to train the SBG.
 - Intelligence gathering both domestically and internationally which may assist Saudi sea port security.
 - Updating of all types of ships and boats.

In general, the challenge of securing Saudi sea ports needs careful planning and very high quality securing processes. Due to the increase in people trying to smuggle, trade illegally and commit terrorist crimes, as well as the increase in the number of trade and passenger ships over the last few decades, a rapid development process and implementation of an effective security strategy are required.

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9. APPENDIX

9.1 Questionnaire



UNIVERSITY OF NEWCASTLE

PhD candidate:

Aabed almzmomi

Supervisor:

Prof. Bob Dow

9.1.1 Personal information

For measurement, tick (✓) if appropriate according to the importance of words

Military rank:

1	Dean	<input type="checkbox"/>	8	Chief Sergeant	<input type="checkbox"/>
2	Colonel	<input type="checkbox"/>	9	Staff sergeant	<input type="checkbox"/>
3	Lieutenant Colonel	<input type="checkbox"/>	10	Sergeant	<input type="checkbox"/>
4	major	<input type="checkbox"/>	11	Under sergeant	<input type="checkbox"/>
5	Captain	<input type="checkbox"/>	12	Corporal	<input type="checkbox"/>
6	First lieutenant	<input type="checkbox"/>	13	The first soldier	<input type="checkbox"/>
7	Lieutenant	<input type="checkbox"/>	14	Soldier	<input type="checkbox"/>

Age :

1	Less than 20	<input type="checkbox"/>	3	30 years to less than 40 years	<input type="checkbox"/>
2	20 to less than 30 years	<input type="checkbox"/>	4	More than 40	<input type="checkbox"/>

Scientific Qualifier:

1	Primary	<input type="checkbox"/>	4	Bsc	<input type="checkbox"/>
2	Less than secondary	<input type="checkbox"/>	5	Master	<input type="checkbox"/>
3	Secondary	<input type="checkbox"/>	6	phD and higher	<input type="checkbox"/>

Experience:

1	Less than 5 years	<input type="checkbox"/>	3	From 10 to 15 years	<input type="checkbox"/>
2	from 5 to 10 years	<input type="checkbox"/>	4	From 15 to 20years	<input type="checkbox"/>
5	From 20 years and more				<input type="checkbox"/>

9.1.2 Questions

Q1: From your point of view, what is the meaning of the word terrorism?

Variable	Variable's importance				
	Strongly agree	Agree	I have no opinion	Disagree	No absolute importance
1. The use of force or violence, or the threat of a state of terror and panic.					
2. Illegal act against innocent people.					
3. Violent government.					
4. Using violence for political goals.					
5. Intentional attacks on the life and safety of persons detained for kidnapping, to be held hostage or killed.					
6. Attacking transport such as the abduction of aircraft and ships.					
7. Criminal offenses of theft, murder, rape, extortion and destruction of public or private property.					
8. Information Crimes.					
9. Family violence.					
10. Drug or arms trafficking.					
11. The manufacture or possession of explosive devices or machines.					
12. Environmental pollution.					

Variable	Variable's importance					
	Strongly agree	Agree	I have no opinion	Disagree	No absolute importance	
13.	The use of firearms, bombs or explosives without the right to create a state of emergency.					
14.	Providing support, sponsoring or contributing to threats, conspiracies, planning or recruitment of persons to commit criminal acts.					
15.	The armed struggle of peoples against colonialism, aggression or occupation for liberation and self-determination (resisting occupation).					
16.	What is your opinion about that?					

Q2: What are the threats or potential terrorist operations affecting Saudi Ports?

Variable	Variable's importance					
	Strongly agree	Agree	I have no opinion	Disagree	No absolute importance	
1.	Terrorist acts against port facilities.					
2.	Terrorist acts against companies such as port-based companies (Armco).					
3.	The use of ships to smuggle chemical and biological weapons or radiological weapons.					
4.	Abduction of a visiting vessel to the port.					

Variable		Variable's importance				
		Strongly agree	Agree	I have no opinion	Disagree	No absolute importance
5.	Attacking ships using heavy weapons.					
6.	Biological attacks on ships' of food and water.					
7.	The use of small fishing boats to smuggle men, weapons, ammunition, explosives and materials for weapons of mass destruction.					
8.	The use of small and fast boats to attack tankers to influence world oil prices or cause pollution.					
9.	Attacking cruise ships, tourism and ships carrying people and goods, products and warships.					
10.	The remote bombing of the ship after.					
11.	Polluting the water of the port.					
12.	The incidence of hijacking vessels in territorial waters.					
13.	What is your opinion about that?					

Q3: What is the extent of the commitment to security and protecting against terrorist attacks at Saudi Ports?

Variable		Variable's importance				
		Strongly agree	Agree	I have no opinion	Disagree	No absolute importance
1	Training workers on how to protect ports against terrorism.					
2	Examining the bags of passengers.					
3	Surveillance cameras at the port.					
4	The use of technology to combat terrorism such as cameras, radar warning systems and the like.					
5	Protection necessary for port facilities.					
6	Putting in forces to protect the existing companies in the port.					
7	Monitoring the quay surrounding the port.					
8	Continuing inspections of fishing and pleasure boats.					
9	The availability of a sufficient number of troops to protect the port.					
10	The presence of vessels to protect the territorial waters.					
11	A warning system.					
12	Having forces trained to deal with terrorists.					
13	What is your opinion about that?					

Q4: What is the role of SBG in combating terrorism, illegal trade and illegal immigration at Saudi Ports?

Variable	Variable's importance				
	Strongly agree	Agree	I have no opinion	Disagree	No absolute importance
1. To conduct searches along the port.					
2. Control of all the border shipments and ensuring their execution of the rules and regulations.					
3. Keeping security inside the port and along the coast.					
4. Cooperating with the official bodies inside Saudi Arabia.					
5. Regulating the length of the coast, guard port locations, appoint leaders, units, centers and checkpoints, and secure communication among them.					
6. Patrols throughout the day.					
7. Full cooperation and coordination between forces in the Kingdom.					
8. Seizure of contraband, taboos and prohibitions, arresting smugglers and holders, and the media transfer and inspection of contraband and prohibited items inside the port.					
9. Inspection of persons present in the port, and investigating and verifying identities and whereabouts of persons.					
10. Inspection of the maritime transport of fishing boats and cruise tourism.					
11. Guarding maritime modes of transportation and controlling ports					

Variable		Variable's importance				
		Strongly agree	Agree	I have no opinion	Disagree	No absolute importance
	located during transit zone navy.					
12.	Inspect all modes of transport without a maritime flag or not specifying their nationality when entering or passing ports, and seizure if they can not prove their nationality.					
13.	Controlling fishermen, divers, and hikers shipments.					
14.	Controlling the use of any explosives or any kind of weapons shipments.					
15.	Inspecting for passengers, personal belongings and ensuring that there is no taboo within them.					
16.	Guarding port facilities and all the existing institutions.					
17.	To ascertain the existence of a license for cruise ships and for tourism.					
18.	Ensuring safety equipment required for vessels is present.					
19.	What is your opinion about that?					

Q5: What is the role of SBG in the fight against terrorism and illegal trade, and the monitoring of illegal immigration vessels, cruise boats, yachts and fishing boats at Saudi Ports?

Variable		Variable's importance				
		Strongly agree	Agree	I have no opinion	Disagree	No absolute importance
1.	Determining the duration of sailing, the speed of departure and return, as well as direction.					
2.	Counting passengers and crew, and making sure data is known before departure and upon return.					
3.	Administer certificates required to provide safety and security.					
4.	Maritime medium inspection before departure and upon return.					
5.	Make sure there is no presence of any person not authorized to board.					
6.	Ensure the captain of the medium knows about security aspects of the medium during sailing.					
7.	Vehicle inspections on the open sea.					
8.	Arrest the captain of the medium if anything is found to be contrary to the rules.					
9.	Make sure that sailing is within territorial waters.					
10.	To ascertain the existence of wireless devices required.					
11.	Make sure that there are no weapons or explosives of any type.					

Variable		Variable's importance				
		Strongly agree	Agree	I have no opinion	Disagree	No absolute importance
12.	Controlling ships and ensuring the disposal of waste oils or unloading or burning materials that are flammable at sea.					
13.	What is your opinion about that?					

Q6: What are the preventive measures necessary to combat terrorism, illegal trade and illegal immigration at Saudi Ports?

Variable	Variable's importance				
	Strongly agree	Agree	I have no opinion	Disagree	No absolute importance
1. Access control.					
2. Magnetic detectors.					
3. The development of automatic warning devices.					
4. Monitoring and intruder detection.					
5. Monitoring the quay surrounding the port.					
6. Controlling coasts.					
7. The use of fixed and mobile radars.					
8. The use of surveillance cameras along the coast for more than 100 miles.					
9. Rapid reporting of incidents.					
10. The use of thermal cameras.					
11. Inspection of fishing boats and cruise passengers, and searching bags and visiting vessels.					
12. Controlling coasts of ports.					
13. Controlling and inspecting ships and boats.					

Variable		Variable's importance				
		Strongly agree	Agree	I have no opinion	Disagree	No absolute importance
14.	Intensifying the number of Border guards.					
15.	Cooperation with other armed forces.					
16.	What is your opinion about that?					

Q7: What are the problems faced by SBG working in the performance of their duties at Saudi Ports?

Variable	Variable's importance				
	Strongly agree	Agree	I have no opinion	Disagree	No absolute importance
1.	Lack of team work.				
2.	Lack of services.				
3.	Too many fishing and pleasure boats.				
4.	The coasts of the Kingdom are too long.				
5.	Lack of technology.				
6.	Lack of training and experience.				
7.	Lack of knowledge.				
8.	Poor communication between border guards and the leadership.				
9.	Working conditions.				
10.	The lack of new procedures and technology systems at ports.				
11.	The need for new methods and ways of doing business.				
12.	The need for modern equipment and devices to assist in the performance of work.				
13.	What is your opinion about that?				

Q8: What is the extent of the impact of technology and modern port security in the fight against terrorism, illegal trade and illegal immigration at Saudi Ports?

Variable	Variable's importance				
	Strongly agree	Agree	I have no opinion	Disagree	No absolute importance
1.	Helps control port.				
2.	Working on the speed of early warning.				
3.	Working on the speed of service leaders.				
4.	Help communication among border guards and other forces.				
5.	Verification speed in the performance of work.				
6.	Help coordination between border guards and other armed forces in Saudi Arabia.				
7.	Verification surveillance required at the port.				
8.	What is your opinion about that?				

Q9: What are the reasons and motives underlying the existence of terrorism, illegal trade and illegal immigration in KSA?

	Variable	Variable's importance				
		Strongly agree	Agree	I have no opinion	Disagree	No absolute importance
1.	Poverty.					
2.	A kind of political frustration.					
3.	Ignorance of the rules of Islam and ethics.					
4.	Confusion between jihad and terrorism.					
5.	Wrong understanding of the concept of jihad among the general people.					
6.	There are many psychological reasons such as love among the young and desire for fame.					
7.	Psychological frustration among young people.					
8.	Spare time.					
9.	The dismantling of society and lack of interdependency.					
10.	Unemployment.					
11.	Economic reasons such as the lack of justice in the distribution of wealth.					
12.	Educational reasons such as the absence of good education.					
13.	Shortages or lack of education.					

Variable		Variable's importance				
		Strongly agree	Agree	I have no opinion	Disagree	No absolute importance
14.	Intellectual deviation.					
15.	Family disintegration.					
16.	An intellectual superficiality and the wrong understanding of religion.					
17.	Tightening and extremism in religion.					
18.	The foreign policy of hegemony within the Arab states.					
19.	Distortion of the image of Islam and Muslims.					
20.	The emergence of different political trends.					
21.	Feeling shortages and a sense of deprivation and injustice.					
22.	Scientific and technical development.					
23.	Too many migrants try to reach the Kingdom of Saudi Arabia.					
24.	The absence of adequate protection along the coasts of the Kingdom.					
25.	What is your opinion about that?					

Q10: How best can the rules of safety and security, and combating emergencies be followed at Saudi Ports?

Variable		Variable's importance				
		Strongly agree	Agree	I have no opinion	Disagree	No absolute importance
1.	Using the latest tools in the management of the port.					
2.	Port management commitment to provide protection for installations, ships and cargo.					
3.	The obligation not to smoke near hazardous areas.					
4.	The presence of all possible devices to meet emergencies.					
5.	Availability of materials used for extinguishing fires in shipments.					
6.	Shipmasters' commitment to sending information required for the management of the port before entering.					
7.	Commitment of shipmasters carrying hazardous materials to inform the management of the port.					
8.	Dealing with all hazardous materials that are banned.					
9.	Commitment to conservation service for closed hazardous materials to prevent diversion.					
10.	Border guards obliged to ensure that cruise and tourism ships and fishing licenses are issued from the Department of Border Guards.					
11.	The commitment of fishing cruise ships to know about safety equipment and the means necessary for rescue and fire					

Variable		Variable's importance				
		Strongly agree	Agree	I have no opinion	Disagree	No absolute importance
	fighting.					
12.	The need for wireless devices on cruise fishing ships.					
13.	What is your opinion about that?					

Q11: From your point of view, should any of these steps be taken by KSA to confront terrorism, illegal trade and illegal immigration?

Variable	Variable's importance				
	Strongly agree	Agree	I have no opinion	Disagree	No absolute importance
1. Addressing the conditions and problems of social and economic hardship, unemployment and the like.					
2. The exchange of information with other States.					
3. Government control of the movement of funds and control of banks, companies and voluntary control.					
4. The Kingdom not to accept the recourse of any terrorist element.					
5. Controlling and preventing the media from providing any kind of support to terrorist elements.					
6. Take benefit from the experiences of others and exchange information and experiences.					
7. Tightening of controls on the sources of arms and explosives.					
8. Tightening of control of the borders of the Kingdom; land, sea, ports and airports.					
9. The establishment of an international center to combat terrorism.					
10. Paying attention to the youth and their problems, and working to promote them.					
11. What is your opinion about that?					

9.1.3 General questions

Any other comments that may help in improving the security of our Sea Ports in the short range?

Any other comments that may help in improving the security of our Sea Ports in the future?

Thank you for your feedback. I sincerely appreciate your honest opinion and will consider your input while determine the requirements in the future design of the vessel.

If you have, any comments or concerns about this questionnaire please contact:-

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Thank you for your participating in this survey and Questionnaire answer