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**OFFSETS IN INTERNATIONAL WEAPONS ACQUISITIONS:**

**THE TURKISH EXPERIENCE**

**THESIS**

Ahmet Ilbas, Captain, Turkish Air Force

AFIT/GLM/ENS/02-06

**DEPARTMENT OF THE AIR FORCE  
AIR UNIVERSITY**

**AIR FORCE INSTITUTE OF TECHNOLOGY**

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**Wright-Patterson Air Force Base, Ohio**

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## Report Documentation Page

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**OFFSETS IN INTERNATIONAL WEAPONS ACQUISITIONS:  
THE TURKISH EXPERIENCE**

THESIS

Presented to the Faculty

Department of Operational Sciences

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Air University

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In Partial Fulfillment of the Requirements for the  
Degree of Master of Science in Logistics Management

Ahmet Ilbas, B.S.

Captain, Turkish Air Force

March 2002

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**OFFSETS IN INTERNATIONAL WEAPONS ACQUISITIONS:  
THE TURKISH EXPERIENCE**

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Ahmet Ilbas

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## **Abstract**

This study sought to describe Turkish defense offsets in foreign procurement. Located at the epicenter of regions fraught with crisis, Türkiye is a secular, democratic, liberal country sharing western moral values. With the tradition of its 1,000 years of statehood, with its constitutional order and its strong armed forces, Türkiye is a center of power that can affect the delicate balance of power in the region.

Offsets started to become an important way of obtaining industrial and technological benefits when importing military equipment in the early and mid-1980s. Offset deals remain an important aspect of Turkish arms import policy, and offset applications in Turkish foreign procurement shows that offsets are likely to increase in the foreseeable future. Consequently, the study of Turkish defense offsets is important.

The history of offsets is introduced for the background of this research. As a major user of U.S. defense systems, Türkiye each year buys American weapons worth more than \$ 1 billion. So, U.S. offset policy is described as a main supplier. A history of the offset policy in Türkiye and analysis of the application of the offset policy is provided. The conclusion is reached that offsets might prove beneficial for development of the Turkish defense industry, provided that the appropriate policy measures create a defense industrial base capable of assimilating future offset benefits programs.

# **OFFSETS IN INTERNATIONAL WEAPONS ACQUISITIONS: THE TURKISH EXPERIENCE**

## **1. INTRODUCTION**

### **1.1 Chapter Overview**

This chapter provides an introduction to the topic of offsets and the use of offsets by Türkiye. [Throughout this thesis, I will use ‘Türkiye’ instead of ‘Turkey’ since this is the spelling preferred by the Turkish government]. It begins with background information and definitions of offsets and other critical terms. The chapter will identify the general issue, and the specific problem and the investigative questions for this research effort. Finally, it closes with a discussion of the scope of the research and the presentation plan for the remaining chapters.

### **1.2 Background**

In 1986, a U.S. interagency group defined offsets as “industrial compensation practices required as a condition of purchase in either government-to-government or commercial sales of defense articles and/or defense services as specified in the International Traffic in Arms Regulations” (Department of Commerce, 1998).

The concept of an offset, especially in projects requiring high technology such as the defense or aerospace industries, is based on foreign currency inflow to compensate for deficits that may arise in the balance of payments as a result of the payments to be made in foreign currencies within the framework of the relevant projects being carried out.

Offset agreements are agreements between the buying and selling countries as conditions for military exports (U.S. General Accounting Office, 1990). The two types of offsets are direct and indirect. Direct offsets include co-production, buybacks, directed subcontracting, investments in defense firms, concessions, technology transfer and licensed production. Direct offsets also mean involving the item being purchased. Indirect offsets include procurement, investments in non-defense firms, trading of commodities, and foreign defense related projects (U.S. General Accounting Office, 1994).

Offsets first occurred after the Second World War, as a result of the process of coping with the economic difficulties encountered during reconstruction of Europe. In the 1980s, parallel with the developments taking place in the world economy, the importance of offsets in industrialized and developing countries has increased. In this manner, the first significant application was realized by Netherlands, Denmark, Norway and Belgium within the scope of the procurement of the F-16 aircraft in 1975.

These days, offsets are used as a method to increase the standards of quality and productivity of the existing industries. Offsets are established through exports and are used to create local content and to produce goods and services which are competitive in the international arena. Offsets are also used as a tool by industrialized countries to develop their defense industry and to augment their market shares.

Turkiye seeks advanced technologies by using offsets for her defense. In 1984, offsets were pursued in an effort to minimize the deficits in the balance of payments started in the defense industry by signing an agreement to co-produce the F-16 fighters domestically. The offsets committed to by the American General Dynamics Company

(GD), within the scope of the offset agreement regarding the F-16 fighters, are implemented and supervised by the Ministry of National Defense (MOND). The offset percentage was set at about 25% or \$1 billion. (Throughout this thesis, all dollar values are in then-year dollars -- A **then-year dollar** is a constant or base-year dollar that has been either inflated or deflated using the appropriate weighted inflation index to show the amount of money that will be (was) needed when the expenditures for goods and services are (were) made.)

In exchange for the purchase of 160 F-16 aircraft, General Dynamics agreed to allow the assembly of 152 of the aircraft in Türkiye using parts from U.S. and European plants (those which co-produced parts for the sale to Netherlands, Denmark, Norway, and Belgium), as well as from new Turkish plants co-owned by General Dynamics, General Electric (GE), Turkish industry, and the Turkish government. General Dynamics also agreed to provide about 800 million dollars' worth of non-defense-related offsets, including investments in the Turkish hotel industry and in a thermal power plant project (Schaffer, 1989).

Afterwards, with the acceptance of Law No. 3238 concerning the establishment of Undersecretariat for Defense Industries (UDI) in 1985, UDI (known by its Turkish acronym of SSM) has become responsible for the export of defense industry products and for the coordination of offset trade. SSM is the only government agency in Türkiye equipped with power to administer military offsets.

The Foreign Trade Undersecretariat, on the other hand, is responsible for offset programs in nonmilitary procurements. Sometimes, it is possible to see some defense related offset programs which are carried out by The Foreign Trade Undersecretariat. 12

May 2000 the new directive which explains principles of offset implementations in the Turkish Defense Industry procurements was submitted. This directive explains that the Ministry of Defense (MSB) and the Undersecretariat of the Defense Industry (SSM) can carry out offset programs in Türkiye. The offsets of the projects carried out by the MSB Foreign Procurement Department Chairmanship within the framework of the Main Procurement Agreements and/or the procurement agreements which require the obtaining of offsets are under the responsibility of the MSB Foreign Procurement Department Chairmanship and offsets of the projects carried out by the SSM are supervised under the responsibility of the SSM. The SSM is the office for the coordination of all of the offset implementations.

Currently, major SSM programs include the co-production of 145 attack helicopters, worth nearly \$4 billion; co-production of 1,000 main battle tanks, worth \$7 billion; purchase of eight aerial early warning aircraft, worth \$1.5 billion; co-production of unmanned aerial vehicles, worth \$250 million; upgrades of 900 U.S.-made M60 A1/3 tanks, worth nearly \$900 million; and several smaller Navy requirements. Major ongoing programs controlled by the Defense Ministry's foreign procurement department include Israel's upgrade of Turkish F-4E jets, worth \$630 million, and a plan to co-produce six modern frigates, worth \$1.5 billion (Bekdil, 2000a). Offset deals remain an important aspect of Turkish arms import policy and offset applications in Turkish foreign procurement shows that offsets are likely to increase in the foreseeable future. Consequently, the study of Turkish defense offsets is important.

### 1.3 Definition of Terms

While there are different definitions of offsets used by industry and government for different purposes, for this study, offsets in defense trade are industrial compensation practices required as a condition of purchase in either government-to-government or commercial sales of defense articles and/or defense services as specified in the International Traffic in Arms Regulations.

Listed below are offset definitions as outlined in the *Federal Register* and *Offsets in Military Exports* (Department of Commerce, 1996)

*Actual Value of an Offset:* An offset transaction measured in terms of dollars.

**Co-production:** Overseas production based upon government-to-government agreement that permits a foreign government(s) or producer(s) to acquire the technical information to manufacture all or part of a U.S. origin defense article. It includes government-to government licensed production. It excludes licensed production based upon direct commercial arrangements by U.S. manufacturers.

**Countertrade:** In addition to the types of offsets defined above, various types of commercial countertrade arrangements may be required. A contract may include one or more of the following mechanisms:

**Barter:** A one-time transaction only, bound under a single contract that specifies the exchange of selected goods or services for another of equivalent value.

**Counter-purchase:** An agreement by the initial exporter to buy (or to find a buyer for) a specific value of goods (often stated as a percentage of the value of the original export) from the original importer during a specified time period.

**Compensation (or Buy-Back):** An agreement by the original exporter to accept as full or partial repayment products derived from the original exported product.

|                                   |                                                                                                                                                                                                                                                                                                                                                |
|-----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Credit Value of an Offset:</b> | The offset transaction value applied against the offset agreement, which may be greater than the actual value of the offset. Extra credit (i.e., defined through multipliers) is sometimes earned as an incentive to perform some specific offset, such as investment or technology transfer of particular interest to the foreign government. |
| <b>Direct Offsets:</b>            | Contractual arrangements that involve defense articles and services referenced in the sales agreement for military exports.                                                                                                                                                                                                                    |
| <b>Indirect Offsets:</b>          | Contractual arrangements that involve goods and services unrelated to the exports referenced in the sales agreement.                                                                                                                                                                                                                           |
| <b>Licensed Production:</b>       | Overseas production of a U.S. origin defense article based upon transfer of technical information under direct commercial arrangements between a U.S. manufacturer and a foreign government or producer.                                                                                                                                       |
| <b>Military Export Sales:</b>     | Exports that are either foreign military sales (FMS) or commercial (direct) sales of defense articles and/or defense services as defined by the Arms Export Control Act and International Traffic in Arms Regulations.                                                                                                                         |
| <b>Multiplier Effect:</b>         | A multiplier is used to increase the value of an offset project when determining offset credit. For example, if an offset project is valued at \$1,000, a multiplier of 10 will increase the amount of offset credit granted to \$10,000.                                                                                                      |
| <b>Offsets:</b>                   | Industrial compensation practices required as a condition of purchase in either government-to-government or commercial sales of defense articles and/or defense services as defined by the Arms Export Control Act (AECA) and the International Traffic in Arms Regulations (ITAR).                                                            |
| <b>Offset Agreement:</b>          | A counter contract to a military export sale negotiated separately between the foreign purchasers, usually a foreign government, and the U.S. exporter as a condition of the export sale. The offset agreement requires the U.S. exporter to compensate the foreign purchaser with various types of offsets.                                   |

|                                  |                                                                                                                                                                                                                                                                                                                                                     |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Offset Transaction:</b>       | An offset transaction is an actual delivery of an offset against the outstanding balance of an existing offset agreement.                                                                                                                                                                                                                           |
| <b>Overseas Investment:</b>      | Investment arising from the offset agreement, taking the form of capital invested to establish or expand a subsidiary or joint venture in the foreign country.                                                                                                                                                                                      |
| <b>Subcontractor Production:</b> | Overseas production of a part or component of a U.S. origin defense article. The subcontract does not necessarily involve license of technical information and is usually a direct commercial arrangement between the U.S. manufacturer and a foreign producer.                                                                                     |
| <b>Technology Transfer:</b>      | Transfer of technology that occurs as a result of an offset agreement and that may take the form of research and development conducted abroad, technical assistance provided to the subsidiary or joint venture of overseas investment, or other activities under direct commercial arrangement between the U.S. manufacturer and a foreign entity. |

#### **1.4 Problem Statement**

Turkiye, one of the fastest developing countries in the region, has required offset agreements to boost her industrial economy while purchasing major equipment. Türkiye views offsets as a benefit to both parties in defense arms deals. Without offsets, the government would never have been able to acquire the technology to produce expensive foreign weapon systems; offsets are considered as a way of doing business. Offset deals remain an important aspect of Turkish arms importing policy and offset applications in Turkish foreign procurements show that offsets are likely to increase in the foreseeable future. Consequently, the study of Turkish defense offsets is important. This investigation will examine why Türkiye uses offset agreements, under what

circumstances the agreements are used, and what the issues and factors are that affect offset programs.

## **1.5 Research Questions**

There are some main features of offset deals. The promotion of the growth and the development of high technology industries merit the transfer of advanced military technology, creation or preservation of foreign exchange, the creation of jobs at the local level, the achievement of competitive advantages, the promotion of investment in local industry and of local value-added programs, and the access to new commercial opportunities are some of the benefits of the transfer of international marketing expertise and the global reach of large companies. The problem statement for this project is to search for these main features or benefits specific to Turkish offset deals. This is represented by the overall research question “How have offsets been used in Turkish military acquisition in foreign procurements?”

Several investigative questions surround and support this issue:

1. What is the Turkish policy on offsets?
2. How and why did this policy developed?
3. What are the critical factors to be considered when evaluating an acquisition for the use of offsets?
4. What are the specific examples of Turkish military acquisition projects where offsets are employed?

The research will answer each specific investigative question by focusing on the offset experience of Türkiye, and some of her offset applications in light of the information, which will be presented in Chapter III.

## **1.6 Scope/Limitations**

This study seeks to describe Turkish defense offsets in foreign procurements and will only consider Turkish military offset agreements, not the civilian ones. The limitations of this study include:

1. The value of offset agreements will not be discussed. Turkish military acquisition projects where offsets are employed will be considered as general examples of her offset applications. Specific evaluation of specific offsets is not the goal of this research.
2. This research will not discuss whether or not the government, Department of Defense (DoD), or defense industry need to change their work system for successful offset agreements. The focus of this research will be limited by how offsets have been used in Turkish military acquisition in foreign procurements.

## **1.7 Presentation Plan**

Chapter II identifies the research methods to be used in this research effort as well as any limitations of the methods. Chapter III presents an overview of the current literature on the general concept of offsets, the international arms market, examples of offset agreements and government offset policies. Chapter IV provides general

information about Türkiye, Turkish offset policy, and provides information about some Turkish offset applications. Chapter V provides findings and recommendations about offset applications in Türkiye.



## **2. METHODOLOGY**

### **2.1 Chapter Overview**

This chapter describes the research design utilized to collect data for this study. The methodologies used will be described first, followed by the data collection methods. Next, justification for the methodologies will be discussed. Finally, the limitations of the research methods will be addressed.

### **2.2 Research Design**

Case study was the primary research methodology utilized. A case study is problem-oriented and represents an intensive study of phenomena using a variety of data sources and tools. This technique requires intensive analysis of either the research subject (Lang, 1984), situations similar to the research problem (Zikmund, 1988), or both. Researchers, however, have no standard procedures to follow. They must be flexible and attempt to glean information and insights wherever they find them (Zikmund, 1988). Case study requires a dissection and study of the particular subject. This intensive study will yield explanations of the research subject or of similar subjects, which can then be used for comparison.

One of the “tools” utilized in the case analysis was the historical method. Historical research is often defined as the writing of an integrated narrative about some aspect of the past based on critical analysis and synthesis of sources (Lang, 1984). As the definition states, a detailed and extensive search of the available data is the first step in

historical research. This data must then be evaluated and synthesized into an accurate account of the subject under investigation. It is this review and analysis of the existing literature which develops the theories and explanations about the research subject.

Another research tool that was used shares common characteristics with the historical method. The documentary research technique was employed as a complement to the historical method. Documentary research “tends to emphasize contemporary sources and present-day issues. It can be thought of as cross-sectional rather than longitudinal, where the data focus is on one point in time or a relatively short period of time” (Lang, 1984). Other than this differing orientation, documentary research shares the historical method’s steps of data collection, synthesis, and evaluation in an attempt to explain the research subject.

### **2.3 Justification for Methodology**

Case study is the primary research tool for this effort. The study of Turkish offset applications is in its infancy. Consequently, the current base of knowledge of offset agreements is a relatively new area of study and thus the existing knowledge base is limited. However, this limitation should not discourage the exploration of this important arena. Case analysis allows the researchers to delve further into the research area in an effort to develop a more mature knowledge base. Obviously, contributing to the existing pool of knowledge on a research topic will not only benefits the immediate understanding of the subject, but it will also move future research towards survey and statistical research methodologies. Case analysis also allows the researcher to compare findings on a particular example to the existing knowledge base. Elements of the existing

pool can then either be corroborated or challenged. New elements can also be expected to be introduced. Additionally, case analysis provides direction to the research. As a result of this effort, the study of Turkish offset applications is no longer purely exploratory. Some data have been developed, and case analysis allows concentration on specific issues.

Analysis of other specific countries' offset applications provided data directly applicable to the research subject. Study of comparable or similar international programs also proved valuable. “Even if situations are not directly comparable, a number of insights can be gained and hypotheses suggested for future research” (Zikmund, 1988). Study of the particular case as well as comparable or similar cases added to the development of the research findings.

Historical and documentary research methods were used to obtain primary data. These primary data were gathered from articles about Turkish acquisition, mostly published in *Defense News*, *The DISAM Journal*, *Turkish Daily News*, and some official publications of The Turkish Ministry of Defense (such as Offset Guidelines-1991 and 2000), and books about offset agreements. These sources established a solid foundation of knowledge to build on. An intensive search and analysis of existing data on the research problem was essential to investigate the dynamic arena of international weapon acquisition. Historical research provided this foundation of existing knowledge on the research subject. Consequently, the historical method was critical to gathering the information, which already existed, on the research subject and synthesizing it into an organized body of knowledge. Historical research provided a foundation and overview upon which further study could be based.

The documentary research method was essential to garner recent data on specifics of the research subject. These specific research subjects are current Turkish Offset policy and ways of application of offsets in some Turkish military acquisitions. The method permitted a shift in orientation from historical research of past data to a more recent review of the research subject. This move in orientation to an investigation of relatively recent findings provided a complementary tool to the historical method. However, the justification for its use is the same as for the historical method. It provided a foundation to build upon.

The use of these three research methods allowed for comprehensive investigation of the research subject. The historical and documentary methods developed a broad foundation upon which the research could be continued. The case study method produced insights into the research subject.

## **2.4 Limitations of the Research**

The researcher who uses the historical or documentary method of research must ensure the genuineness and truthfulness of sources (Lang, 1984). The researcher was able to verify the accuracy of much of the secondary data by cross checking with other sources. When secondary data has been cited or quoted in the articles, the information gathered from articles, books, etc., has been cross checked with the original source. This evaluation of historical and documentary evidence is termed “historical criticism.”

The concept has been divided into internal and external criticism. External criticism is concerned with the determination that the source is authentic. Internal criticism is then defined as determining that the data within the source is accurate (Borg,

1971). Obviously, the use of respected, well-documented data is essential to freeing historical research from internal and external criticism problems.

The foremost prevention against the above limitations and criticisms of the chosen methodologies is to acknowledge their possibility to occur. Knowledge of the pitfalls can then be used to design and conduct research, which minimizes the possibility of their occurrence. The following tools were used in this research to avoid the limitations and criticism cited:

1. Use of complementary research methods concurrently throughout the research process.

Case analysis, one of the research methods, is used to study of three Turkish offset applications among all Turkish foreign weapon system procurements. All three examples are analyzed intensively to see how do offsets fit into these applications.

2. Broad-based use of respected, well documented primary sources of data.

Primary data were gathered from articles about Turkish acquisition, mostly published in *Defense News*, *The DISAM Journal*, *Turkish Daily News*, and some official publications of The Turkish Ministry of Defense (such as Offset Guidelines-1991 and 2000), and books about offset agreements.

3. Use of different data sources to cross-check the information gathered.

When data has been cited or quoted in the articles, the information gathered from articles, books, etc., has been cross-checked with the original source. The fundamental task is to get as close as possible to the truth.

4. Maintenance of a professional, critical perspective to guard against prejudice or bias in the research.

Lots of sources are searched for to prevent bias over the thesis topic and nationality feelings are ignored while evaluating the data.

Such techniques can effectively prevent the limitations and criticisms detailed in this section, and the researcher feels that the methodology utilized was both appropriate and effective in providing answers to the research questions.



### **3. REVIEW AND ANALYSIS OF LITERATURE**

#### **3.1 Chapter Overview**

This chapter will discuss the general concept of offsets, the background of the international arms market, and the factors that led to the growth in the use of offsets. This discussion will include examples of offset agreements in recent years to illustrate their complex nature. Finally it closes with a discussion of the current U.S. position on the use of offsets.

#### **3.2 The World Arms Environment**

There has been a change in the nature of world arms transfers since World War II. Immediately following the war, arms trade in the west consisted almost entirely of the transfer of surplus weapons on a grant (free) basis from the United States to Western Europe. The United States considered these transfers necessary to help Europe defend itself against communism as it rebuilt its damaged industries.

By the early 1960s, most western European countries had recovered sufficiently to begin sharing the costs of their defense. Consequently, sales of United States weapons replaced the former grant programs. In the early 1970s, Western European countries were anxious to develop indigenous defense industries. However, high technology weapons are costly to produce and most countries do not have sufficient demand for the weapons or sufficient defense budgets to make stand-alone production either efficient or affordable (Weida, 1986).

Based on recent North Atlantic Treaty Organization (NATO) and General Accounting Office (GAO) studies, the principal reasons why other nations seek offsets include the desire to bring jobs, technology, and production experience to their domestic firms, to create and/or maintain a domestic defense technology and industrial base, and to reduce dependence on foreign suppliers. In addition to these economic motives, an important political motivation, consistently articulated by European defense ministry officials in a recent NATO study, is to “keep the Parliament contented which, in turn, requires that public opinion be willing to support the expenditure of public funds to buy weapons and equipment from abroad . . . offsets are presented to show a longer term gain to the national economy, national defense and the Alliance . . .” (Petty, 1999).

In 1986, a U.S. interagency group defined offsets as “industrial compensation practices required as a condition of purchase in either government-to-government or commercial sales of defense articles and/or defense services as specified in the International Traffic in Arms Regulations” (Department of Commerce, 1998). Under the terms of an offset agreement, the seller agrees to formal or informal compensatory demands made by the purchasing nation.

Offsets are classified as “direct” or “indirect” (Petty, 1999). Direct offsets involve an agreement for a transaction directly related to the specific weapon system purchased, such as the seller’s acquisition from the purchasing nation of components for the system being purchased. Indirect offsets require the seller to purchase goods or services that are unrelated to the product acquired. Such agreements generally require that a percentage of the purchase price be spent in the acquiring country’s economy, usually within a negotiated period of time. Offsets may be structured to co-produce, to

produce under license, to subcontract, to transfer technology, or to make an overseas investment. Direct offsets are often accomplished simply through the purchasing nation's manufacture of components or subcomponents, or its delivery of services to be incorporated into the product being sold. However, they can be accomplished through a licensing and co-production agreement. A current example is the production of the F-16 aircraft in Turkiye by licensee, Turkish Aerospace Industries Inc. (TAI), under a license from Lockheed Martin. In addition to producing F-16s for the Turkish Air Force, TAI produced the F-16 for Egypt and is competing to build the fighter for other nations.

An offset "agreement" is the negotiated agreement between the U.S. exporter and the foreign government (or its state-controlled company) providing that the exporter will complete a certain amount of offset work (subcontracts, transfers of technology, etc.) within a given time period (Defense Offsets Commission, 2001).

An offset "transaction" is the actual delivery of the offset work by the U.S. exporter (e.g., the placement of a specific subcontract, the transfer of a particular technology) in fulfillment of the exporter's offset agreement. For its completion of the transaction, the exporter receives offset "credits" which, in some cases, can be traded among exporters (Defense Offsets Commission, 2001).

To determine from a military perspective whether offsets are strategically beneficial or detrimental, we must consider much larger issues, such as weapon proliferation, technology transfers, inter-operability, military alliances through equipping and training, and the industrial base and economies of scale. Each of these issues will be discussed in turn.

### **3.2.1 Proliferation**

Arms proliferation is a global concern, especially for weapons of mass destruction (WMD), mines, small arms, and technically-advanced weapons. Offsets can potentially accelerate this proliferation through sales, co-production, and technology transfer. In the past importers of arms accepted generation-old systems, but today, weapon sales have become a buyer's market. Buyers friendly to the U.S. can request and receive many top-of-the-line systems. Although the U.S. continues to maintain technological superiority in arms, that advantage can vanish through satisfying other countries' offset demands for the most modern systems and technology. Then the cycle continues with a need for U.S. research and development to once again progress to a militarily dominant position. For example, Lockheed lobbyists inform Congress that several countries own the very capable combat F-15 and F-16, thereby justifying the need for the F-22 (Petty, 1999).

### **3.2.2 Technology Transfer**

"Technology transfer is one of the most highly valued offsets"(Hsiung, 1998). Approximately one-quarter of all defense-offset transactions involve the transfer of technology (Petty, 1999). It is difficult to control and monitor shared technology or to monitor where it eventually goes. Refusing to transfer technology through an offset can jeopardize defense sales. If one company won't provide the technology transfer, another one will and it will get the sale.

Technology transfers, largely promoted by offsets, can thus pose a threat to national security and the military. Technical knowledge and advanced or enhanced weapon systems can end up in the hands of an adversary. Likewise, research and

development or production knowledge can be used and shared to benefit other nations' acquisition programs. Alarming, the technology that improved Iraqi Scud missile-targeting capabilities was originally transferred from the U.S. to Brazil through an offset program (Wolf, 1997). Since the U.S. is primarily an exporter of weapon systems and technology, it does not substantially benefit from offset technology transfers. But the U.S. can be threatened directly and indirectly through these transfers.

### **3.2.3 Interoperability**

Since widespread use of the same equipment is the most obvious form of interoperability, offsets can be interpreted to promote equipment and training purchases. On the high technology battlefield where the U.S. will fight alongside of multinational forces, there is a greater need for standardization and commonality. Especially critical is interoperability of command, control, communication, computers, and intelligence (C4I) technologies. But U.S. allies, such as North Atlantic Treaty Organization (NATO) partners, have often balked at adopting U.S. C4I equipment and standards due to cost, industrial competitiveness, national sovereignty, and jobs (Petty, 1999). However, offsets may have broken down many of these barriers and improved interoperability. With interoperability gained through offsets, more countries own, maintain, and fight with American equipment, so the U.S. military can potentially benefit from foreign-owned manufacture and repair facilities. The U.S. military currently uses foreign companies at their foreign locations to rebuild and repair weapon systems. Many of these overseas facilities were established through offset co-production agreements. The capability of this expanded friendly industrial base will become even more important in

times of conflict when requirements will out-pace the domestic industrial base's capability. The U.S. can then benefit from the redundancy of strategic locations of critical, interoperable items. For example, the F-16 now can be maintained, repaired, or even manufactured at locations that literally span the globe. To meet the challenges of interoperability, offsets can be especially useful in partnering and cooperation that begins at system development. Cooperative international programs, supported by offsets, provide seamless interoperability that is essential to strategic success.

### **3.3 U.S. Government Policy**

There are two different perspectives on offsets. The recipient's view is that offsets are an integral part of the sale itself rather than unrelated compensation practices. The supplier's view is that offsets improve the overall value of the sale. These conflicting views are useful in understanding how governments establish offset policies. The increasing use of offsets has motivated a lot of countries (including Türkiye) to set their own offset policies. Discussing the offset policy of the United States as a general supplier will help us to understand how the offsets policy of Türkiye, as one of the recipient countries, is established.

The United States government policy on offsets in military exports was initiated in 1978 in a memorandum issued by Deputy Secretary of Defense Charles Duncan. The memorandum indicated that there were inherent difficulties in negotiating and implementing compensatory co-production and offset agreements. The memorandum also indicated that the U.S. contractors involved in an offset agreement must bear the total responsibility for fulfilling its conditions (US DoD, 1978). This policy led to a

situation where, as a 1984 General Accounting Office (GAO) report stated, “The United States Government has no comprehensive national policy on offset agreements for the sale of military equipment to foreign governments” (Department Of Commerce, 1984).

Offset deals are made when foreign countries successfully demand some form of compensation, a non-monetary rebate if you will, for purchasing armaments. With international competition to win lucrative arms sales around the globe so fierce, the returns regularly surpass 100 percent of the value of the equipment purchased (Ruppe, 2001). An offset arrangement can include sharing part of the manufacturing work of the purchased equipment. It can also involve transfers of American technology, licensed co-production of American equipment for U.S. troops or for sales to other countries, or other types of technological or economic benefits provided by the U.S. exporter. The phenomenon has strategic thinkers concerned that America is bartering away some of its technological edge. U.S. defense workers are concerned about losing jobs. And small- to medium-sized defense contractors worry about losing sub-contracting work (Ruppe, 2001).

The current United States policy guide is the “U.S. Government Policy on Offsets in Military Exports.” This policy is a result of the National Defense Authorization Act for Fiscal Year 1989, which required the President to establish a comprehensive defense trade offset policy.

The policy describes that the U. S. government views certain offsets to be economically inefficient and market distorting. The policy directs that certain principles should be followed to minimize the adverse effects of offsets, while not hampering U. S.

firms' ability to compete for military export sales. This policy was issued on April 16, 1990, by the White House Press Secretary in the following statement.

The president announced today his policy on offsets in military exports. This responds to the requirement under FY 1989 National Defense Authorization Act, Section 8925, and 10 U.S. C. Sec. 2505.

The president stated that the United States Government is committed to the principles of free and fair trade. Consequently, the United States Government views certain offsets for military exports as economically inefficient and market distorting. Mindful of the need to minimize the adverse effects of offsets in military exports, while ensuring that the ability of U.S. firms to compete for military exports sales is not undermined, the President has established the following policy:

No agency of the United States Government shall encourage, enter directly into, or commit U.S. firms to any offset arrangement in connection with the sale of defense goods or services to foreign governments. United States Government funds shall not be used to finance offsets in security assistance transactions except in accordance with currently established policies and procedures.

Nothing in this policy shall prevent agencies of The United States Government from fulfilling obligations incurred through international agreements entered into prior to the issuance of this policy. The decision whether to engage in offsets, and the responsibility for the negotiation and implementing offset arrangements, resides with the companies involved. Any exceptions to this policy must be approved by the President through the National Security Council.

The President also noted that the time has come to consult with our friends and allies regarding the use of offsets in defense procurement. He has, therefore, directed the Secretary of Defense, in coordination with the Secretary of State, to lead an interagency team to consult with foreign nations with a view to limiting the adverse effects of offsets on defense procurement. This interagency team will report periodically on the results of these consultations and forward any recommendations to the National Security Council. (The White House Office of Press Secretary, 1990)

The 1992 amendment of the Defense Production Act directed the Department of Commerce to lead in assessing the impact of offsets. The President's 1996 National

Export Strategy recommended consultation with foreign nations to limit the adverse effects of offsets. The recommendation ended with what a DoD official described as the DoD position: “The United States should be cautious and not make any decisions to unilaterally limit offsets” (Trade Promotion Coordinating Committee, 1996). Some academic analysts have described the U. S. official policy on offsets as “ambivalent,” saying they are a product of “benign, albeit somewhat confused, neglect” (Udis, 1996). The United States government normally does not regulate offsets negotiated by industry; however, there have been some exceptions. In the 1990 competition between McDonnell Douglas and General Dynamics counterbids escalated for a \$5.2 billion fighter sale to South Korea. Even early bids included an offset licensing of technology for producing the aircraft. But the government imposed a 30 percent cap on the value of additional offsets.

U.S. arms sales policy explicitly controls the transfer of arms. The sale of biological, chemical, and nuclear weapons is prohibited; however, most conventional weapons can be sold, with the exception of ballistic/cruise missiles, anti-personnel landmines, Stinger missiles, napalm, and depleted uranium anti-tank ammunition. Sales are approved on a case-by-case basis, subject to an interagency review and review of the policy for the country or region under consideration (Federation of American Scientists, 2001)

On the one hand, offsets may strengthen U.S. national security by increasing the capabilities of defense firms in allied nations, thereby strengthening U.S. joint defense capabilities. This facilitates exports of U.S. defense systems, thereby helping to maintain the economic viability of U.S. defense firms and the defense systems they develop. On

the other hand, offsets may harm U.S. national security by increasing the capabilities of foreign defense firms, which in turn may increase the proliferation of weapons and technology to nations hostile to the United States. This may deprive capable U.S. defense firms and their workers of business in favor of foreign firms, thereby eroding the U.S. supplier base and allowing the skills of essential U.S. defense workers to atrophy. This would increase U.S. dependence on foreign suppliers.

Existing U.S. government policy on offsets is used to persuade other countries to reduce their offset demands or shift the types of offsets they request toward more benign activities. The U.S. government seeks a multilateral agreement with its trading partners to reduce or prohibit the use of offsets in defense trade, work cooperatively with other countries to shift their offset demands away from defense production which supplants U.S. work and jobs, and toward activities that could serve their economic and political needs. The objective is to seek benign or even positive effects for the United States, and increase foreign firms' involvement in the research and development stages of new defense systems. This is in order to reduce their government's subsequent demand for offsets (Defense Offsets Commission, 2001).

### **3.4 Summary**

Offsets are classified as “direct” or “indirect” (Petty, 1999). Direct offsets involve an agreement for a transaction directly related to the specific weapon system purchased, such as the seller's acquisition from the purchasing nation of components for the system being purchased. Indirect offsets require the seller to purchase goods or services that are unrelated to the product acquired. Such agreements generally require

that a percentage of the purchase price be spent in the acquiring country's economy, usually within a negotiated period of time. Offsets may be structured to co-produce, to produce under license, to subcontract, to transfer technology, or to make an overseas investment. Offsets have become a well-established part of international arms trade. They will remain so well into the future.

The current United States policy guide (The Presidential 1990 offset policy) limited agency involvement in offset arrangements, which limits the DoD's ability to substantially impact offset policy. Nonetheless, the complex issues surrounding offsets certainly concern the DoD. From a military perspective, not all offsets are bad. Properly controlled, they can promote national security. Offsets positively impact interoperability, alliances, training, and modernization; they have a substantial positive impact on the industrial base and economies of scale. Notwithstanding, offsets promote proliferation of weapon systems that may negatively or positively influence national security. Finally, the impact of technology transfer is generally negative.

Even though foreign business competitors often receive offset assistance from their governments, the DoD should continue its policy not to recognize or accept responsibility to implement offsets. However, the DoD should resist the tendency to focus internally and remain open to international development and cooperative acquisitions. Failure to work with industry and other countries in an environment that is increasingly global could threaten advancements in interoperability, preservation and expansion of the industrial base, and strength of alliances.

## **4. DEFENSE OFFSETS OF REPUBLIC OF TURKIYE**

### **4.1 Chapter Overview**

This chapter provides a comprehensive case study of the Defense offsets of the Republic of Turkiye. It will begin with general information on the geographical and political history of Turkiye and then describe the relations with the United States of America. The development of Turkish offset policy will be presented. The discussion will include basic Turkish policies for offsets. The final section will include descriptions of some Turkish offset agreements.

### **4.2 General Information about Turkiye**

Turkiye is located at a place where the three continents making up the old world (Asia, Africa and Europe) are closest to each other. Turkiye is actually at the point where Europe and Asia meet.

Geographically, Turkiye is a large, roughly rectangular peninsula situated bridge-like between southeastern Europe and Asia. Indeed, the country has functioned as a bridge for human movement throughout history. Turkiye extends more than 1,600 kilometers from west to east but generally less than 600 kilometers from north to south. Total land area is about 814,578 square kilometers, of which 790,200 square kilometers are in Asia and 24,378 square kilometers in Europe. The country is located in the northern half of the hemisphere at a place that is about halfway between the equator and the north pole, a latitude of 36 degrees N to 42 degrees N and a longitude of 26 degrees E to 45 degrees E (See Figure 1).

There are two European and six Asian neighboring countries surrounding the land of Türkiye as neighbor. The land border to the northeast with the Commonwealth of Independent States is 610 kilometers long. The border with Iran is 454 kilometers long, and the border with Iraq is 331 kilometers long. In the south the border with Syria is 877 kilometers long. Türkiye's borders on the European continent consist of a 212-kilometer frontier with Greece and a 269-kilometer border with Bulgaria.



Figure 1. Map of Türkiye

Because of its geographical location, the mainland of Anatolia (Türkiye) is a bridge connecting the Middle East and Europe, and it shares in the history of both those parts of the world. Despite the diversity of its peoples and their cultures, and the constantly shifting borders of its ethnic map, Anatolia has a history characterized by remarkable continuity. It is the birthplace of many great civilizations. It has also been known as a center of commerce because of its land connections to three continents and the seas surrounding it on three sides (Embassy of the Republic of Türkiye, 2001a).

With a population of 65 millions, Turkey is one of the largest markets in the Middle East and Western Europe. The U.S. Department of Commerce says Türkiye is

among the “10 big emerging markets,” and one of the “20 most dynamic countries in the World Trade Organization.” Türkiye is at the center of a new economic and political area known as “Eurasia,” a place where Europe, the former Soviet Union and the Middle East meet. Türkiye is expected to become a member of the European Union by 2005 (The Washington Times, 2000).

#### **4.2.1 Turkish Politics and Policy**

The government of Türkiye functions in accordance with the constitution of 1982. The Republic of Türkiye is a democratic, secular state governed by the rule of law respecting human rights and loyal to the political philosophy of Kemal Atatürk, who was the Republic’s founding father. The Turkish State, with its territory and nation, is an indivisible entity.

Türkiye is fully committed to democracy, respect for human rights and fundamental freedoms, the rule of law, and a free market economy. Closer integration into the international community, in particular into Western institutions, has always been a priority of Turkish foreign policy.

Education is based on contemporary science and education methods and is provided under the supervision and control of the state. The official language of the Turkish State is Turkish and its capital is Ankara. Everyone possesses inherent fundamental rights and freedoms. The individual is entitled to privacy and to freedom of thought and communication

The fundamental goals and duties of the State are to safeguard the independence and the integrity of the Turkish Nation (Embassy of the Republic of Türkiye, 2001b).

#### **4.2.2 Relations with the United States of America**

Turkish-American friendship dates back to early 19th century. Although there was a trade agreement, dated 1830, between the Ottoman Empire and the United States (U.S. Department of State, 1984), relations in the 19th century and even in the early 20th century remained largely confined to the activities of American missionaries in the Ottoman Empire as well as to limited trade largely in tobacco and currant. Even with the onset of the First World War, the Balkans and the Middle East, including the Ottoman Empire, were not considered as traditional areas of American national interest.

There was a ten-year break in diplomatic relations between the two countries from 1917 to 1927. During this period, one note of interest was the refusal of the U.S. Senate to ratify a bilateral Treaty of Amity and Commerce concluded in Lausanne in August of 1923 between the new Turkish Republic and the United States. Once diplomatic relations were resumed in 1927, however, the relationship took a relatively better turn (Republic of Türkiye Ministry of Foreign Affairs, 2002). Nevertheless, the interaction between the two countries remained minimal at the time.

After World War II, Türkiye 's foremost ally has been the United States. Because of Türkiye's strategic location in the Middle East, its proximity to the Former Soviet Union's military installations and test sites, and its control of the Black Sea straits, military ties with the United States were a crucial factor in the East-West confrontation. The alliance originated soon after the end of World War II. The Truman Doctrine of March 12, 1947 was the beginning of a new era in Turkish-American relations. Close

working relations were established between Turkiye and the U.S. in the political, military, economic, technical, social and cultural affairs during this period (Republic of Turkiye Ministry of Foreign Affairs, 2002).

Turkiye has gained strong allies and protection against the U.S.S.R. Turkiye is providing the control of the Dardanelle and the Bosphorus, and it is the first line defense for NATO's southern flank. It is also a strategic communication and transportation link between Arab oil sources and the West.

Turkiye had joined the United Nations (UN) on August 15, 1945 (Nyrop, 1973). On June 27, 1950, the United Nations' Security Council invited the organization's members to repel the armed attack against the Republic of Korea, which was aided and abetted by the Soviet Union. In response to this request, the Turkish government sent a mixed brigade of 4,500 men to the conflict. This unit was the third largest to participate in this action, after the American and South Korean forces. As a result of their distinguished actions, the Turks were highly praised by the other forces (Vali, 1971).

In September 1951, both the U.S. and Britain proposed full NATO membership for Turkiye and Greece. This proposal was accepted by the organization and on February 18, 1952, Turkiye and Greece became full members of NATO (Harris, 1972). In accordance with bilateral defense arrangements under NATO authority, the United States has developed and maintained several major military installations on Turkish bases (Republic of Turkiye Ministry of Foreign Affairs, 2002).

Cordial relations between the U.S. and Turkiye continued until 1974. The relationship between the U.S. and Turkiye continued well except for an arms embargo of Turkiye. The embargo was in response to Turkish military action (Peace Operation) in

Cyprus and was lifted in 1977. By the time the embargo ended, the Turkish armed forces had been severely weakened. General Alexander Haig, the Commander of NATO, indicated in July 1978 that less than half of Türkiye's aircraft were operational (Byrd, 1978).

During the years of the embargo, Türkiye considered different sources for obtaining military equipment and spares. One source considered was domestic production. Other important sources were other NATO nations (especially Germany) and some Arab nations. It can be said that the embargo encouraged Turks to seek better relations with her neighbors, but Türkiye never accepted military aid from the U.S.S.R. and the other Warsaw Pact nations. However, whatever problems were encountered during this period, they never jeopardized the strong underlying partnership between the U.S. and Türkiye. A new chapter in Turkish-American relations opened in the 1980s. Greater cooperation and U.S. support for Türkiye increased significantly (Republic of Türkiye Ministry of Foreign Affairs, 2002).

In 1991 Türkiye and the U.S. agreed to upgrade their cooperation even further and give it the status of an enhanced partnership (Republic of Türkiye Ministry of Foreign Affairs, 2002). Since then bilateral relations have continued to prosper in many fields. Post-Cold War developments have clearly shown that more than ever Türkiye and the U.S. currently share a set of common strategic, security, and economic concerns and interests which naturally bring them closer together.

Over the years, Türkiye has been one of the greatest recipients of U.S. grants and monies from various U.S. programs (Nuber, 1995). These include the Economic Support Fund (ESF), Military Assistance Program (MAP), Foreign Military Financing Program

(FMFP), and International Military Education and Training (IMET) program. In addition, Türkiye has been a valued user of the Foreign Military Sales (FMS) process. Back in FY 1985, Türkiye received \$700 million in FMS credits and MAP grants. For FY95, Türkiye was allocated \$365 million in commercial rate loans; the era of credits and grants has come to an end. Türkiye's IMET allocation, which had been around \$3 million for several years, is now at \$1 million (Nuber, 1995).

Turkish defense exports to the United States traditionally have been negligible. They include small volumes of aircraft parts made by Türkiye's Akinci-based Tusas Aerospace Industries Inc. (TAI) under offset arrangements related to Türkiye's F-16 fighter purchases. There are some new efforts to enter the U.S. market. FNSS Defense Systems Inc., an Ankara-based Turkish-U.S. joint venture between United Defense L.P., Arlington, Virginia, and Nurol Holding, Ankara, is competing to provide the U.S. Army with a new mid-weight armored vehicle design. It is the first major opportunity for the Turkish defense industry to participate in a major U.S. program. It could be a large export opportunity for Türkiye and it could show that the Turkish armored vehicle industry is competitive not only in other parts of the world, but also in the United States (Enginsoy, 2000).

### **4.3 Turkish Offset Policy**

All governments purchase defense equipment, and it is hardly surprising that over 130 countries have some form of offset policy (Martin, 1996). As defense budgets are cut and competition in the industry increases, offsets are likely to become more rather than less important. Firms are seeking to compete for contracts by offering increasingly

attractive offset packages and purchasers are increasingly demanding domestic benefits for their defense expenditures.

With regard to giving and receiving offset work, countries can be categorized into three groups. First, there are countries like the USA that largely export equipment, and thus give offsets. The USA has a policy not to accept offsets. However, major foreign procurements demand offsets. The USA purchased major weapon systems such as the Harrier aircraft, the Ptarmigan radio system, or Beretta pistol with 100% production offset, all purchasing agreements stipulated that final assembly takes place in America (Petty, 1999). Second, there are a small number of countries such as the UK, Germany, France, and Israel, that both import and export armaments, and thus both give and receive offset work. Finally, there is the large number of states that largely import defense equipment, and who typically only receive offset work. Turkiye is one of the countries that fall into this category.

Turkiye has been seeking to modernize her defense forces and has attempted to use offsets to improve her defense industrial base. Today, 80 percent of the world's crises have taken place within close proximity to Turkiye: the Balkans, Israel, Lebanon, Iran, Iraq, Syria and the Caucasus region (Book, 2002). Due to its location at the center of a region historically characterized by instability, Turkiye continues to be obligated to commit substantial amounts of limited resources for defense and defense industry as a matter of self-protection and survival. Constituting, sustaining, and maintaining deterrent armed forces both at a high state of readiness and with the necessary and proper equipment is extremely costly and can have quite a negative effect on the economy, especially when limited defense dollars are spent off-shore (Egeli, 1999). Therefore,

under military procurement programs, the efficient use of Türkiye's limited resources has become imperative. Emphasis has been and continues to be placed on developing and/or enhancing indigenous capabilities within various sectors comprising the defense industry infrastructure. From this point of view, the provision of direct and indirect offset activities become extremely important in first, establishing and/or sustaining an indigenous defense industry infrastructure capable of satisfying Defense's needs; and secondly, at the same time, fostering domestic economic growth during future military procurement programs by minimizing off-shore expenditures (Egeli, 1999).

One important step the Turkish government has taken to meet the requirements of the 21<sup>st</sup> Century is the creation of the Undersecretariat of Defense Industries, or Savunma Sanayi Müsteşarlığı (SSM, to use the Turkish acronym) in 1985. This organization comes under the Ministry of National Defense (MND) and is tasked with building a military-industrial complex and in entering into defense cooperation arrangements and large-scale procurement programs, like the F-16 co-production program. It is the initial point of entry for foreign defense contractors desiring to do business with Türkiye. SSM commands an annual budget of one billion dollars Defense Industry Support Fund – supported by levies on gas, tobacco, alcohol, and gambling – to finance its programs (Bekdil, 2000b). SSM is the only government agency in Türkiye equipped with power to administer military offsets. The Foreign Trade Undersecretariat, on the other hand, is responsible for offset programs in nonmilitary procurements. For example, procurement of a commercial plane for Turkish Airlines can carry out by The Foreign Trade Undersecretariat. Sometimes, it is possible to see some defense related offset programs which are carried out by The Foreign Trade Undersecretariat.

In 1984, Türkiye had its first offset experience with the F-16 fighter program, which was conducted by General Dynamics. The program was implemented and monitored under the responsibility of the Ministry of National Defense. The Undersecretariat of Treasury and Foreign Trade actively took part in the export of commercial and industrial goods under the program. Since then, under the various procurement programs, SSM has signed twenty-nine offset agreements with twenty-one companies (Egeli, 1999). During this time, Turkish offset policy has changed markedly from one purchase to another. Like many offset authorities around the globe, Türkiye is presently developing and evaluating an updated/revised set of offset guidelines. The intent of these updated/revised guidelines is to encourage additional business transactions that will further contribute toward the achievement of SSM's offset policy objectives. On 12 May 2000 the new directive which explains principles of offset implementations in the Turkish Defense Industry procurements was submitted. The core objective of the changes was to increase the work share of local companies and, in the long term, improve their competitiveness in foreign markets (Sariibrahimoglu, 2000). Basically, the new offset directive gives more flexible legislation for direct offsets which do not perform well under the previous strict guidelines. After issuing the original 1991 guidelines, SSM encountered difficulties, mainly in direct offsets, with many countries failing to fulfill their commitments. This was largely because the programs were directly related to defense-related exports and the joint venture companies faced difficulties exporting into Türkiye's relatively new defense market. These problems were worsened by worldwide shrinking defense industry markets. To overcome this problem with the new directive, the definition of direct offsets has been expanded to include exports directly or indirectly

related to commercial products. For example, under a military helicopter/aircraft program, export of the commercial equivalent can be qualified as a direct offset.

The reason for the new offset approach is the belief that both foreign contractors and Turkish companies will be better able to mutually develop meaningful offset projects resulting in long-term partnerships. A revision of current Turkish offset guidelines can give more flexibility to foreign contractors in fulfilling their offset obligations. With this revision, SSM aims to define a clear-cut set of priorities, which underlie its promotion of offsets. Optimally, SSM seeks a transfer of technology, whether through direct investment, co-production, licensing or know-how arrangements. In the area of purchases of Turkish goods, preferences are being given to the defense and technology oriented sectors. For future defense deals, when other conditions are equivalent, Türkiye will opt for countries that are providing higher technology transfer. Technology transfer and approval of export licenses – together with Türkiye's right to export defense equipment to third countries – became crucial factors in determining the country's future defense contracts (Sariibrahimoglu, 2000).

However, as a major export country, the U.S. administration has pledged to examine Türkiye's requests for export license and technology transfer on a case-by-case basis, rather than making general commitments. At one extreme (low transfer), all critical equipment was produced in the United States and added to planes in F-16 fighter co-production in Türkiye. However, opportunities exist for increased levels of technology transfer and cooperation. For example, the co-production of 145 attack helicopters worth \$4 billion and 1,000 main battle tanks, worth \$7 billion in Türkiye

(both projects will be examined in further section) could be an opportunity for Türkiye to secure partial access to U.S. technology (Bekdil, 2000c).

Research and development studies have been carried out with some projects. Values of these studies are different in every projects. Research and development studies have big importance in defense industry, but in some offsets agreements, level of studies is not high enough. Initially, joint ventures, transfer of technology through licensing agreements, the transfer of turnkey factories and assembly units had created very limited backward and forward linkages between studies (Akin, 2002). But some joint venture companies are paying more attention for research and development studies. For example, FNSS Savunma Sistemleri A.Ş. is an American-Turkish joint venture company established by United Defense L.P. of USA and NUROL Holding of Türkiye. A contract made between FNSS and the Turkish Government to produce 1698 armored fighting vehicles (AFVs), advanced armored personnel carriers (AAPCs), armored TOW vehicles (ATVs) and armored mortar vehicles (AMVs) became effective on 15 August 1989. Besides vehicle production, establishment of a fully equipped research and development unit for development in Türkiye was aimed to attain as one of the objectives in the project (FNSS, 2002).

As a result of a search for a new exclusive defense equipment supplier and partner, Türkiye and Israel, in February 1996, signed two unprecedented agreements on military and defense industry cooperation as the basis for a new strategic alliance. In the military cooperation agreement, Turkish and Israeli fighter pilots have trained in each other's territory and the partner's navies have held joint exercises in the Mediterranean Sea. The Turkish government and Israeli Aerospace Industries Ltd. (IAI) signed the

defense industry agreement. It was the first large scale defense industry deal between the two countries. It covered the upgrade of 54 Turkish F-4E fighters for \$630 million and an \$85 million deal in 1998 to modernize 48 Turkish F-5A/B jets. Both were sole-source deals (Bekdil, 2000d).

SSM's policy objectives are anticipated at this time to remain the same even when the new guidelines are released. SSM's offset policy objectives are (Egeli, 1999):

1. To increase foreign currency inflows either by exporting defense industry products and other related industrial Turkish products or by foreign capital investments in order to compensate for the foreign currency outflows incurred for the financing of defense industry projects.
2. To save foreign currency by transferring technology and creating both new production capabilities and increasing existing production.
3. To ensure established industries' self-sufficiency and to enable projects to be implemented in a productive way by creating new business opportunities and Turkish Value Added. Turkish Value Added incentive is a way of increase the local content of exported products (it will be discussed in greater detail in a later section).
4. To improve quality, standardization and productivity of the existing industries and also industries to be established through technology transfer and export sales, and in this way to increase international competitiveness of the Turkish economy as a whole.

The new guidelines introduce changes to the direct portion of the Turkish military offset program guidelines and seek to achieve the benefits and advantages of offsets. The changes intend to encourage prospective contractors to consider mutually beneficial business opportunities, while at the same time, making it easier for Turkish companies to secure work associated with defense programs. It has been argued that, "The new guidelines are a result of pressure from foreign firms" (Bekdil, 2000e). However, the

revisions apparently have been devised to comfort the contractor, rather than to maximize offsets gains. In that way, they look concessionary.

### **Direct Offset**

Direct Offsets are contractual arrangements that involve defense articles and services referenced in the sales agreement for military exports. Under the evolving new guidelines, the definition of direct offsets are expanded to also include (Egeli, 1999):

1. Export of defense goods and/or services by a Turkish business to the country of the eligible party or third countries.
2. Previously the exports needed to be directly or indirectly related to the project. Under the new guidelines and subject to SSM's approval, these exports may also be directly or indirectly related to commercial projects. For example, under a military helicopter/aircraft program, export of the commercial equivalent can be qualified as a direct offset.
3. License, know-how, and technology transfers relating to the prime contract, using the multipliers quoted for technology transfers realized under the contractors' indirect offset obligations,
4. The Turkish value added of goods and services procured from Turkish subcontractors in Türkiye relating to the prime contract/project,
5. Depot level maintenance projects relating to the prime contract (tooling, equipment, drawings, engineering information, training, assistance, etc.).

Subject to final guideline decisions, contractors may be required to fulfill 50% of their direct offset obligation through the export of defense products directly or indirectly related to the Prime Contract/Project (Egeli, 1999).

## **Indirect Offsets**

Indirect Offsets are contractual arrangements that involve goods and services unrelated to the exports referenced in the sales agreement. Under the evolving new guidelines, the definition of indirect offsets is defined as (Egeli, 1999):

1. New or expanded foreign investment.
2. License, know-how, and technology transfer; training opportunities in Turkiye and abroad.
3. Research and developments financed by the contractor for Turkish universities and other research institutions.
4. Investment by the contractor in industrial companies to establish and operate research and development facilities.
5. Exports of Turkish defense or related industry products and services.

## **Offset Credits**

Offset credits are being granted on the basis of Turkish value added; however, if Turkish value added exceeds 50% of product price then the product price is used as Turkish value added for offsets credit purposes. Subject to SSM approval, for high-tech defense products, this Turkish value added threshold could be set as low as 30%. The SSM performed a survey of Turkish industry production capabilities prior to establishing these new percentage thresholds and believes the new calculation methodology allows for an implicit multiplying effect in the 2 - 3.3 range (Egeli, 1999).

## **Turkish Added Value Incentive**

A new Turkish added value concept regarding the export type of offsets provide another incentive for contractors. In order to encourage contractors to increase the local

content of exported products, this incentive mechanism may be enhanced. For example, assume a contractor will export a high-tech defense product with a minimum Turkish value added of 40% (this percentage has to be approved by SSM prior to any export). In this case, if the Turkish value added exceeds 40% of the exported product invoice price, the contractor will get full offset credit on the total invoice amount in accordance with the new offset policy. If, however, the Turkish value added is less than 40%, the contractor only gets offset credit for that amount. It is imperative that the Turkish added value incentive mechanism be attractive enough to encourage eligible parties to actively work to increase the local content of the exported product. As such, SSM is considering a new crediting mechanism. If the local content of an exported product is increased some substantial amount, a multiplier will be used on the total invoice amount. For example, if the total content were to increase from 40% to 50% Turkish value added, this would represent an increase of 1.5 times and a multiplier of 1.5 would be applied to the total invoice amount. This policy would further encourage contractor to significantly increase local content.

According to the current export regime, Turkish suppliers who export goods and services have the right to obtain export incentive from the Undersecretariat of Foreign Trade. Turkish suppliers are allowed to temporarily import raw materials; parts and components for export purposes without paying custom taxes, duties, and levies.

## **Penalty**

If the offset commitments are not met at the time and in the manner required, then (Egeli, 1999):

1. Penalties at the rate of 10% shall be applied to the unfulfilled and escalated offset amount. Enforcement of penalties does not relieve the contractor of liability for losses resulting from its failure to meet its contractual offset commitment.
2. Any contractor who fails to meet the offset commitment may not be allowed to participate in SSM's projects for a specific period of time to be determined by SSM.

In order to secure the penalty payments, Contractor is required to submit a letter of bank guarantee that is equal to the potential offset penalties to be assessed under its total offset commitment as an effectivity condition of the offset agreement.

## **Multiplier**

Multipliers between one and five are used for investments, technology transfers, know-how to be realized in different fields, and for training to be provided free of charge. SSM is authorized to apply these multipliers by considering the level and quality of investment, technology transfer, know-how and training (Egeli, 1999).

## **Bank Guarantee**

A bank guarantee in the form of an irrevocable letter of credit (L/C) obtained from a reputable and trusted bank in the amount, which is equal to the potential total penalty value of the offset commitment, is required (Egeli, 1999).

## **Project Evaluation Bases and Criterion**

Activities related to the projects executed by the Undersecretariat for Defense Industry by the decision of Executive Committee are executed as described below.

After decision for execution of the project by Undersecretariat for Defense Industry, the project management organization is constituted. Usually, project management organization consists of Executive Committee, High Level Committee, Project Coordination Group and Project Office. The highest level decision organ is Executive Committee, which consists of Primer Minister, Head of Turkish General Staff, and Minister of National Defense; High Level Committee consists of Undersecretary for Defense Industries, representatives of Turkish General Staff and related forces; Project Coordination Group consists of project general coordinator, project technical coordinator, project economic coordinator, representatives of Turkish General Staff and related forces. Project Office consists of Undersecretariat for Defense Industry personnel and representatives of related forces. If necessary, representatives of Turkish Aerospace Industry, Defense Technology Engineering Inc. (STM) and related industry could be added to the Project Office (SSM, 2002a).

The project is executed by the Project Coordinator who is assigned by Undersecretariat for Defense Industry. Request for proposal (RFP) is prepared by the project office and after agreement of opinion related committees and user, the RFP is issued. Also, the project office prepares the project detail schedule and the project is executed according to schedule. Each project office, also, consists of a Turkish Armed Forces coordinator or related forces coordinator according the property of project.

At the evaluation of the project, administrative, economic, technology transfer and local content, system performance and offset subjects are handled as main criterion. The project office is divided to subgroups with parallel to main criterion focused above. Main criterion and weights and sub criterion and weights are fixed before receiving of proposal, coordinated with user and these are filed as an evaluation guide and evaluation guide are signed before evaluation process.

All evaluation activities are executed in the Undersecretariat for Defense Industry. Evaluation committees are collected when pure majority occurred. Each member of execution committee has one vote. If the members give different scores to the same criteria, average of the scores are used; if the members give vote like accept or reject to a criteria, majority of vote is used. Evaluation activities and decisions is written and signed by the evaluation committee members.

Proposals, evaluation ground rules, evaluation criterion and weights and all documents related with evaluation activities are classified as secret and carry out of any documents, notes, sketches related with evaluation activities are prohibited.

After finishing of evaluation, the results are firstly discussed at Project Coordination Group; secondly discussed at High Level Committee and then the result are prepared for the presentation to Executive Committee. Then, Executive Committee takes information about project and gives directives to be base of execution the project (SSM, 2002a).

## **The Future of Offset Programs**

The SSM has the most extensive experience of all Turkish governmental institutions with administering offset programs. SSM is the only government organization in Türkiye responsible for military offsets under the Law No. 3238. The SSM signed 41 offset agreements between 1989 and Jul. 31, 2001, mainly with joint venture companies (Sariibrahimoglu, 2001). The potential offset or industrial cooperation projects under the major defense procurement programs that will be conducted by SSM are as follows (Jane's Defense Weekly, 30 August 2000):

- 145 attack helicopters, worth US \$4 billion
- 1,000 main battle tanks, worth US \$5-7 billion
- 4 airborne early warning and control aircraft, worth US \$1-1.5 billion
- 6 mine hunting vessels, worth US \$0.75 billion
- 13 UAV systems, worth US \$0.25 billion
- 48 police helicopters, worth US \$0.3 billion
- 40,000 tactical wheeled vehicles, worth US \$3 billion

Türkiye will be allocating roughly US \$150 billion on the modernization of its armed forces during the next 25 years (Egeli, 1999). In order to minimize the negative impact of this substantial defense expenditure on Türkiye's national economy, the SSM will be obligated to take measures that achieve great efficiencies. This will result in high importance for offset programs. In this regard, directing defense equipment purchases towards indigenous defense industry to the maximum extent possible, as well as introducing new technologies with export opportunities, will be key factors in evaluating future offset proposals. The best-offset projects create an economic win-win for all

involved parties, the obligor, Turkish industry, and Turkish armed forces. When this happens, Türkiye's national economy also wins.

#### **4.4 Turkish Offset Applications**

In the early 1980s, as a critical North Atlantic Treaty Organization (NATO) and U.S. ally, with borders on Iran, Iraq, Syria, and Russia, Türkiye began to upgrade its military substantially and to request offsets more frequently to help compensate for its increased spending.

In 1984, Türkiye had its first offset experience with the F-16 fighter program, which was conducted by General Dynamics. The program was implemented and monitored under the responsibility of the Ministry of National Defense. The Undersecretariat of Treasury and Foreign Trade took active part in the export of commercial and industrial goods under the program. Since then, under the various procurement programs, the SSM has signed twenty-nine offset agreements with twenty-one companies.

Three out of twenty-nine offset programs have been successfully completed so far. As of 31 December 1998, the total offset commitments made by contractors amounted to US \$1.54 billion. This is composed of US \$0.39 billion for direct offsets and US \$1.15 billion for indirect offsets. 38.4% of SSM's US \$0.39 billion in direct offsets have been fulfilled as of year-end; but it is important to acknowledge that the fulfillment period for many of these direct offset programs continues for quite some time. Also 92.3% of SSM's US \$1.15 billion in indirect offsets were fulfilled as of year-end (Egeli,

1999). As could be expected, the SSM is most willing to assist contractors that experience difficulty in discharging their offset obligations.

The next section provides a summary of co-production and offset deals with Turkiye. Examples of successful offset programs to date are Peace Onyx II F-16 Engine, Light Transport Aircraft Engine (LTAE), AH-1W Super Cobra Helicopter Lot I and Lot II. Under Peace Onyx II and LTAE offset programs, Tusas Engine Industry (TEI), a joint venture between the Turkish Air Force and the aircraft engines division of General Electric, became the sole source supplier for more than 200 parts with the help of General Electric (GE). This is a good example of industrial cooperation. This cooperation helped TEI be competitive in terms of price and quality, while at the same time GE acquired 46% of TEI's stocks as a partner. GE, in fulfilling its offset commitments, created a win-win situation for both parties. In addition to part manufacturing, TEI benefited from depot level maintenance capability establishment for miscellaneous engines and received training in critical defense fields. The TEI partnership was originally formed to produce aircraft engines for the F-16 "Fighting Falcon." Since then, the company has begun producing engines for a variety of aircraft and helicopters. Today, TEI is the 36<sup>th</sup> largest exporting company in Turkiye, and is a good example of a working partnership (The Washington Times, 2000).

#### **4.4.1 Co-production and Offset Deals with Turkiye**

##### **240 F-16 Fighters (JDW, 1998):**

This is Turkiye's first and largest co-production program that was started in 1984 and marked the development of a significant industrial infrastructure. Under the Peace

Onyx I program TAI co-produced 152 of 160 Lockheed Martin F-16s that were delivered to the air force between 1987 and 1995. Peace Onyx II began in mid-1996 with 48 of the 80 F-16s ordered already delivered. Production of the 240 F-16s is due to end next year. 80 of the planes are being financed by a \$2.5 billion fund set up by the U.S., Saudi Arabia, and Kuwait in return for Turkiye's cooperation in the Gulf War. Lockheed Martin owns 49% of TAI.

**F-110-GE-100 Engine F-16 Fighters (DISAM, Spring 1995):**

TEI was established in 1985 to manufacture engine components and assemble the F110-GE-100 engine for the TAI F-16 production line. TEI is a Turkish-American joint stock company.

**ALQ-178 V5 Radar Warning and Electronic Countermeasures for use on F-16 Fighter Planes (JDW, 98):**

Microwave Electronic Systems, Inc. (MIKES) produced the ALQ-178 V3 for the first batch of 160 co-produced F-16s, which was worth \$325 million. Lockheed Martin owns 49% of MIKES.

**Light Transport Aircraft Project (SSM, 2002):**

In order to meet Turkey's current military and future civilian needs, a contract was signed with CASA (Construcciones Aeronauticas SA) of Spain in 1990 for the joint production of 52 CN-235 transport aircraft. Deliveries from TAI's Ankara/Akinci facilities have been completed in 1998.

**Basic Training Aircraft (SSM, 2002):**

40 SF-260 model aircraft have been jointly manufactured with Italian Agusta at TAI facilities and delivered to the Turkish Air Forces.

**Cougar Helicopters (SSM, 2002):**

30 Cougar helicopters were intended to be co-produced in Turkey. For this purpose, in February 1997 a contract was signed with EUROTAI Consortium, constituted by EUROCOPTER and TAI. December 11, 2001, total of 15 helicopters has been delivered to Turkish Armed Forces. Two of them were produced in EC facilities (France). Remaining 13 helicopters were co-produced in TAI facilities. Out of these helicopters, 6 are Combat -SAR; 3 are SAR and 6 are Utility.

**1,698 Armored Combat Vehicles (ACV) (JDW 8/19/98 and 9/15/99):**

The U.S. company FMC entered into a joint venture with Turkish Nurol Savunma Sanayi to form the company FNSS. Nurol SS has been assembling the first part of the order under license. The plan calls for 1,698 vehicles of various configurations based on a FMC design, worth an estimated \$1.3 billion, to be produced over an eight-year period in four variations (infantry fighting vehicle, armored personnel carrier, mortar vehicle, and TOW vehicle). As of August 1998 the TLFC had received 1,500 vehicles with the complete delivery expected by the end of 1999. In September 1999, Prime Minister Bulent Ecevit approved the acquisition of an additional 655 armored infantry fighting vehicles from FNSS (valued at \$450 million).

#### **Components and Parts for the 1,698 ACV's (DISAM, 1995):**

Texas Instruments has a contract through Aselsan to produce optical sights. The U.S. companies Alison Transmission, Detroit Diesel, and Cadillac Gage are also supplying part.

#### **Upgrading M-113s and Producing Components for the F-16 (DISAM, 1995):**

Sergeant Fletcher (US), Kayseri Werkplaats (Turkiye), SIAI-Agusta (Italy) and MBB (Germany) are engaged in joint ventures.

#### **Euro-Stinger Project (DISAM, 1995):**

This is a joint venture between Turkiye, Germany, Greece, and the Netherlands to develop a European version of the U.S. Stinger shoulder-launched anti-aircraft missile licensed by the U.S. company Raytheon. Turkiye is producing around 4,800 missiles. Assembly of the final product is taking place at both the German plant Dornier and the Turkish plant Roketsan AS. Roketsan was formed in 1988 and produces rocket motors and propellants for the Raytheon Stinger missile.

#### **4.4.2 The F-16 Offset Agreement**

In 1985, the major concern of the Air Force Directorate (AFD) was the start-up of the Turkish Air Force Command (TAFC) F-16 co-production/co-assembly program. Today it is the most important program in the Turkish armed forces quest for modernization and it has proven to be most beneficial to build Turkiye's military-

industrial complex (Hickok, 2000). Türkiye has long recognized the importance of air power, having founded a separate air force in 1911 (thirty-six years before the United States). The decision to focus on modernizing the Turkish Air Force was therefore not surprising, but the choice to pursue co-production of the F-16, instead of buying off-the-shelf airframes, marked a crucial turn in Türkiye's indigenous defense industry and in the country's pursuit of military self-sufficiency (Hickok, 2000).

### **Peace Onyx I**

The sale itself was enormous: 132 F-16 Cs and 28 F-16 Ds at a cost of \$4.2 billion in 1983, sold to Türkiye for cash and a Foreign Military Sales (FMS) loan from the Pentagon. Against this, a direct offset commitment of \$150 million was signed on May 11, 1984, committing General Dynamics (GD) to purchase components in Türkiye's aerospace program directly or to provide training in it (Hickok, 2000). GD agreed that out of a total package of 160 F-16C/D, the first 8 aircraft would be delivered from the General Dynamics/Fort Worth Division production line, the remaining 152 aircraft were delivered from the newly established TAI's production line (Letter of Offer and Acceptance, 1983). On November 9, 1984, GD signed an indirect offset commitment, agreeing to provide services and to export products from Türkiye unrelated to the F-16 or the aerospace program.

In addition, GD committed to fund the set up of a new aerospace company, the Turkish Aerospace Industries Inc. (TAI). The purpose of this company, housed in a large, newly constructed factory, was to assemble and co-produce the F-16 in Türkiye, and to provide support for the program including research, development, design, training,

and servicing. GD set up this company as a joint venture with Türkiye and its principal subcontractor, General Electric Corporation (GE), which makes F-16 engines. Of the \$137 million required to fund the project, GD put in \$58 million (42%), GE funded \$9 million (7%), Türkiye put in \$68 million (49%), and the Turkish Air Force Foundation and Turkish Air League Administration (THK) put in the remaining \$2 million (2%). The company, TAI, was thus 51 percent Turkish owned and 49 percent U.S. owned. TAI facilities located in Akıncı, Ankara cover an area of 2.3 million square meters with an industrial facility of over 130,000 square meters under roof. The Company has a modern aircraft facility, furnished with high technology machinery and equipment which provide extensive manufacturing capabilities. Quality system of TAI meets USAF MIL-Q-9858A, NATO AQAP-120 and ISO-9001 standards (Turkish Armed Forces Foundation, 2002).

General Electric helped create Tusas Engine Industries (TEI), a Turkish-American joint stock company, to manufacture engine parts and assemble the F110-GE-100 engine for the TAI F-16 production line. The assembly of engines and the manufacture of parts started in 1987. This start-up phase was completed with the co-production of selected parts by the end of 1989. Having successfully completed the start-up phase by the end of 1989, TEI moved into the mature growth phase. TEI is now mature supplier of engine components. Initially utilizing military aircraft engine technology, throughout the years, TEI has penetrated to commercial components markets as well. Over the past years, TEI has developed into a very well trained diversified company, combining manufacturing, assembly and test facilities all in one location. TEI has met all its delivery and quality commitments and is now producing parts for several aircraft engine applications as well

as gas turbines for customers in United States and Europe (Turkish Armed Forces Foundation, 2002).

Lockheed Martin owned a 49% share in a Turkish firm, Microwave Electronic Systems, Inc. (MIKES), to produce the ALQ-178-V5 radar and electronic countermeasure systems used on the F-16. And Litton started to collaborate with the Turkish firm Aselsan to build F-16 components (Gabelnick, 1984).

The Turkish government allowed GD to spend the \$150 million direct offset commitment on the development of a whole town around the TAI complex. This included housing for 2,000 personnel to work in the plant, a hospital, mosque, school, waste treatment plant, power plant, and roads, as well as job training. The F-16 production, named Peace Onyx and then Peace Onyx II, has been TAI's primary program and the main catalyst for the growth of Türkiye's aerospace industry. In addition to assembling the F-16s, TAI is manufacturing in Türkiye the aft fuselage, center fuselage, and wings. The rest of the components are being shipped in. The first plane rolled off the assembly line in October of 1987, ahead of schedule (Hickok, 2000). Peace Onyx provided a ten-year plan to modernized the Turkish Air Force (TuAF), to develop an indigenous aerospace industry, and to deepen Turkish-U.S. military relations.

As with the creation of TAI, General Dynamics requested support for the offset commitment from its principal subcontractors, General Electric Corporation (making the engines) and Westinghouse (providing the radar). General Dynamics has overall responsibility for the \$1.27 billion indirect offset but was able to sign separate commitments with General Electric Corporation for \$317.5 million (25%) and with Westinghouse for \$152 million (12%) (Hickok, 2000). The performance period was for

ten years with a three-year grace period, which means that the offset was to be completed by 1994 or, with the grace period, by 1997. There is a complex penalty formula for noncompliance. A review period every two years was provided to smooth out the process, so that General Dynamics does not arrive at the end with a lot of the commitment left uncompleted. In total, General Dynamic's obligation in Turkiye for the F-16 was \$1,008.5 million. This is a huge sum in absolute terms but represents a relatively modest 24 percent of the actual contract value. The offset figure in General Dynamic's recent military sales to some European countries has easily exceeded 100 percent (Hickok, 2000).

Initially, the government laid down guidelines for the indirect offset, asking General Dynamics to fulfill 90 percent of it through the procurement and export of Turkish products and 10 percent through capital investment and the promotion of tourism in Turkiye. When General Dynamics began to look around for products to export from Turkiye, such as cotton, textiles, and orange juice concentrate, they found the process difficult, time consuming, and expensive. General Dynamics could get only one dollar of offset credit for each dollar of product exported. In 1984 and 1985, as the development of TAI got underway, the Turkish authorities began to have a change of heart. They came to believe that the investment was worth more because of its inherent leverage.

Since dollars invested in an industry (e.g., a hotel) could generate far more cash than the original investment sum, Turkiye began to encourage General Dynamics to invest more, even to reverse the percentage under the guidelines with 90 percent now to be fulfilled by investment. The encouragement Turkiye provided was to award General Dynamics offset credit based on a multiplier formula. General Dynamics thus receives

offset credit, to be negotiated in each case, of several times the value of its actual investment. The leverage could be further increased since General Dynamics could use its reputation and network to enlist the support of investment partners.

The first indirect investment was in the Ankara Hilton Hotel, followed by three more, one each in Izmir, a port in the west; in Mersin, a port in the south; and in Istanbul on the Bosphorus. The Istanbul hotel is the original Hilton Hotel in the country. General Dynamic's investment in each hotel was \$2 million with additional equity put in by foreign and local partners. The advantage to General Dynamics, if these projects worked as planned, was that its money would generate a cash flow and eventually a profit once the investment is paid back. GD entered into a joint venture with Sabanci Holding (local partner) and Hilton International to open Hilton Hotels under the name of HiltonSa Company in Turkiye. HiltonSa Hotels had been opened in Ankara, Izmir, Istanbul and Mersin as an offset commitment by the year of 1993 (Cakiroglu, 2002).

General Dynamics had put together another investment project in Turkiye with Bechtel, the giant U.S. engineering and construction firm based in San Francisco. General Dynamics invested about \$20 million in a billion dollar thermal power plant project. Bechtel lead the construction but was joined on a subcontract basis by other investment partners, Combustion Engineering of the United States, Siemens of Germany, and Royal Dutch Shell. General Dynamics expected to get \$250-300 million in offset credit for this project, and the government guaranteed a 15-20 percent return on investment (Hickok, 2000).

## **Peace Onyx II**

TAI would not remain viable without additional F-16 production on terms substantially different from the first program. The original Peace Onyx had achieved the goal of transferring the necessary technology and know-how to establish a Turkish aerospace industry. This potential was not sustainable without the acquisition of further aircraft. The second co-production program of F-16 fighters—Peace Onyx II—was signed on 26 March 1992. At first, the contract called for the purchase of 34 F-16C and 6 F-16D Block 50 aircraft with a total estimated cost of \$1.515 billion. In 11 February 1994, the contract changed with an amendment to the letter of offer and acceptance reflecting the shift from 40 to 80 aircraft to produce (Hickok, 2000). The funding of the first 40 planes met primarily by Saudi Arabia, Kuwait, and the Emirates. A direct offset commitment of \$133.7 million was signed, committing General Electric (GE) to purchase components in Türkiye's aerospace program directly. Within this project, overall responsibility for the \$256.2 million indirect offset commitment was able to sign. Maintenance hangars for F-100, F-129 and CT-7 engines were built and training was provided by General Electric for TuAF (TUSIAD, 1999). The additional of enhanced radar systems for better air-to-ground targeting with standoff precision guided weapons, a missionized cockpit, and improved data links would give the Turkish Air Force an all-weather, night-capable aircraft. A Peace Onyx follow-on would continue to provide Türkiye with a versatile military capability to defend itself against attack by its neighbors or to provide strategic deterrence well into the twenty-first century.

## **Peace Vector IV**

In addition to the Peace Onyx program TAI produced 46 F-16 fighters with a new program— Peace Vector IV —for the Egyptian Air Force between 1993 and 1995 under the agreement signed between the Governments of Turkiye, the U.S.A. and the Arab Republic of Egypt. This program is significant as it was the first delivery of F-16s to a third country from a manufacturer outside the U.S.A. (Barber, 2000).

## **Summary**

TAI completed a total of 152 Block 30/40 F-16C/Ds for the TuAF (plus 8 delivered directly from the USA) under the Peace Onyx I, 80 Block 50 F-16C/Ds (68 Cs and 12 Ds) was placed under the Peace Onyx II, plus an additional 34 Block 40 Cs and 12 Block 40 Ds built for the Egyptian Air Force. The total is 278 F-16C/Ds for the TuAF, 46 aircraft for Egypt. The last license-built F-16 from TAI was delivered to the TuAF on November 13, 1999 (Cebeci, 1999). Turkiye is negotiating on the assembly of 32 additional F-16's. Twenty of them would have reconnaissance pods. Some of these are believed to be attrition replacements. But project is on hold due to economical problems in Turkiye (Cakmakci, 2002).

The Turkish Air Force Command is offering to lease its older F-16C/D Block 30 fighters to Hungary in the hope that it can replace them with new Block 50 aircraft (Enginsoy, 2001).

The Peace Onyx story of force modernization clearly is one of success. The Turkish military achieved modernization at a relatively low financial price, but the true

cost of the Peace Onyx story in terms of industrial competitiveness and relations with the United States remains uncoun ted.

#### **4.4.3 Main Battle Tank Project**

The Government of Turkiye continues to look toward Western defense industry for co-production and joint venture opportunities for political and budgetary reasons. The main battle tank (MBT) project has been launched in order to meet the requirement of the Turkish Land Forces Command (TLFC) for main battle tanks with maximum local content. Accordingly, in-country production of 1000 tanks has been planned. Aside from the manufacture of 1,000 main battle tanks, the project would also encompass the modernization of 900 existing U.S. General Dynamics-made M-60 A1 tanks. The MBT project is one of the Turkish military's top three programs, along with multibillion-dollar deals to buy attack helicopters and airborne early warning and control aircraft from U.S. companies.

Turkiye's largest planned procurement project is the local production of 1,000 new tanks in a project estimated to be worth about \$7 billion. The request for proposal (RFP) concerning the production of first batch consisting of 250 tanks has been forwarded on 6 September 1999 to the following companies determined as the national contractor candidates (SSM, 2001a):

1. ASMAŞ Ağır Sanayii Makinaları A.Ş.
2. BMC Sanayii ve Ticaret A.Ş.
3. FNSS Savunma Sistemleri A.Ş.

4. OTOKAR Otobüs Karoseri Sanayii A.Ş.

5. ROKETSAN Roket Sanayii ve Ticaret A.Ş.

A group of sample tanks has undergone field tests in Türkiye and the performance evaluation of France's Giat Leclerc, Germany's Krauss-Maffei Wegmann Leopard 2A6, Italy's Alenia/OtoBreda Ariete, and Ukraine's Ukrspetsexport T-84 was completed in year 2000. An evaluation of a U.S. General Dynamics M1A2 equipped with a diesel engine has been completed.

The Turkish lira has lost a quarter of its value against the U.S. dollar since Türkiye decided 21 February 2001 to let the currency float freely in international markets (Bekdil, 2001). The decision scrapped the government's earlier pre-determined exchange rate for the lira based on a currency basket of the dollar and the euro. Türkiye has started to curb its defense spending and reshuffle procurement programs because of the currency crisis resulting from the government recovery plan with the International Monetary Fund (IMF). Because of the government's new anti-inflation program, spending on the main battle tank program was spread over the next 15 years. But for the lucrative tank bid, the first order of 250 tanks would be finalized with a total cost of \$1.7 billion. The project was scheduled for finalization by 2013 (Reuters, 2000). Türkiye at some point would proceed with the main battle tank co-production project, but probably the size would be reduced (Bekdil, 2000f).

According to the M-60 A1 tank modernization program, Türkiye has given priority to the modernization of its U.S. General Dynamics-made M-60 A1 tanks due to delays in the co-production of the third generation main battle tanks. The United States donated more than 900 M60A1s to Türkiye in the early 1990s as part of a NATO

program to assist the alliance members. Upgrading the entire fleet could cost more than \$2.5 billion (Enginsoy, 2001). The M-60 A1 tank of U.S. General Dynamics Land Systems has been competing against the state-owned Israel Military Industries (IMI) for Turkiye's M-60 tank modernization project, although Turkiye has only been negotiating with IMI as part of efforts to further develop its strategic ties with Israel.

(Sariibrahimoglu, 2001). Negotiations involve significant technology transfer and offset arrangements. One possible option is for a few Turkish M60s to be upgraded in Israel and the rest modernized in Turkiye. The bulk of that work in Turkiye would be done at an Army repair and maintenance center in Kayseri in Central Anatolia, with some work handled by the military electronics company Aselsan Elektronik Sanayi A.S. Aselsan has experience since they won a contract from the Defense Ministry to upgrade the Army's 170 German-made Leopard I tanks. The Leopards and M60s form the backbone of the service's Main Battle Tank fleet (Opall-Rome, 2000). As an offset commitment, Israel plans to buy 50m cubic meters of water from Turkiye each year, estimated to be worth about \$50-75m over 10 years, though the price is still subject to negotiation (Shanson, 2001).

Contract negotiations with IMI collapsed in the late November 2001. The deal centered on upgrades to 170 M60A1 tanks, the first batch of a fleet of more than 900 M60s. After arguments over price sank contract talks with Israel, Turkiye decided to cut the contract negotiations with IMI. The Israeli negotiating team simply could not bridge the wide gaps between technological capabilities expected by SSM and price limitations imposed on the program. IMI refused to go below about \$700 million while the SSM

insisted on paying less than \$500 million (Enginsoy, 2001a). It seems that the cancellation will cause a delay of at least one year in the effort to modernize the M60s.

Turkiye is preparing to offer a new tender. U.S., French, Ukrainian, and German companies, as well as a few Turkish firms would be willing to compete in a new fresh tender. U.S. tank manufacturer General Dynamics Land Systems, Sterling Heights, Mich. Has already approached the Turkish government in an effort to win the right to improve some of Turkiye's M60 main battle tanks (Enginsoy, 2001). General Dynamics Land Systems (GDLS) has developed an upgrade of the M-60, called the 120S, which includes claimed survivability as well as accuracy upgrades, providing performance similar to the M1A1. "The 120S makes existing M-60 fleets relevant by increasing their capability to close to that of the M1A1 Abrams tank's performance, at half the price," Henry Umanos, director of GD's 120S program, said: "Its commonality with the Abrams tank family of vehicles easily offers future growth opportunities to evolve into a new main battle tank program." The GD's upgrade integrates key systems from the M1A1. This includes the M1A1 120 mm turret, equipped with a 240X4 Forward Looking Infrared Radar (FLIR), onto an upgraded M-60 chassis. The upgraded M-60 also contains an M1A1 suspension system. The modernized chassis is said to improve firepower accuracy. Moreover, the upgraded M-60 contains a turret protected with advanced armor. The turret was successfully demonstrated to the Turkish Main Battle Tank Committee. The GDLS offer is half the price of IMI's bid. But this calculation depends on Turkiye's choice of an engine for the M-60. GD has recommended the 1200-horsepower AVDS-1790 engine to reproduce the mobility of the latest model M1A2.

Such an engine would significantly raise the price of the M-60 upgrade (Middle East News Line, 2001).

Turkey decided to restart negotiations with IMI-TAAS over the tank modernization deal in January 2002, after having asked it to lower its price to from \$1 billion to \$550-650 million. Turkiye has awarded TAAS-Israel Industries the tender for modernizing 170 of its US-made M-60 tanks, ending a years-long dilemma over the fate of the aging weapons. The contract, which includes the transfer of technology to develop third-generation tanks, is worth some \$668 million (Demir, 2002).

The tanks will be modernized in a Turkish military factory in the central Anatolian town of Kayseri; subcontracted Turkish firms Aselsan and MKE will provide local input. The engine thrust, fire, and maneuverability of the tanks will be renovated with computerized systems.

#### **4.4.4 ATAK Helicopter Project**

The ATAK helicopter project is managed by the Undersecretariat for Defence Industries (SSM) in coordination with the Turkish Land Forces (TLF) and the Chief of General Staff. The purpose of the project is to secure 145 tactical reconnaissance and attack helicopters for the needs of the Turkish Armed Forces (TAF). The ATAK helicopter project, a vital part of the modern defense force of the Turkish Armed Forces (TAF), will be another concrete example of the demonstrated ability of the Turkish defense industry in the field of aviation industry. The studies started at the end of 1996 (SSM, 2001b).

Turkish Aerospace Industries (TAI) has been selected as the prime contractor for the project. These helicopters will be acquired by maximum in-country production under license. This agreement is expected to further develop Türkiye's current infrastructure of defense industry, as well as helicopter design, development, production, testing system integration, and logistics support capabilities including depot-level maintenance.

By the successful completion of the process of preparing a joint proposal with five foreign companies in the first period, TAI created an environment for the participation of 114 local companies in the project in order to contribute to the development of the local industry (SSM, 2001b). In past years, the defense industry acquired production capabilities for the following state-of-the-art devices: UHF/VHF Radio, FLIR, MFD, IFF, STINGER, and INS/GPS. These components are currently being used on many different air platforms of the TAF. Standardization among forces will be achieved through the use of these same devices under the ATAK project. In addition, in-country production capabilities of defence industry will be used at a maximum level and additional capabilities will be obtained.

On 21 July 2000, The Defence Industry Executive Committee (SSİK) decided for SSM to begin contract negotiations with the Bell Helicopter Textron Company. Currently, the negotiations (executed among the Undersecretariat for Defense Industries (SSM)-TAI, Bell, and other local companies) have been accelerated. Also the negotiations with Bell Helicopter Textron Company are continuing. The negotiations of the significant portions of the agreements and its appendices have been completed. The initial requirement is for 50 aircraft, worth an estimated \$1.5 billion (according to Bell), but the numbers produced could eventually rise to 145 in two more batches of 50 and 45.

Turkiye already operates Bell AH-1W Super Cobras, from which the AH-1Z is being developed (Barber, 2000).

TAI, with Bell acting as principal subcontractor, will build most of the aircraft in Türkiye. Besides manufacture and assembly, TAI will create and coordinate the overall technology transfer effort, TAI will also be responsible for ensuring that Turkish content meets the government's 50% goal. Around 140 major subsystems on which Turkish and foreign companies could collaborate have been identified. The principal subcontractor for avionics is the Turkish defense electronics contractor Aselsan (which was founded by the Turkish Armed Forces Foundation). Aselsan has previously undertaken offset-generated work with Raytheon and Rockwell Collins. SSM is in charge of the program overall. A statement from the SSM argued, "Through the procurement of 145 helicopters by in-country production under license, not only Türkiye's current infrastructure of defense industry will develop but also logistics support capabilities such as helicopter design, development, production, system integration, and depot-level maintenance will be acquired" (Barber, 2000).

TAI, as a prime contractor, will include the local defense companies in the process with SSM's support. It will thus contribute to the national economy, and display efficient customer-seller teamwork with SSM, purchasing authority, on the way to going beyond the requirements of TAF. Through the well-planned and carefully implemented activities, TAI should enable Türkiye to gain the following capabilities (TAI's Voice, 2001):

- Complete helicopter production
- Mechanical-avionics modification and modernization on helicopters

- Design & Development activities of the helicopters
- “Integrated Logistic Support” for supporting the product through its life cycle

“In terms of basic helicopter technology, Turkiye wants to be able to make and test critical components such as gears and gearboxes, rotor and other dynamic components, and landing gear. Obtaining licenses and the rights to sell aircraft to certain third countries is TAI’s responsibility” (Barber, 2000).

But uncertainties regarding parts warranties, the level of technology transfer to Turkiye, and the right to export to third countries threaten to slow down negotiations over The ATAK Helicopter Project.

Because of the government's new anti-inflation program, spending on the ATAK helicopter project was spread over the next 15 years (Reuters, 2000). Turkiye and Bell Helicopter launched contract negotiations for the chopper deal in September 2000, but the talks were stalled several times by Turkish demands to indigenously develop a national mission computer for the AH-1Zs. The U.S. Department of Defense declared on June 2001 that it would not allowed a Turkish-developed mission computer aboard U.S.-designed helicopters (Enginsoy, 2002). Turkiye and U.S. agreed that the mission computer for the proposed AH-1Z fleet would be developed jointly by Northrop Grumman Litton and Turkiye’s stated-owned Scientific and Technical Research Institute (TUBITAK). The preliminary deal shuts out other potential Turkish participants that were proposed during earlier rounds of negotiations by Turkish defense authorities, including military electronics manufacturer Aselsan, state-run software company STM and electronics concern Ayesas, all based in Ankara. Final co-production contract with Bell Textron expect to be signed in May 2002. Most of the co-production work would be

carried out at TAI. Bell Textron will manufacture the first three or four helicopters in the U.S. and the rest will be co-produced in Türkiye (Enginsoy, 2002).

#### **4.5 Conclusions**

Although not always easy to predict, the future picture for Türkiye's industries is quite clear: continuation along the path to modernization. The political and military leadership of Türkiye has made it abundantly clear that they place a high priority on ensuring that the Turkish armed forces remain completely capable and fully prepared to carry out its national defense missions, its NATO missions, and future requests by the United Nations in its many peacekeeping roles. In addition, this modernization of military and industrial capability will be achieved through continued and increased emphasis on offsets. For major co-production projects, the following aspects are considered vital points during the evaluation process: technology transfer, offers for research and development in plants and facilities to be established in Türkiye, amount of national content, and net flow currency abroad. SSM will be obligated to take concrete measures and to attach utmost importance to offsets programs. In this regard, directing defense equipment purchases towards indigenous defense industry to the maximum extent possible, as well as introducing new technologies with export opportunities will be key factors in evaluating future offset proposals.

Türkiye is trying to utilize the technologies that Turkish defense industry has gained by technology transfer with offsets. For example, Türkiye developed "J" missile, a Turkish version of Chinese M-7 missile by the Turkish plant Roketsan A.S. in 2001 (Cakirozer, 2002). Roketsan A.S. developed the missile "J" with technology transfer

from China. It is a good example to see that technologies can be adapted to Türkiye's current and developing industrial system.

The Turkish Air Force of the 21<sup>st</sup> century will be stronger and more capable in every area. Not only will future TUAf modernization efforts result in greater force capability, they will expand Türkiye's manufacturing and technological base, increase TuAF interoperability within NATO, and broaden Türkiye's participation in multi-national peacekeeping operations. As with any military force in transition the years ahead will offer numerous challenges. Fortunately, the TAFC leadership is adept at navigating the political and fiscal obstacles, which threaten to stifle sustained growth in force capability.

## **5. CONCLUSIONS AND RECOMMENDATIONS**

### **5.1 Chapter Overview**

This chapter summarizes the results of the research effort described herein and offers conclusions and suggestions based on the facts presented. The research focuses on the offset experience of Türkiye and some of her offset applications. To this end, each specific investigative question posed in Chapter I will be addressed in light of the information presented in Chapters III through IV. Finally, recommendations for further research will be presented.

### **5.2 Conclusions and Recommendations**

A major lesson of recent technological development in the military arena is that states that have determined that their national security is at stake will commit significant resources in order to attain the weapons they view as necessary to preserve that security. The production capabilities of the Turkish defense industry and the particular structure they imply for the design of defense procurement indicate that the offset implementations significantly contribute to the development of the country's defense industry. Offset is a well-established process of technology acquisition through collaboration and joint ventures. From the description in the preceding chapters of the policy development and the terms of offsets applications which accompanied the large defense procurement contracts of the last decade, it becomes evident that the offset practice might contribute to

the promotion of co-production programs and the exports as well as the creation of job opportunities in the Turkish defense industry.

For example, the F-16 offset agreement created very good amount of job opportunities for the national defense industry. 1926 personnel work at TAI as of February 2002, consisting of 1098 technicians, 828 administrative. Total number of engineers is 413 and 97 of them have their PhDs and/or master degrees (TAI, 2002). In 1992, TAI gave training for 500 Korean workers who are from newly built General Dynamics' F-16 plant in Korea (FAS, 2002). Another example is FNSS Savunma Sistemleri A.Ş, an American-Turkish joint venture company. 370 people work at FNSS as of December 2000, consisting of 60 engineers, 40 executives, 145 technicians and 120 administrative personnel as well as five personnel with military background (FNSS, 2002). As a result, Türkiye has gained a quality labor force for her national defense industry by the offset deals.

The Undersecretariat of the Defense Industry (SSM) is the only and most experienced government agency in Türkiye equipped with power to administer military offsets. SSM seeks a transfer of technology, whether through direct investment, co-production, licensing or know-how arrangements. In the area of purchases of Turkish goods, preferences are being given to the defense and technology oriented sectors. For future defense deals, when other conditions are equivalent, Türkiye will opt for countries that are providing higher technology transfer. Technology transfer and approval of export licenses – together with Türkiye's right to export defense equipment to third countries – became crucial factors in determining the country's future defense contracts.

Technology transfer needs an environment in which it can succeed. The systems which allow technology to be absorbed must be developed before transfer can take place. As Türkiye chose a market-based system, this means the development of a market economy in which businessmen see and pursue opportunities to profit from the technology available. The success of offset programs in Türkiye will inevitably depend in part on the extent to which the prerequisite has been or can be met.

Offset is a good way to increase the production opportunities and capabilities of the industry, led by the defense industry in Türkiye, within the framework of the procurement of goods and services required by the Turkish Armed Forces or other public institutions in the field of the defense industry, from abroad or through domestic production by means of joint ventures and to increase the existing market shares in the international arena and to provide for the balance of payments.

Proposals and quotations submitted to Undersecretariat for Defense Industries (SSM) or the Turkish Ministry of Defense (MSB) are first evaluated to ensure technical compliance with Turkish Armed Forces operational requirements. For major co-production projects, the following aspects are considered vital points during the evaluation process: technology transfer, offers for research and development in plants and facilities to be established in Türkiye, amount of national content, and net currency flow abroad.

In addition, it is important that bid packages offer direct and indirect offset programs. The “Offset Guidelines” (prepared in 2000) place almost exclusive interest on direct offsets. Almost every defense project announced by the SSM calls for an offset proposal which is included in the request for proposal (RFP) document related to the

project. Companies should carefully study the offset requirements detailed in the RFP document.

Within the framework of the offset programs carried out by the MSB and the SSM the basic objectives are:

1. To export the defense industry products and priority industry products and to provide foreign currency inflow to Türkiye through foreign capital investments (new or extension) and thus provide the return of the foreign currency to the economy of Türkiye to the maximum extent of the foreign currency that will go abroad as a result of the project costs;
2. To provide savings on foreign currencies through the creation of new domestic production capabilities by technology transfer determined within the framework of the requirements as well as by making use of the increases to be provided for the existing production;
3. To provide for the carrying out of the projects efficiently for a long period of time by creating new fields of work and domestic added value and to provide for the industries established to become self-sufficient; and
4. To increase the standards of quality and efficiency levels of the existing industry and the industries that will be established through technology transfer and exports and thus, to increase the competitive power of the Turkish economy in the international arena.

According to MSB and the SSM's basic objectives, limited number of joint ventures companies exports some defense industry products and provide foreign currency inflow to Türkiye. For example, in addition to serving the Turkish Armed Forces, a significant objective of FNSS is to provide exports opportunities to Türkiye. FNSS established its first exports relation with the United Arab Emirates (UAE) in 1997. A total of 133 armored engineering squad vehicles, armored recovery vehicles, armored artillery forward observation vehicles were built and delivered to UAE under the agreement signed. Deliveries started in early 1999 and were completed in February 2001 (FNSS, 2002).

From now on the cooperation between the MSB and the SSM will be more effective with the new directive submitted on 12 May 2000 which explains principles of offset implementations in the Turkish Defense Industry procurements, to apply offsets within procurement of goods and services required by the Turkish Armed Forces and other public institutions in the field of the defense industry.

SSM is the only government agency in Turkiye equipped with power to administer military offsets. The Foreign Trade Undersecretariat, on the other hand, is responsible for offset programs in nonmilitary procurements. Sometimes, it is possible to see some defense related offset programs which are carried out by the Foreign Trade Undersecretariat. How the coordination between SSM and the Foreign Trade Undersecretariat will be is not clearly known, and sometimes no coordination can be seen between each other. Sometimes, this situation causes problems such as unwanted delays in contract negotiations. However, some offset related procurements for a government company as Turkish Airlines followed by Foreign Trade Undersecretariat can be done in defense industry plants like TAI, TEI, Aselsan, and Havelsan. It can be accomplished with a little coordination between SSM and the Foreign Trade Undersecretariat. The example of some B-737 plane parts production for Turkish Airlines in TAI in 1998 can show us that with coordination between SSM and the Foreign Trade Undersecretariat, both agencies can gain some benefits in offset agreements (TUSIAD, 1999).

## **Turkish F-16 Offsets and Licensed Production**

### **Peace Onyx I:**

TAI manufactured and delivered 152 F-16C/D aircraft in Block 30 and 40 configurations at the TAI Facilities to the Turkish Air Force under the Peace Onyx I Program between the years 1987-1995. The Program covers 160 F-16s, eight of which were produced at the General Dynamics, Fort Worth facilities and delivered to TuAF. Under this program, TAI manufactured 70% of the airframe of the F-16 aircraft including aft and center fuselages and wings.

### **Peace Onyx II:**

Within the framework of the follow-on program Peace Onyx II, TAI produced an additional 80 F-16C/D aircraft in Block 50 configuration during the 1995-1999 period for TuAF. With this program, the manufacturing share of the company reached 80% with the addition of flaperons and the stuffing tasks for the forward fuselage to the airframe components manufactured in the first program.

### **Peace Vector IV:**

TAI produced 46 F-16s for the Egyptian Air Force between 1993 and 1995 under the agreement signed between the Governments of Turkiye, the U.S.A. and the Arab Republic of Egypt. This program is significant as it was the first delivery of F-16s to a third country from a manufacturer outside the U.S.A. The F-16 offset agreement clearly is one of the first successful offsest experience in Turkiye. With this project Turkiye gained a very important military-industrial complexes, TAI and TEI, for her defense industry. In addition to assembling the F-16s, TAI manufactured in Turkiye the aft

fuselage, center fuselage, and wings. In this regard, the F-16 offset agreement introduced new technologies with export opportunities to Turkish defense industry. TAI produced and sold 46 F-16 fighters with Peace Vector IV program for the Egyptian Air Force between 1993 and 1995. TAI's experience includes not only F-16 Fighting Falcon, CN-235 Light Transport Aircraft, SF-260 Primary Trainers, AS-532 Utility Helicopters, but also design and development of Unmanned Aerial Vehicles (UAV-X1), Target Drones, Fighter-Surveillance Aircraft, Agriculture Aircraft and modernization activities. As a full member of Airbus Military Company, TAI is continuing with improvement activities of The Future Large Aircraft (FLA) with six members of the Independent European Program Group (Turkish Armed Forces Foundation, 2002).

In addition to part manufacturing, TEI benefited from depot level maintenance capability establishment for miscellaneous engines and received training in critical defense fields. TEI has met all its delivery and quality commitments and is now producing parts for over 17 aircraft engine applications as well as gas turbines, for local customers and international customers in the United States and Europe (TEI, 2002).

Today, these factories are providing support for some current offsets programs including research, development, design, training, and servicing. The Turkish military achieved modernization at a relatively low financial price, but the true cost of the F-16 offset agreement in terms of technology transfer, the creation of job opportunities in the Turkish defense industry and relations with the United States remains uncoun-  
ted.

## **Main Battle Tank Project**

Turkiye is evaluating proposals for a \$7 billion project to build 1,000 tanks for the Turkish army, the second largest in NATO, aside from the manufacture of 1,000 main battle tanks, the project would also encompass the modernization of 650 existing tanks. Because of the government's new anti-inflation program, spending on the main battle tank program will be spread over the next 15 years. Turkiye at some point will proceed with the main battle tank co-production project, but probably the size will be reduced (Bekdil, 2000f).

Turkiye has given priority to the modernization of its M-60 A1 tanks due to delays in the co-production of the third generation main battle tanks. Turkiye had been negotiating with the state-owned Israel Military Industries (IMI) for Turkiye's M-60 tank modernization project (Sariibrahimoglu, 2001). Negotiations involved significant technology transfer and offset arrangements. One possible option was for a few Turkish M60s to be upgraded in Israel and the rest modernized in Turkiye. The bulk of that work in Turkiye would be done at an Army repair and maintenance center in Kayseri in Central Anatolia, with some work handled by the military electronics company Aselsan. As an indirect offset commitment, Israel planed to buy 50m cubic meters of water from Turkiye each year, estimated to be worth about \$50-75m over 10 years (Shanson, 2001).

Contract negotiations with IMI collapsed in the late November 2001 because of gaps between technological capabilities expected by SSM and price limitations imposed on the program (Enginsoy, 2001a). Turkiye is preparing to offer a new tender. U.S., French, Ukrainian, and German companies, as well as a few Turkish firms would be willing to compete in a new fresh tender.

Turkey decided to restart negotiations with IMI-TAAS over the tank modernization deal in January 2002, after having asked it to lower its price to from \$1 billion to \$550-650 million. Turkiye has awarded TAAS-Israel Industries the tender for modernizing 170 of its US-made M-60 tanks, ending a years-long dilemma over the fate of the aging weapons. The contract, which includes the transfer of technology to develop third-generation tanks, is worth some \$668 million (Demir, 2002).

### **ATAK Helicopter Project**

In July 2000, Turkey chose Bell's King Cobra as its new attack helicopter. The King Cobra beat Eurocopter's Tiger and IAI Kamov's Ka-50-2 Erdogan, a variant of the Ka-50 Black Shark, after other aircraft including Boeing's Apache Longbow were eliminated earlier. The initial requirement is for 50 aircraft, worth an estimated \$1.5 billion according to Bell, but the numbers produced could eventually rise to 145 in two more batches of 50 and 45. Turkiye already operates Bell AH-1W SuperCobras, from which the AH-1Z is being developed.

Most of the aircraft will be built in Turkiye by TAI, with Bell acting as principal subcontractor. TAI also assembles Black Hawks and Cougars for the Turkish armed forces. Besides manufacture and assembly, TAI will create coordinate the overall technology transfer effort and will be responsible for ensuring that Turkish content meets the government's 50 percent goal. Around 140 major subsystems on which Turkish and foreign companies could collaborate have been identified. Turkiye and U.S. agreed that the mission computer for the proposed AH-1Z fleet would be developed jointly by

Northrop Grumman Litton and Türkiye's state-owned Scientific and Technical Research Institute (TUBITAK).

In overall charge of the program is the Undersecretariat for Defense Industries, known as the SSM. Through the procurement of 145 helicopters by in-country production under license, not only Türkiye's current infrastructure of defense industry will develop but also logistics support capabilities such as helicopter design, development, production, system integration, and depot-level maintenance will be acquired.

As a summary of this research, the following recommendations are made:

1. There must be more coordination between SSM and the Foreign Trade Undersecretariat.
2. Co-production seems to be the most promising acquisition strategy and should be used under these following conditions:
  - a. If a system to be produced is highly complex,
  - b. If a system requires advanced technology (higher than Turkish industry capabilities,
  - c. If a system might involve complex and costly research and development activities.
3. In order to take advantage of economies of scale in production, Türkiye should look to produce more than just their own requirement. This could also be termed using an "export-oriented" policy vice an "import substitution" policy.
4. To become an arms producer very quickly, Türkiye should utilize the technologies that Turkish defense industry has gained by technology transfer with offsets. Technologies should be adaptable to its current and developing industrial system.
5. Research and development studies in Türkiye have less value in offset agreements besides technology transfer, the creation of job opportunities in the Turkish defense industry. When we increase research and development

studies, with the co-production strategy, research and development cost would be shared with at least two nations.

6. More export opportunities with offset agreements can be a good chance to find a way to procure new projects in the future.
7. Co-production provides very fairly good amount of job opportunities for the national defense industry. However, job opportunities provided by co-production will depend on what percentage of the overall system is produced in Turkiye. SSM should have look for more production opportunities in country in future offsets.
8. Contribution of offset benefits to national defense is very high. Arms production with offset acquisition strategy should bring new defense industry capabilities to Turkiye and increase level of Turkiye's defense capability. So, technology of the arms to be produced should add to the current military capability. In addition, they should not be only prestige weapons to produce, should meet a real Turkish military need. So, consistency on future procurements for offsets is necessary.

### **5.3 Areas for Further Research**

Turkish offset policy and how this policy is employed in F-16 offset agreement, main battle tank project and ATAK helicopter project are my focus in this research. I analyzed how and why Turkish offset policy developed and how offsets are employed on these specific projects.

The main battle tank project and ATAK helicopter project are not completed yet. Because of price limitations, higher technological transfer expectations, economical problems in Turkiye, projects are still going on and SSM is negotiating with different companies. Accordingly, further tracking and study is suggested as the projects progress, in order to find how the offsets are employed according to Turkish offset policy, as well as to validate the conclusions drawn in this study.

In addition to the projects which have been analyzed in this research, one of the big projects of SSM, four airborne early warning and control aircraft project, worth US \$1-1.5 billion, can be a good area to search for offsets for the future research.



## APPENDIX A. Abbreviations and Vocabulary

|               |                                                              |
|---------------|--------------------------------------------------------------|
| <b>ACV</b>    | Armored Combat Vehicle                                       |
| <b>AECA</b>   | Arms Export Control Act                                      |
| <b>AFIT</b>   | Air Force Institute of Technology                            |
| <b>AFD</b>    | Air Force Directorate                                        |
| <b>AW</b>     | Aviation Week                                                |
| <b>CASA</b>   | Construcciones Aeronauticas SA (Spanish)                     |
| <b>C4I</b>    | Command, Control, Communication, Computers, and Intelligence |
| <b>DoD</b>    | Department of Defense                                        |
| <b>DISAM</b>  | Defense Institute of Security Assistance Management          |
| <b>DOC</b>    | Department of Commerce                                       |
| <b>ESF</b>    | Economic Support Fund                                        |
| <b>FAS</b>    | The Federation of American Scientists                        |
| <b>FAR</b>    | Federal Acquisition Regulation                               |
| <b>FLIR</b>   | Forward Looking Infrared Radar                               |
| <b>FMFP</b>   | Foreign Military Financing Program                           |
| <b>FMS</b>    | Foreign Military Sales                                       |
| <b>FY</b>     | Fiscal Year                                                  |
| <b>GAO</b>    | Government Accounting Office                                 |
| <b>GD</b>     | General Dynamics Company                                     |
| <b>GDLS</b>   | General Dynamics Land Systems                                |
| <b>GE</b>     | General Electric Corporation                                 |
| <b>IAI</b>    | Israeli Aerospace Industries, Ltd.                           |
| <b>IMET</b>   | International Military Education and Training                |
| <b>IMF</b>    | International Monetary Fund                                  |
| <b>IMI</b>    | Israel Military Industries                                   |
| <b>ITAR</b>   | International Traffic in Arms Regulations                    |
| <b>JDW</b>    | Jane's Defense Weekly                                        |
| <b>L/C</b>    | Letter of Credit                                             |
| <b>LTAE</b>   | Light Transport Aircraft Engine                              |
| <b>MAP</b>    | Military Assistance Program                                  |
| <b>MBT</b>    | Main Battle Tank                                             |
| <b>MIKES</b>  | Microwave Electronic Systems, Inc.                           |
| <b>MSB</b>    | Ministry of National Defense (MND)                           |
| <b>NATO</b>   | North Atlantic Treaty Organization                           |
| <b>RFP</b>    | Request for Proposal                                         |
| <b>SAR</b>    | Search and Rescue                                            |
| <b>SECDEF</b> | Secretary of Defense                                         |
| <b>SSIİK</b>  | The Defence Industry Executive Committee                     |
| <b>SSM</b>    | Savunma Sanayi Müsteşarlığı                                  |
| <b>STM</b>    | Defense Technology Engineering Inc.                          |
| <b>TAF</b>    | Turkish Armed Forces                                         |
| <b>TAFC</b>   | Turkish Air Force Command                                    |

|                |                                             |
|----------------|---------------------------------------------|
| <b>TAI</b>     | Turkish Aerospace Industry, Inc.            |
| <b>TEI</b>     | Tusas Engine Industries, Inc.               |
| <b>TGS</b>     | Turkish General Staff                       |
| <b>THK</b>     | Turkish Air League Administration           |
| <b>TLF</b>     | Turkish Land Forces                         |
| <b>TLFC</b>    | Turkish Land Forces Command                 |
| <b>TUBITAK</b> | Scientific and Technical Research Institute |
| <b>TuAF</b>    | Turkish Air Force                           |
| <b>TUSIAD</b>  | Türk Sanayicileri ve İşadamları Derneği     |
| <b>UAE</b>     | United Arab Emirates                        |
| <b>UAV</b>     | Unmanned Aerial Vehicle                     |
| <b>UDI</b>     | Undersecretariat for Defense Industries     |
| <b>UN</b>      | United Nations                              |
| <b>USAF</b>    | United States Air Force                     |
| <b>USG</b>     | United States Government                    |
| <b>USSR</b>    | Union of Soviet Socialist Republics         |
| <b>WMD</b>     | Weapons of Mass Destruction                 |

## **APPENDIX B. Undersecretariat for Defense Industries Offset**

**Guidelines, 1991**

### **UNDERSECRETARIAT FOR DEFENCE INDUSTRIES OFFSET GUIDELINES**



**ANKARA 1991**

# **UNDERSECRETARIAT FOR DEFENCE INDUSTRIES OFFSET GUIDELINES**

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## **1. PURPOSE**

- 1.1. The purpose of this guideline is to set forth the principles for the definition, classification and evaluation of offset transactions related to defence acquisition programs in which MND/SSM is acquiring goods and services from foreign sources or from domestic sources through co-production programs. This guideline also describes the procedures for implementation of offset transactions. The offset transactions described in this guideline are intended to increase the market share and the international competitiveness and capabilities of domestic industries, in particular of the defence industry.
- 1.2. The main objectives for the MND/SSM offset programs are :
  - a. To increase foreign currency inflows either by exporting defence industry products and other related industrial Turkish products or by foreign capital investments in order to compensate for the foreign currency outflows incurred for the financing of defence industry projects.
  - b. To save foreign currency by transferring technology and creating both new production capabilities and increasing existing production.
  - c. To ensure established industries self-sufficiency and to enable projects to be implemented in a productive way by creating new business opportunities and Turkish added value.
  - d. To improve quality, standardisation and productivity of the existing industries and also industries to be established through technology transfer and export sales, and in this way to increase international competitiveness of the Turkish economy as a whole.

## **2. SCOPE :**

Direct and indirect offset agreements entered into with companies participating in MND/SSM tenders are subject to the principles set forth in this guideline.

## **3. DEFINITIONS :**

### **3.1 Abbreviations:**

R&D: Research and Development  
RFP: Request for proposal  
SSM: Undersecretaries for Defence Industries  
TBD: To be determined.

### 3.2. OFFSET CONCEPT :

Defence industry related exports and any other kinds of foreign currency inflows secured pursuant to agreement in order to compensate for the foreign currency shortfall occurring as a result of foreign currency payments in the framework of MND/SSM projects are treated as “Offset”.

The following items, apart from the prime contract, are accepted as offset:

- a. New or expanded foreign capital investments.
- b. License, know - how and technology transfer.
- c. Training opportunities both in Turkey and abroad proposed and financed by the contractor for Turkish citizens and approved by MND/SSM.
- d. Research and development work opportunities and funds created by the contractor for Turkish universities and/or other research institutions.
- e. Investment by the contractor in industrial companies to establish and operate R&D facilities particularly to develop prototypes.
- f. Capital contribution of the contractor to foreign companies established and/or participated in by Turkish manufacturing companies whose technological development and exports enjoy priorities and for the purpose of marketing their products in international markets provided that MND/SSM prior approval is obtained.
- g. Export of Turkish defence or related industry products and services to defence industries in contractors' country via foreign companies with Turkish capital share participation by Turkish defence and/or related industrialists.
- h. Exports to be realised by new or expanded investments and any other alternative long-term export possibilities created by the contractor.
- i. Turkish defence and related industries exports, government to government sales and sale of machinery, equipment and spare parts within the framework of MND/SSM projects to foreign Ministries of Defence and international defence institutions.
- j. Transportation of goods with Turkish flag carriers ie. insurance on net value added basis, transportation and freight costs.

### **3.3. DIRECT OFFSET:**

Direct offsets are goods and services exported by the main and/or subcontractors nominated in the prime contract either to the country of contractor or to third countries. The goods and services to be exported may include the systems, sub-systems, components, parts material and services. These exports should be directly or indirectly related with the project, it is not necessary to be the same type or model provided that similar technology is used in their production.

### **3.4. INDIRECT OFFSET:**

Transactions other than the ones defined as direct offset and set forth in Article 3.2 are treated as indirect offsets in the framework of MND/SSM projects.

### **3.5. PRIME CONTRACT :**

Prime contract is the document signed establishing a project between MND/SSM and a selected company in order to set forth the terms and conditions of procuring certain goods and services which are not available domestically.

### **3.6. CONTRACTOR:**

Within the framework of a MND/SSM projects any company which has headquarters outside of Turkey which either forms a joint venture in Turkey or which works together with a selected Turkish prime contractor and with whom MND/SSM signs a prime contract is the contractor.

### **3.7. ELIGIBLE PARTY:**

The following parties are eligible to fulfil the offset commitments of MND/SSM projects:

- a. Companies which are directly related with the project and which are committing to the offset.
- b. Companies at least 50 % of the voting shares of which are owned by the contractor or their affiliates owned by these companies ie. companies at least 50 % of the voting shares of which are owned by them.

- c. Companies nominated in the offset agreement and approved by MND/SSM. However, 50 % capital share contribution may not be required in the public companies in which the contractor can demonstrate his control in the decision making process. 50 % capital share contribution is also not required in case the eligible parties are the companies stated in Article 3.2, which are defence industry related companies. Upon the approval of MND/SSM if the contractor owns some shares of a foreign company, this foreign company is also accepted as eligible party.

### **3.8. CREDITING :**

The process of deducting the value of any offset transactions realised by an eligible party from its offset commitment.

### **3.9. PRE- CREDITING :**

Upon the prior written consent of MND/SSM, realisation of transactions stated in Article 3.2 by the eligible party but to be credited to the account of the contractor in cases in which the prime contract is awarded to the contractor.

### **3.10. LOCAL VALUE ADDED :**

3.10.1. Local value added is the total export value of the goods or services manufactured and performed in Turkey less the cost of all materials imported by the eligible party and where applicable its subcontractors to perform their relevant offset obligations. For the calculation of the import value, the books of the eligible party and/or its subcontractors may be audited at any time by MND/SSM.

3.10.2. In case the documents presented by the contractor are not sufficient to permit calculation of local value added, the company may be asked for expertise reports from Chambers of Industry.

In the event there does not exist a relevant Chamber of Industry, Chamber of Commerce's expertise report may be requested.

### **3.11. CO-PRODUCTION :**

Co-production consists of production activities of the contractor with Turkish companies in facilities existing and/or to be established in Turkey, in order to increase the production opportunities and capabilities of Turkish industry.

#### **4. MAIN PRINCIPLES :**

The following principles shall be applied in evaluating and crediting offset transactions:

- 4.1. In framework of the related project, user training to be given to the personnel of the end user and production training to be provided to the Turkish subcontractors to permit production shall not be considered within the scope of Article 3.2.
- 4.2. Investment type of indirect offset shall be credited provided that the equity of the contractor shall not be transferred to any other party for a minimum of 10 years following the investment realization.
- 4.3. The committed offset value will be subject to the escalation formula, which is applied to the imported material and services portion of the prime contract.
- 4.4. The value of any unfulfilled offset commitment in one program year shall be added to the next succeeding year's offset commitment and shall be escalated accordingly.
- 4.5. In the event that the offset commitment shall not be fulfilled to the satisfaction of MND/SSM one year before the completion of the prime contract, an irrevocable letter of bank guarantee for an amount of the potential liquidated damages calculated on the outstanding escalated offset commitments remaining to be fulfilled shall be given by the contractor to MND/SSM. In that case, any remaining payments to the contractor up to or equal to the amount of irrevocable letter of bank guarantee shall be made only after the submission of that of letter bank guarantee to MND/SSM.
- 4.6. Transportation cost of using Turkish flag carriers and insurance cost if insurance is through Turkish insurance institutions shall be credited as offset of the contractor provided that the related documents should be presented to MND/SSM.
- 4.7. Expenses of the Contractor or Eligible Party related to personnel and other administrative activities and overhead and similar expenses etc. In the framework of offset programs shall not be credited as offset.
- 4.8. In the event that the total value of direct off-set finally achieved would exceed the total value of the direct offset commitment, the excess value may be credited to the contractor's account upon its request for the purpose of fulfilling its indirect offset commitment related to the same project.

- 4.9. In the event the total value of direct and/or indirect offset commitments finally met would exceed the total value of the offset commitments, the excess value may be pre-credited to the contractor's account, upon its request, for the purpose of fulfilling its future offset requirements. However, request for pre-crediting should be made within 6 months after the excess value has been calculated and the right for crediting should be utilized within 5 years following the pre-crediting. In the event that the aforementioned requests have not been made within the said periods, the excess of-set shall not be taken into consideration for the purpose of crediting.
- 4.10. Offset proposals of contractors made before signing of the prime contract may be pre-credited in accordance with the principles set forth in this guideline.
- 4.11. Offset activities to be credited to the account of the contractor for its commitment should be realized after the effectiveness of the offset agreement. However, application of pre-crediting mechanism shall not be subject to this sub-article requirement.
- 4.12. In the case of the exportation of goods produced as a result of investment type of indirect offset activities, under the projects carried on by MND/SSM, the export sales value added in Turkey will be credited for a maximum of 10 year period as indirect offset at the rate of the participation of the contractor in the capital of company.
- 4.13. The offset commitment for the projects carried on by MND/SSM shall not be less than 30 % of the total value of project. However, in any case, this rate shall not be less than 50 % of the imported cost portion of the project. For in-country co-production projects, a minimum of 50% of the offset commitment should be direct offset.
- 4.14. A multiplier of two (2) shall be applied in the favor of direct offset commitments relative to the indirect offset commitments during MND/SSM evaluation process.
- 4.15. If the actual Turkish local content achieved is greater than the amount guaranteed in the prime contract, then 100 % of the excess may be considered as indirect offset or 50 % of the excess may be considered as direct offset.
- 4.16. Offsets realized in the framework of MND/SSM projects may not be credited to any company other than the contractor.

## **5. BIDDING**

- 5.1. The company committing to offset under the project carried on by MND/SSM shall submit its offset proposal to MND/SSM within the time period stated in the RFP, as a separate proposal from the one related to the project itself, and it shall contain the information stated in Article 5.2. submission of an offset proposal shall mean the

acceptance of all terms and conditions stated in this offset guideline without any objection. The offset proposal shall not contain any condition provision-reflecting objection to the terms and conditions stated in this guideline. (Offset proposals containing these objections, other than the constraint stated in Article 4.13, shall not be evaluated if such objections are not waived by the contractor within the time limit to be given).

In case of shortfall in the proposals, the committed offset values will be taken into consideration during the evaluations accordingly.

- Below 50% 0.25 coefficient will be applied.
- Between 51-75 % 0.60 coefficient will be applied
- Between 76-99 % 0.85 coefficient will be applied.
- 100 % and above 1 coefficient will be applied.

In case of shortfall in performance then Article 7 will be applied.

5.2. Information to be included in the offset proposal:

- a. Information related to the contractor and its past offset experiences,
- b. Offset commitment by years (in the currency unit used in the prime contract)
- c. Statement which acknowledges that application of the penalty rate and provision stated in Article 7 are accepted unconditionally,
- d. The types of direct offset committed to according to the heading in Article 3.2.
- e. For training type of offsets; nature of training, duration of courses, qualifications that trainees should have before and after the courses, detailed schedule, cost, and parts of training which will be on-the-job or in class should be stated (demands for crediting training cost as offset should be stated separately),
- f. Information which the Contractor believes to be useful.

5.3. Proposals shall be reviewed by MND/SSM in a pre-evaluation process. In the event the proposal shall not match the basic offset requirements stated in this offset guideline, companies shall be invited to resubmit and reconsideration of their offset proposals. If the corrected resubmission has not been made within the given time period then the offset proposal shall not be taken into consideration in the evaluation process.

## **6. CREDITING**

6.1. Offset activities shall be credited to the account of the contractor against its commitments pursuant to the following procedures:

6.1.1. Multipliers, stated in Annex-1 shall be applied in crediting investment and technology transfer types of offset commitments in accordance with the Article 3.2. (a) and (b). In crediting, the following shall be taken into consideration as indirect offset at the rate of participation of the contractor in the investments:

- a. Total investment amount (incentives given by the Republic of Turkey shall be deducted from the investment amount and the balance shall be taken into consideration).
- b. The portion of profits obtained from the investment, which is kept in Turkey and utilized for the financing of new investments.

The contractor shall submit the following information to MND SSM as regards the investment type of offsets:

- Type of investment,
- Period of investment and production,
- Whether exportation of goods or services will take place in the framework of this investment,
- Share of the contractor in total investment amount,
- Information about other real and legal partners in the investment,
- Information about the transfer of profits that are going to be gained from the investment,

In crediting investment type of indirect offsets, the amount obtained by applying the multipliers stated in Annex-1 to the actual amount of the investment shall be taken into consideration.

If investment is made in the first priority regions announced in the Official Gazette of The Republic of Turkey, then the multiplier 2.5 (two and half) for the investment will be added those stated in Annex-1; if investment is made in the second priority regions, then the multipliers in Annex-1 shall be added by 2.0 (two).

Investments which are contained in Article 3.2. (f), shall be evaluated on a case by case basis and will be credited as approved by MND/SSM

- 6.1.2. For offset commitments which are contained in Article 3.2. (c), (d), (e) the multipliers stated in Annex-2 shall be applied depending upon submission of the related training invoices by the Contractor.
- 6.1.3. In the framework of Article 3.2. (g), (h), (i) export type of offsets shall be credited on the basis of Turkish value added. The company should describe in detail the type of goods and services and the industrial facilities in which the goods are going to be produced.
- 6.1.4. Offset commitments in accordance with Article 3.2. (j) shall be multiplied by 1 (one).
- 6.2. In crediting technology transfer, license and know-how types of offset commitments, actual market value and or value of the like will be taken into consideration. This value shall be determined by MND/SSM. Technology transfer, license and know-how should be given free of charge in order to be credited as offset. In addition, the Turkish company to which the technology is going to be transferred should accept to share with MND/SSM the benefits of such technology transfer in a manner to be mutually agreed.

## **7. LIQUIDATED DAMAGES**

- 7.1. If offset commitments are not met at the time and in the manner required, then:
  - a. Liquidated damages at the rate of 10 % shall be applied to the unfulfilled and escalated offset amount. Enforcement of liquidated damages does not relieve the company of liability for losses resulting from its failure to meet its contractual offset commitment. However, in such a case, a right arises for the contractor to ask for a change in type of its offset commitment.
  - b. Any contractor who fails to meet the offset commitment may not be allowed to participate in MND/SSM projects for a specific period of time to be determined by MND/SSM.
- 7.2. Liquidated damages to be applied to a contractor who has not fulfilled its offset commitment shall be collected from its letter of bank guarantee given in respect of its offset commitment.

## **8. FORCE MAJEURE**

- 8.3. The eligible party shall not be liable for the delays resulting from the below mentioned Force Majeure. The eligible party shall submit the proof of occurrence of any events of the specified force majeure events and its effects on the offset commitment to MND/SSM within 30 days following the commencement of force majeure. Otherwise, the eligible party shall be held responsible for delays due to these factors as if the cause is its own fault. MND/SSM has the right to make necessary investigation about the delay. If MND/SSM agrees that a force majeure event has occurred, then, MND/SSM shall extend the duration of the offset program for a reasonable period of time depending upon the circumstances. In such case, there will not be any liquidated damage to be applied for the extension period. However, offset amount shall be escalated in accordance with the escalation formula set forth for the foreign content of the project during this period. If the realization of the offset program exceeds the period stated in Article 4.5. due to extension of time, points indicated in Article 4.5. shall be applied.
- 8.2. Force Majeure means any of following events:
- a. Earthquake, flood, epidemics or other natural physical disaster,
  - b. War or hostilities,
  - c. Invasion, foreign enemy mobilization,
  - d. Riot, revolution, civil war, mobilization, commotion,
  - e. Seizure of power, rebellion, disorder or civil disturbances,
  - f. Embargo or seizure,
  - g. Strikes.
- 8.3. For the eligible party not to be held responsible for the delays resulting from the causes set forth in Article 8.2., the eligible party has to take all necessary actions not to be affected by the event of force majeure. In addition, such delays may not have been caused by the negligent acts or omission of the eligible party or its personnel during the performance of offset commitment and documents approved by the competent Turkish authorities concerning this situation have to be submitted to MND/SSM promptly.

## **9. REPORTING**

9.1. With regard to the realization of its offset commitments, the contractor shall prepare a "quarterly development report" on the realized exports and an "annual report" concerning all of its offset commitments and submit these to MND/SSM within 7 days following the beginning of the month.

9.2. The quarterly development reports should include the following information:

- The amount of export realized in the foreign currency which is used in the prime contract (If export is made in a currency other than the one used in the prime contract, the specified amount shall be converted into the currency in the prime contract by using cross exchange rates of Central Bank of Republic of Turkey on the date the export was actually made),
- Name of the country and company to which export was made,
- Type and amount of the exported goods and services,
- Amount of local value added,
- Name, title and addresses of producers of the exported goods and services,
- A certified copy of custom clearance declaration showing the realized export value and a statement saying all is made in the framework of offset contract,
- Other information to be required by MND/SSM.

9.3. The annual reports should contain the following information :

- Amount of offset realized up to the report period (as of global values by years),
- Amount of offset realized during report period (such amount shall be given separately by type of offset realized),
- Detailed information which shall be required by MND/SSM concerning the transactions realized in categories other than the export type of offset during report period,
- The total amount of offset commitments fulfilled and unable to be fulfilled along with reasons for the latter as of the end of the reporting period.

## **10. CONTROL AND AUTHORITY OF ANNULMENT**

- 10.1. MND SSM is free to use either independent auditing firms or its own personnel to audit the accounts of the eligible party or its subcontractors with the objective of checking the realized offset amounts. MND SSM will bear all the expenses of this process. The auditing process is accepted by the contractor and no statement can be put into proposals stating the contrary, otherwise Article 5.3. shall be applied.
- 10.2. In case of double or over crediting of offset amount due to miscalculation, MND SSM has the right to annul over crediting within the offset program period. In this case, the disposition shall be notified to the eligible party by an official letter, and if needed, points mentioned in Article 3.10 shall be applied to the occurrence of circumstances by giving a reasonable time for realization of the annulled part.

## **11. TERMINATION OF THE PRIME CONTRACT**

- 11.1. If termination of the prime contract occurs before the expiration date for reasons beyond the control of the contractor, then any offset amount realized in excess of the contractual offset commitment up to that date shall be credited for future offset commitments of the contractor within the framework of Article 4.9 upon the contractor's request.
- 11.2. If the prime contract has been terminated due to a default of the contractor, the above mentioned procedure in Article 11.1 shall not be applicable.

## **12. DISPUTE RESOLUTION AND APPLICABLE LAW**

- 12.1. Turkish courts are authorized in solving disputes arising from offset agreements according to international private and procedure Law No 2675.
- 12.2. Offset agreements shall be construed and governed in accordance with laws of Republic of Turkey.

## **13. CHANGES TO BE MADE IN THE OFFSET GUIDELINES**

- 13.1. MND/SSM, at any time, has the right to amend this offset guideline partially or completely. Any such change, however, will not be applied to offset agreements all ready signed.

**TABLE OF SECTOR MULTIPLIERS**  
**I- INVESTMENT AND TECHNOLOGY TRANSFER**

| <b><u>SUBJECTS</u></b>                                                                                                            | <b><u>MULTIPLIERS</u></b> |
|-----------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| <b>1- DEFENCE ELECTRONICS :</b>                                                                                                   |                           |
| ○ Electromechanics (Gyroscope, optronics, sensor, actuator and hardware).....                                                     | 4                         |
| ○ Optoelectronics.....                                                                                                            | 4                         |
| ○ Robotics.....                                                                                                                   | 4                         |
| ○ Laser Technologies (Measurement, guidance and cutting applications) .....                                                       | 3                         |
| ○ Software (Artificial intelligence, expert systems).....                                                                         | 4                         |
| ○ Semiconductor Technologies .....                                                                                                | 3                         |
| <b>2- ELECTRONICS (Other than the above mentioned fields).....</b>                                                                | <b>3</b>                  |
| <b>3- AERONAUTICS :</b>                                                                                                           |                           |
| ○ Composite Structures Manufacturing Technology .....                                                                             | 3                         |
| ○ Propellant Production and Development.....                                                                                      | 2                         |
| ○ Engineering Design and Development (CAD CAM Sys. FEM, CFD, etc.).....                                                           | 4                         |
| ○ Material Manufacturing Techniques (Forging, injection, molding,<br>welding and adhesive technologies, metal bonding etc.) ..... | 2                         |
| ○ Avionics related Technologies .....                                                                                             | 4                         |
| ○ C3I (Command, control, communication and information systems).....                                                              | 4                         |
| ○ Establishment of Overhaul, Repair and Maintenance Center .....                                                                  | 3                         |
| <b>4- AUTOMOTIVE :</b>                                                                                                            |                           |
| ○ Armour Development Technologies .....                                                                                           | 2                         |
| ○ Night Vision Systems.....                                                                                                       | 4                         |
| ○ Vehicle Design, Research and Development Center .....                                                                           | 2                         |
| <b>5- MEDICAL APPLIANCES .....</b>                                                                                                | <b>2</b>                  |
| <b>6- OTHER .....</b>                                                                                                             | <b>TBD</b>                |

Other investments and technology transfers specified by MND/SSM related to the above-mentioned sectors.

## II- TRAINING

| <u>SUBJECTS</u>                                                           | <u>MULTIPLIERS</u> |
|---------------------------------------------------------------------------|--------------------|
| 1- Quality Control.....                                                   | 5                  |
| 2- Research and Development .....                                         | 5                  |
| 3- Training for Technical Staff in the Field of Technology Transfer ..... | 5                  |
| 4- Other.....                                                             | TBD                |

Training specified by MND/SSM other than the above-mentioned fields.

# **APPENDIX C. Undersecretariat for Defense Industries Offset**

**REPUBLIC OF TURKEY  
MINISTRY OF NATIONAL DEFENSE  
ANKARA**

**UNOFFICIAL TRANSLATION**

**OF**

**DIRECTIVE ON OFFSET IMPLEMENTATIONS  
IN THE DEFENSE PROCUREMENT TRANSACTIONS**

**ANKARA  
GENERAL STAFF PRINTING HOUSE  
2000**

**SSM RESERVES THE RIGHT TO CORRECT TRANSLATION AND INTERPRETATION MISTAKES**

REPUBLIC OF TURKEY  
MINISTRY OF NATIONAL DEFENSE  
ANKARA

12 MAY 2000

REF: MEY. : 6048-146-00/İd.Şb.  
SUBJECT : Principles of Offset Implementations in the Defense Industry  
Procurements.

PRINCIPAL DIRECTIVE

1. This directive has been prepared with the objective of implementing the offsets as an essential principle in Turkey which has attained a specific infrastructure and potential in the defense industry sector and for this purpose to assure that offsets to be received in connection with the international procurements and joint venture projects reach as high proportions as possible and are implementable.
2. A certain infrastructure has been established during the past period by the Ministry of National Defense in the offset implementations for the defense industry projects and significant experience and knowledge have been obtained. In the light of the subject experience and knowledge, the implementation results have been reviewed in accordance with the contemporary conditions by also taking into consideration that the competition in the international defense markets is gradually intensifying at the present and the fact that the producers make attractive offset offers, and these have been coordinated with all the related institutions and these implementation procedures and principles have been determined.
3. All defense industry and procurement projects to be contracted after the competitive bidding procedures by the Ministry of National Defense and all the files of the invitation to competitive bidding not yet sent to the bidders will be carried out in accordance with the principles of this directive.
4. The coordinating office for the implementations of offsets is the Undersecretariat for Defense Industries.
5. The Undersecretariat for Defense Industries is also responsible for the coordination of the offset implementations with the other State Institutions. The offset obligations obtained based on previously signed offset agreements will be transformed into an implementation plan by the Undersecretariat of the Defense Industry within four months from the date of publication of this directive and will be submitted for the approval of the Minister of Defense and activities will be carried out according to this plan.

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6. The conformity of the offset implementations with the R&D matrix requirement document developed by the Ministry of National Defense will be provided.
7. All proposals for changes that may arise during the implementation process will be made to the Undersecretariat for Defense Industries of the Ministry of National Defense without any restriction of time.

Respectfully submitted.

Signature  
Sabahattin Çakmakoglu  
Minister of National Defense



SSM RESERVES THE RIGHT TO CORRECT TRANSLATION AND INTERPRETATION MISTAKES

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SSM RESERVES THE RIGHT TO CORRECT TRANSLATION AND INTERPRETATION MISTAKES

1. OBJECTIVE:

- 1.1. The objective of this directive is the definition, classification of the offset procedures, determination of the principles for submitting offers and clarifying the applications related to the offset implementations that will be realized with the objective of increasing the production opportunities and capabilities of the industry, led by the defense industry in Turkey, within the framework of the procurement of goods and services required by the Turkish Armed Forces and/or other public institutions in the field of the defense industry, from abroad and/or through domestic production by means of joint ventures and increasing the existing market shares in the international arena and providing for the balance of payments.
- 1.2. Within the framework of the offset programs carried out by the Ministry of Defense (MSB) and the Undersecretariat of the Defense Industry (SSM) the basic objectives are:
  - a. To export the defense industry products and priority industry products and to provide foreign currency inflow to Turkey through foreign capital investments (new and/or extension) and thus provide the return of the foreign currency to the economy of Turkey to the maximum extent of the foreign currency that will go abroad as a result of the project costs;
  - b. To provide savings on foreign currencies through the creation of new domestic production capabilities by technology transfer determined within the framework of the requirements as well as by making use of the increases to be provided for the existing production;
  - c. To provide for the carrying out of the projects efficiently for a long period of time by creating new fields of work and domestic added value and to provide for the industries established to become self-sufficient; and
  - d. To increase the standards of quality and efficiency levels of the existing industry and the industries that will be established through technology transfer and exports and thus, to increase the competitive power of the Turkish economy in the international arena.

2. SCOPE:
- 2.1. The agreements aimed at the direct and indirect offsets obtained from the companies which participate in the MSB/SSM public biddings are subject to the principles and procedures in this directive.
  - 2.2. The offsets of the projects carried out by the MSB Foreign Procurement Department Chairmanship within the framework of the Main Procurement Agreements and/or the procurement agreements which require the obtaining of offsets are under the responsibility of the MSB Foreign Procurement Department Chairmanship and offsets of the projects carried out by the SSM are supervised under the responsibility of the SSM.
  - 2.3. The SSM is the office for the coordination of all of the offset implementations.



### 3. DEFINITIONS:

#### 3.1. ABBREVIATIONS:

|         |                                                             |
|---------|-------------------------------------------------------------|
| EU      | : European Union                                            |
| USA     | : United States of America                                  |
| R&D     | : Research and Development                                  |
| DTM     | : Undersecretariat of Foreign Trade (UFT)                   |
| MSB     | : Ministry of National Defense (MND)                        |
| SSM     | : Undersecretariat for Defense Industries (UDI)             |
| SSDF    | : Defense Industry Support Fund (DISF)                      |
| RFP     | : Request for Proposal (RFP)                                |
| TÜBİTAK | : Scientific and Technological Research Institute of Turkey |
| TGS     | : Turkish General Staff                                     |

#### 3.2. THE CONCEPT OF OFFSETS:

The MSB/SSM, with the objective of compensating the deficits that may arise in the balance of payments of Turkey as a result of the payments to be made in foreign currencies within the framework of the projects carried out, in accordance with the agreement, the exports to be made from Turkey of the defense industry and/or priority industry products first of all for strengthening the infrastructure of the defense industry and other transactions providing foreign currency inflow directed to the development of existing production or export potential of Turkey are offset. The transactions specified below are considered to be offsets provided that prior consent is obtained from the MSB/SSM.

- a. The Domestic Net Added Value realized above the level undertaken within the scope of the Main Procurement Agreement;
- b. The exports at the system, sub-system, parts, materials and services level of the productions realized (including those that can be used both for military and civilian purposes) in the fields directly or closely related to the project on the production lines (including those produced with the same or similar technologies without regard to the type or model) which are the subject of the Main Procurement Agreement by the companies realizing the joint production or by the domestic sub-contractors of them;
- c. The exporting of the Turkish industrial products to new foreign markets or an increase of exports to the existing foreign markets;
- d. The acquirement, development and export of software technologies in the fields of the defense industry and/or priority industries;
- e. The investments made for the manufacture of spare parts by the related company directed at the defense industry and the exporting of the products produced as a result of these investments;
- f. The R&D activities and/or technological cooperation in the field of the defense industry (including those that can be used for both military and civilian purposes) directed to increasing the export potential or domestic production potential;
- g. The new foreign capital investments or the extension of the existing foreign capital investments in the field of the defense industry;

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- h. The joint investments made by the company related to the foreign companies partially or wholly owned by them in the foreign countries, established with the objective of marketing in the foreign markets the products of the manufacturing companies in Turkey, engaged in activities in sectors in which the technological development and export of products are supported with priority;
- i. The exporting of goods and services to be realized as the result of new or extension investments; and
- j. The new or extension foreign capital investments to be realized in the fields of advanced technologies.
- k. If there are no other ways to do offset, training opportunities both in Turkey and abroad, proposed and financed by the related company for Turkish citizens working for Turkish universities and/or other firms operating in the field of defense and approved by the TGS.

### 3.3. DIRECT OFFSETS:

Direct offsets are limited by the transactions specified below:

- a. The exports at the system, sub-system, parts, materials and services level of the productions realized (including those that can be used both for military and civilian purposes) in the fields directly or closely related to the project on the production lines (including those produced with the same or similar technologies without regard to the type or model) which are the subject of the Main Procurement Agreement by the companies realizing the joint production or by the domestic sub-contractors of them;
- b. The Domestic Net Added Value realized above the level undertaken within the scope of the Main Procurement Agreement;
- c. The R&D activities and/or technological cooperation in the field of the defense industry (including those that can be used for both military and civilian purposes) directed to increasing the export potential or domestic production potential; and
- d. The exporting of software related to the defense industry and/or providing source codes in the fields related to the defense industry software.

### 3.4. INDIRECT OFFSETS:

Within the framework of the projects carried out by the MSB/SSM, the realization of the transactions specified in Article 3.2. and excluded from the direct offsets are considered to be indirect offsets (inclusive of items stated in the scope of the Main Procurement Agreement and the RFP).

### 3.5. MAIN PROCUREMENT AGREEMENT:

The Main Procurement Agreement is the agreement signed between the company selected and the MSB/SSM by receiving the approval of the TGS that regulates the general matters related to the procurement transactions with the objective of the procurement of goods and services from abroad and/or domestically through joint venture production and related to the defense industry

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required by the Turkish Armed Forces and/or other public institutions.

3.6. RELATED COMPANY:

- a. The related company in direct procurement is the foreign company with whom the Main Procurement Agreement is signed.
- b. The related company in joint production is the foreign company specified in the Main Procurement Agreement.
- c. The related company for manufacturing under license is the company providing the license.
- d. The foreign company/companies that provide the subject goods and services are the related company in case the imports of goods and services to be materialized from the foreign company/companies exceeds 5 million US dollars for each foreign company with whom the Turkish company has entered into a commitment for cooperation within the framework of the project that is the subject of the Main Procurement Agreement.

3.7. THE COMPANY REALIZING THE OFFSETS:

The following companies are considered to be the companies realizing the offsets in the fulfillment of offset commitments within the framework of the projects carried out by the MSB/SSM:

- a. The company directly related to the project having an offset obligation and/or the partners of the related company (in this case the partners of the related company are required to have a minimum of a 10% share); and
- b. The companies proposed by the related company and included in the offset agreement provided that they are approved by the MSB/SSM.

3.8. CREDITING:

Crediting is deducting the offset transaction amounts realized by the company having an offset obligation from the amount of commitment of the company.

3.9. ADVANCE CREDITING:

Advance crediting is the realization of one or a few of the transactions specified in Article 3.2. above, within the framework of the project carried out by the MSB/SSM, provided that the related company applies to the MSB/SSM under the conditions specified in Articles 4.6. and 4.7. below, and the approval in writing of the petition by the MSB/SSM and the TGS, to be considered against the offset commitment to be undertaken when the Main Procurement Agreement is signed with the company in case the related company is awarded the contract at the competitive bidding stage and in case direct and/or indirect offsets are realized at the completion of the project by the related company exceeding the amounts committed.

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### 3.10. DOMESTIC NET ADDED VALUE:

- 3.10.1. The Net Domestic Added Value realized within the framework of the Main Procurement Agreement related to joint production is calculated by taking as the basis the "Domestic Added Value Calculations" article in the Main Procurement Agreement.
- 3.10.2. The Domestic Net Added Value realized within the scope of export type offset projects or direct procurement projects from abroad, is the difference after deducting the costs of the imported goods and services both by the company realizing the production and by other companies which have provided goods and services to this company in order to be able to realize the subject production from the export value of the goods and services produced in Turkey and is the value of the net production realized in Turkey. In the calculation of the import inputs, the records of the producers can be examined when necessary.
- 3.10.3. In case the documents submitted by the company obligated for offsets are not considered to be sufficient in the determination of the Domestic Net Added Value, an expert report from the Chamber of Industry or at places where there are no Chambers of Industry, then an expert report from the Chamber of Commerce may be requested.

### 3.11. JOINT PRODUCTION:

Joint production activities are the production activities to be made for providing increases in the production capacity and capabilities of the industry in Turkey directed at meeting the requirements related to the defense industry of the Turkish Armed Forces and/or the other public institutions of the related company selected to realize the project within the framework of projects carried out by the MSB/SSM with the related company at the existing and/or the new facilities to be established in cooperation with the Turkish companies.

### 3.12. PRODUCTION UNDER LICENSE:

Productions under license are production activities carried out under license from the foreign company or companies within the framework of the projects carried out by the MSB/SSM.

### 3.13. NATIONAL PRIME CONTRACTOR:

The national prime contractors are company/companies established according to the Law of the Republic of Turkey that have more than 50% Turkish capital, which is selected to realize the project and with whom the Main Procurement Agreement has been signed within the framework of the projects carried out by the MSB/SSM.

### 3.14. FOREIGN COMPANY:

The foreign company is the company selected to realize the project directly with a joint investment company or selected to realize the project through a prime contracting company to be selected from Turkey and with whom a Main Procurement Agreement has been signed or companies whose centers of activity are outside of Turkey and from whom the prime contracting company selected in Turkey and/or other Turkish companies serving as sub-contractors in the project which purchases imported goods and/or services worth over 5 million US dollars.



4. BASIC PRINCIPLES:

The following criteria will be used in the evaluation and crediting of the offsets.

- 4.1. The offsets to be provided by the related company should be realized without charge in order to be accepted.
- 4.2. The crediting of investments that will be realized within the framework of the indirect offset commitment is possible with the condition that the related company will not transfer its subject investment to third parties for a minimum of a five (5) year period as of the date of realization of the investment. In case the investment is withdrawn before the completion of the subject periods or if the company withdraws the investment without obtaining permission from the MSB/SSM, then offset credit given is canceled and as of the date of crediting, a penalty is accrued in the foreign currency type in the offset agreement if such a clause is in the agreement and is collected from the company along with a 10% simple annual interest rate for the delay.
- 4.3. The expenses of the related company or the company realizing the offset within the framework of its offset activities, such as consulting, personnel expenses, administrative, etc. expenses, cannot be credited in any manner to its offset commitment.
- 4.4. If the amount of the export type direct offsets directed to the field of the defense industry realized exceeds the amount of the commitment, then the excess amount can be credited to the indirect offset commitment within the framework of the same project by multiplying it with a multiplier of three (3).
- 4.5. The export type indirect offset amount realized by the related company in excess of its commitment related to the exporting of the priority industrial goods and services determined by the MSB/SSM and the DTM in coordinating with the TGS can be credited to the unrealized direct offset commitment of the company upon the request of the related company and on the condition that a minimum of 50% of its export type direct offset obligations are realized by multiplying it with a multiplier between 1/2 - 1/3. The subject multipliers are determined by taking into consideration the priority sectors.
- 4.6. The request of the related company for advance crediting directed to the offset obligations before signing the Main Procurement Agreement can be subject to advance crediting within the framework of the principles determined in this directive if the request is approved by the MSB/SSM in coordinating with the TGS. No advance crediting can be made in case the offset transactions that will form the basis for the advance crediting of the related company are realized and/or planned to be realized prior to the date of publication of the RFP related to the project. In other words, the offset projects proposed by the related company should be new and must be realized in the period of the project which is the subject of the competitive bidding. The related offset project period starts from the publication date of the RFP. In case the related company to

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which the RFP was sent realizes the offset transactions that will form the basis for advance crediting, then the advance credit is canceled in case the Main Procurement Agreement is not signed with the related company.

- 4.7. In case the direct and/or indirect offsets are realized in excess of the committed amount within the validity period of the offset agreement, then the excess amount can be subject to advance crediting to the offset commitments to be undertaken by the related company upon the request of the related company and/or its partners (the subject partners are required to own at least a 10% share of the company). However, if the request for crediting for the offset amount to be subject to advance crediting in this manner is not made within one (1) year as of the date of realization of the offset, then the amount of the excess offset is not taken into consideration. The advance credited offset amount is valid for a five (5) year period from the date of the subject petition.
- 4.8. In case of the exporting of the products manufactured as a result of the investments that can be considered to be indirect offsets within the scope of the projects carried out by the MSB/SSM, then the Domestic Net Added Value created in Turkey for the manufacturing of those goods are accepted as indirect offsets proportional to the company shares of the related company and credited accordingly. In case the created amount of the Domestic Net Added Value is over 51%, then the indirect offset credit amount is determined by multiplying the total invoice amount by the proportion of company shares of the related company.
- 4.9. Technologies conforming to the EU and USA environmental standards will be given priority in the activities related to technological cooperation to be realized in the scope of the offsets.
- 4.10. The offset percentage to be committed by the related company within the framework of the domestic joint production projects that are being carried out by the MSB/SSM and whose foreign minimum procurement cost is a total of five (5) million US dollars, cannot be less than 50% of the import cost of the project. At least one half of the direct offset commitments is required to be realized as the export type direct offsets in accordance with Article 3.3.a. specified above. However, the export type direct offset ratio can be increased by the MSB/SSM for providing an increase in exports in the field of the defense industry and this matter is stated in the related RFP.
  - 4.10.1. In case the import portion of goods and/or services to be purchased to be realized from the foreign company with which the Turkish company, which is included within the framework of the project that is the subject of the Main Procurement Agreement, has made a cooperation agreement, exceeds five (5) million US dollars, then the minimum offset ratio to be committed by the foreign company cannot be less than 50% of the import portion of the subject purchase of goods and/or services. A minimum of 50% of this ratio must be direct offsets. However, the direct and indirect offset commitment ratios in cases when the subject foreign company cannot engage in joint production activities in Turkey are specified in the RFP.

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- 4.10.2. In cases when it is determined that the Domestic Net Added Value ratios targeted in the scope of the Main Procurement Agreement to be signed within the framework of the joint production projects could not be reached under the capabilities of the existing defense industry infrastructure, then the difference in the Domestic Added Value is compensated by increasing the export type direct and indirect offsets. This matter is clearly specified in the related RFP.
- 4.11. The minimum offset amount to be applied in the direct procurement projects from abroad in which a domestic joint production is not envisaged is 50% of the project cost. The direct and indirect offset ratios to be committed by the related company and the offset methods to be applied are determined by the MSB/SSM by taking into consideration the existing capabilities of the Turkish industry and these are clearly specified in the RFP.
- 4.12. In case the Domestic Net Added Value ratio for the products that are the subject for exporting in the export type direct offsets to be realized is a minimum of 51% or more, then the total invoice value of the goods is credited as direct offsets. In case the Domestic Net Added Value ratio is less than 51%, then the crediting will be up to the amount of the Domestic Net Added Value realized. The minimum Domestic Net Added Value ratio can be reduced to as low as 30% by the MSB/SSM for some products for which production with advanced technology is required. The related company is required to obtain the approval of the MSB/SSM for the minimum Domestic Net Added Value ratio to be applied before the subject export connections are made for being able to credit the related transactions. Prior to any approval, the MSB/SSM coordinate the subject with the TGS.
- 4.13. In the exporting of goods and/or services to be realized in the scope of the indirect offsets, if the Domestic Net Added Value ratio of the goods and/or services which are the subject of exports are a minimum of 51% or more, then the total invoice amounts of the goods and/or services are credited as indirect offsets. The crediting of the subject exports can be made by the DTM in case it is approved by the MSB/SSM. In that case, the principles of crediting related to exports are jointly determined by the MSB/SSM and the DTM.
- 4.14. In the export of main weapons systems, for which the costs for the design and R&D are met from domestic sources to provide the effectiveness in the international markets of the Turkish companies engaged in activities in the defense industry field, crediting can be made by applying a multiplier between 1-2 if approved by the MSB/SSM. A multiplier of one (1) is applied for exports for other export type direct and indirect offsets.
- 4.15. In case the related company provides technological cooperation that will provide the opportunity for technology transfer and/or R&D to the Turkish companies in the scope of the offset obligations of the related company, then 50% of the subject offset transactions obtained without multiplication with a multiplier, is repaid to the SSDF by the company using the offsets without any interest in US dollars or Euro within five (5) years at the latest

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within the framework of a payment plan acceptable to the MSB/SSM. The MSB/SSM coordinate the subject with the TGS.

- 4.16. In case the related company having the offset obligation establishes a sales connection within a region to be defined in the offset agreement as in the scope of the sales rights to third countries in addition to the deliveries specified in the Main Procurement Agreement signed, then the related company will place orders with the Turkish industry by taking into account the highest Domestic Net Added Value reached in the scope of the related project and the existing competitive conditions.
- 4.17. The priority sectors and fields of industry are determined every year by the MSB/SSM in coordination with the DTM, TÜBİTAK and the other related institutions.
- 4.18. During the discussions related to the Main Procurement Agreement and/or the procurement agreements requiring offsets, the potential offset projects committed by the company will also be discussed and these will be included as a list in the offset agreement. If new projects are brought up, then the approval of the MSB/SSM will be obtained. Prior to any approval, the MSB/SSM coordinate the subject with the TGS.
- 4.19. The offsets realized within the framework of the MSB/SSM projects cannot be credited to the account of another company excluding the related company and/or the partners of the related company (in this case the related company is required to have a minimum of a 10% share in the subject partnership).
- 4.20. The multipliers to be applied for the offset transactions in the offset commitments are shown in the Appendix.

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5. SUBMISSION OF PROPOSALS:

- 5.1. The company undertaking offset commitments within the framework of the project carried out by the MSB/SSM, will submit its proposal related to the subject commitment within the period specified in the RFP sent to them and present it to the MSB/SSM in a file separate from its proposal related to the project and including the information specified below.
- 5.2. The information to be submitted in the proposal file related to the offset commitment:
  - a. The information on the offset experience in the past of the company that will make a commitment and/or the companies that will realize the offset commitment with the approval of the MSB/SSM;
  - b. The offset amounts committed by years (in the type of foreign currency proposed in the Main Procurement Agreement and/or procurement agreement requiring the obtainment of offsets);
  - c. The statement to the effect that the application of sanctions specified in Article 8 below are unconditionally accepted in case the offsets committed are not fulfilled;
  - d. The kinds of offsets committed (per the main headings included in Article 3.2.) and presentation of detailed information as much as possible in the framework of the concrete offset projects;
  - e. The answers provided related to all of the other information requested in the offset section of the RFP; and
  - f. The information related to other subjects that are deemed to be useful by the related company besides the matters specified above.
- 5.3. At the conclusion of the preliminary evaluations to be made on the offset proposal submitted to the MSB/SSM, if the subject proposal is perceived not to meet the basic offset criteria included in this directive, then the representatives of the company are invited and requested to correct their proposals within the framework of the subject criteria. In case the requested corrections are not made within the specified period, then the offset proposal of the related company is not taken into consideration in the evaluations and that company is assumed to have not submitted any proposal on this subject. All these activities are coordinated with the TGS by the MSB/SSM.
- 5.4. One of the validity articles of the Main Procurement Agreement and/or a procurement agreement requiring obtainment of offsets is the signing of the offset agreement and its going into effect.

6. CREDITING:

6.1. The following aspects are applied for crediting the subject commitment of the transactions realized within the framework of the offset obligation of related company.

6.1.1. The multipliers given in the Appendix are applied in the crediting of the investment and technological cooperation type of offset obligations. In the crediting, the following are taken into consideration in proportion to the share of the related company in the investment:

- a. The amount of the investment made, and
- b. The profits reconverted to investments which are obtained at the conclusion of the investments made and that are not transferred abroad.

6.1.1.1. In the investment type offsets, the following information and explanations should be submitted by the related company to the MSB/SSM: the type of investment to be made, the period of investment and production, whether or not the subject goods and services that will be produced will be exported, the share of the related company within the total investment, information on other real and juristic persons who will participate in the investment and information related to the transfer of the profits obtained from the investment. In the scope of Article 3.2.g. and j., in crediting the investment type offsets, the amounts obtained by multiplying the multipliers specified in the Appendix by the investment amounts, which are taken as the basis in crediting, are used. It is necessary to apply to the MSB/SSM and to get their approval before obtaining the foreign capital investment permission from the Undersecretariat of the Treasury in order to consider the subject investments as offsets. All these activities are coordinated with the TGS by the MSB/SSM.

6.1.1.2. In the investment type offsets to be credited in the scope of the project, an export guarantee can be requested at a certain percentage of the total investment by taking into account the export potential of the investment that will be made. In case a request is made for an export guarantee, then the investment amount is temporarily credited after the completion of the investment by applying the multiplier specified in the Appendix. The amount of investment temporarily credited is subject to final crediting in proportion to the amount of exports as the desired exports are realized.

6.1.2. If the investments are realized in regions with development priority which are published every year in the Official Gazette, then the multipliers can be increased up to eight (8) by taking into consideration the features and the size of the investment and provided that the multipliers specified in the Appendix are approved by the MSB/SSM.

6.1.3. The Domestic Net Added Value realized above the committed amount in the Main Procurement Agreement in the scope of Article 3.2.a. is credited as a direct

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offset with the use of a multiplier of one (1). Upon the request of the related company, the excess Domestic Net Added Value that is requested to be credited as an indirect offset is credited with the use of a multiplier of two (2). The Domestic Net Added Value realized by the Turkish companies with the support of the related company within the framework of the direct procurement projects from abroad for which joint production is not envisaged are credited according to the principles specified in this article.

- 6.1.4. In the crediting of the export type offsets within the framework of Article 3.2.b. c., d., e. and i., Articles 4.12, 4.13 and 4.14 are taken as the basis for the exports materialized. The company is required to clearly specify the features of the goods and services to be exported in the export type offset commitment.
- 6.1.5. The multipliers shown in the Appendix are used as the basis in crediting for the offset commitments in the scope of Article 3.2.f. However, it is required that the invoices and/or other acceptable documents for the expenses made by the related company for technological cooperation and/or R&D are submitted by the company.
- 6.1.6. The investments specified in Article 3.2.h. are credited with a multiplier of two (2).
- 6.2. In the crediting of offsets in the scope of technological cooperation, the real market value and/or equivalent value of the subject technology is taken as the basis. This value is specified by the MSB/SSM and/or by organizations deemed appropriate by the MSB/SSM. In order for the offsets within the scope of technological cooperation to be subject to crediting, the offsets should be made free of charge and the organization which will receive the technology should accept entering into an obligation towards the MSB/SSM due to the gains to be obtained as the result of the subject technological cooperation. All these activities are coordinated with the TGS by the MSB/SSM.

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7. ESCALATION:

- 7.1. The offset committed is escalated within the framework of an escalation formula to be applied for the goods and services to be imported and included in the Main Procurement Agreement at the beginning of every program year or according to the escalation analysis to be made by the MSB/SSM in coordinating with the TGS, it will be escalated at a fixed rate of escalation determined once on the date the project goes into effect.
- 7.2. If the Main Procurement Agreement is signed with fixed prices, no escalation is applied to the offset commitments if the related offset obligation realization period of the related offset obligation is the same as the project implementation period. In case the offset realization period is longer than the project implementation period, then escalation is applied as specified in Article 7.1. above to the remaining offset commitments as of the beginning of the first program years after the completion of the project.
- 7.3. In case the offset commitments which are escalated up until the beginning of the related program year are not realized within the program year to which they belong, then the subject commitment amounts not realized are escalated for one more year and added to the escalated commitment amount for the succeeding program year.

8. BANK LETTER OF GUARANTEE AND PENALTY SANCTIONS:

- 8.1. An irrevocable bank letter of guarantee issued by an internationally reputable foreign bank and/or a Turkish bank up to the total potential delay penalty specified in Article 10.4 below and a 10% potential penalty amount to be calculated on the estimated escalated cumulative total commitment amount is taken from the related company which has undertaken the offset commitment by taking into consideration the probability that the offset commitments could not be fulfilled within the specified period and under the required conditions. Regarding this process, the MSB/SSM notifies the TGS with a written report. The format of the subject bank letter of guarantee and when it will be obtained is specified in the related RFP.
- 8.2. In case the offsets are not fulfilled within the envisaged period and conditions:
- a. A pecuniary penalty at the rate of 10% of the escalated cumulative offset amount of the commitment not fulfilled is applied. The pecuniary penalty to be applied to the related company which could not fulfill its obligation is transferred to the SSDF by the related company upon the request of the MSB/SSM. In case the related company does not pay the subject penalty, then this amount is collected from an irrevocable bank letter of guarantee obtained as a provision for the potential penalty calculated in the scope of the offset commitment specified in the offset agreement of the company and/or from payments to be made, if any, to the related company by the MSB/SSM within the scope of the Main Procurement Agreement.
  - b. The application of the pecuniary penalty does not release the company from the responsibility of fulfilling the offset commitment. If the related company does not fulfill the offset to which it is committed, then a joint committee to be formed by the representatives of the MSB/SSM and the related company within 90 days after the conclusion of the implementation period specified in the offset agreement will attempt to obtain an applicable agreement by starting discussions within the framework of the principles of good will on the subject of the portion not realized and when and in what manner it will be realized. In case an agreement cannot be reached or if the offset commitment is not materialized in spite of an agreement, then the related company is prohibited by the MSB/SSM from participating in the MSB/SSM projects. The MSB/SSM notifies the TGS regarding this case with a written report.
  - c. Escalation is applied according to Article 7 above in the calculations of penalties. The maximum amount of penalty to be paid within the scope of the offset agreement by the related company is up to 10% of the escalated total offset commitments. The offset commitment which is not fulfilled on time and that is subject to penalty is transferred to the succeeding period with its escalated form after the application of the penalty and the obligation of the related company continues based on the determined escalated cumulative commitment amount. In case escalated cumulative offset commitment is not fulfilled in the program period to which it belongs, then a penalty is applied. However, a new penalty is not applied in the subsequent program period for the offset commitments which were subject to the penalty application in a previous program period.

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9. FORCE MAJEURE CONDITIONS:

- 9.1. The company which realizes its offset commitments will not be responsible for the delays arising from the force majeure conditions specified below. The company will submit the required evidence to the MSB/SSM within a maximum of thirty (30) days following the date of occurrence of the subject force majeure condition showing the effect of this on the offset commitment if any one of these force majeure conditions occurs. Otherwise, the related company which has an offset obligation will be responsible for the delays arising as a result of this as if it was its own fault. The MSB/SSM is authorized to make the necessary investigations on the subject of delays. In case the MSB/SSM accepts the force majeure condition as valid, then the realization period of the offsets will be extended for a reasonable period by the MSB/SSM according to the circumstances. In such a case no delay penalty will be applied. However, the offset amount will be escalated in accordance with the escalation method to which the import portion of the project is subject within this period. All these activities are reported to the TGS by the MSB/SSM.
- 9.2. The force majeure conditions include the following:
- Natural disasters;
  - Declared wars;
  - Occupation, enemy operations;
  - Rebellion, revolution, civil war, mobilization, uprising;
  - Takeover of government, revolt, civil turmoil or peoples' movements;
  - Embargo or confiscation; and
  - Branchwide strikes.
- 9.3. In order for the related company having an offset obligation not to be held responsible for delays arising from the causes enumerated in Article 9.2., and for the subject force majeure condition not to negatively affect the fulfillment of the commitment, the company should have made all the necessary efforts, the company should not have neglect or fault in the delay of the realization of the offset commitment and the company is required to submit on time the documents certified by the authorized Turkish officials attesting this condition to the MSB/SSM.
- 9.4. A new regulation can be prepared on matters related to the force majeure conditions in accordance with the Main Procurement Agreement and/or the procurement agreement necessitating obtainment of offsets provided that it is approved by the MSB/SSM.

10. REPORTING:

10.1. The related company prepares and submits to the MSB/SSM a Six Month Development Report for the realized export type offsets once every six months after the offset agreement goes into effect in connection with the status of realization of the offsets undertaken and an Annual Report for all of its offset commitments within sixty (60) days following the termination of the subject reporting period.

10.2. The following information will be included in the Six Month Development Report:

- The export amount realized in foreign currency included in the offset agreement (if the export is made in a foreign currency other than the foreign currency specified in the offset agreement, then the cost of the product exported is converted into the type of foreign currency included in the offset agreement by using the Republic of Turkey Central Bank Cross Exchange Rates);
- The name of the country and company to which the export was made;
- The type and amount of the goods exported;
- The calculation of the Domestic Net Added Value;
- The list of the import inputs included in the exported goods (type and cost);
- The list of the domestic inputs included in the exported goods (type and cost);
- The name, title and address of the producer of the goods exported;
- A copy of the invoice prepared for goods exported;
- A certified copy of the Customs Export Declaration recording the fact that the export was realized and that it was done within the framework of the offset agreement;
- A copy of the approval letter previously given in writing for the related offset activity by the MSB/SSM;
- The foreign currency purchase receipt for the export;
- The bank statement documenting that the cost of the goods were paid; and
- Other information and documents required by the MSB/SSM.

The MSB/SSM can also request documents certified by a Certified Financial Consultant including the calculations of the Domestic Net Added Value and documents proving that the related exports were made along with the documents specified above in cases where the MSB/SSM deems it necessary.

10.3. In the Annual Report, information related to the following matters will be included in addition to the information and documents included in Article 10.2.:

- The amounts and types of the offsets realized prior to the reporting period (by years and in grand totals);
- The amounts and types of the offsets realized in the reporting period (these amounts will be provided separately according to the types of offsets realized);
- The detailed information related to offset transactions realized in categories other than the export type offsets within the reporting period; and
- The amount of offset commitments that were required to be fulfilled but could not be fulfilled as of the end of the reporting period and the reasons for not being fulfilled;

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- 10.4. In case the Six Month Development and Annual Reports are not submitted to the MSB/SSM within the sixty (60) day period specified in Article 10.1. above, then a delay penalty is applied for each reporting period in the amounts specified in the related RFP.



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11. AUTHORITY FOR CONTROL AND CANCELLATION:

- 11.1. The MSB/SSM is authorized to have its own personnel or an independent auditing organization control accounts of the company realizing the commitment or its sub-contractors related to the offset activities aimed at determining to what extent the offsets have been realized.
- 11.2. In case crediting exceeding the real amount has been made by repeated crediting of the offset amount or by a calculation error, the MSB/SSM has the right to cancel the excess crediting made as of the date of completion of the realization period of the offset commitments up to a one (1) year period. In this case, the situation is notified in writing to the company realizing the offset and if necessary a reasonable period of time is recognized for the fulfillment of the commitment related to the canceled portion. All these activities are reported to the TGS by the MSB/SSM.

12. CANCELLATION OF THE PROCUREMENT AGREEMENT:

- 12.1. In case the Main Procurement Agreement and/or the procurement agreement necessitating the obtainment of offsets is partially or completely canceled before its period of termination or terminated in another manner due to reasons beyond the control of the related company, then the offset obligation of the related company is revised proportionally. If the offset amounts realized before this date exceed the proportional cost of the fulfilled portion of the Main Procurement Agreement related to the project and/or the other procurement agreement, then the excess amount can be applied to the offset commitments to be assumed in the future by the related company within the framework of Article 4.7 above upon the request of the company realizing the offsets. In case the proportional cost is not exceeded, then transactions are made according to the decrees of the existing offset agreement. All the above mentioned points are coordinated with the TGS by the MSB/SSM.
- 12.2. If the Main Procurement Agreement and/or the procurement agreement necessitating the obtainment of offsets are terminated as the result of the fault of the related company, then the application specified in Article 4.7. above is not made for the excess offsets realized within the period of implementation. Penalties are applied for incompletely realized offsets. This case is reported to the TGS by the MSB/SSM.

13. RESOLUTION OF DISPUTES

- 13.1. The offset agreements will be signed and applied according to the Turkish laws.
- 13.2. The methods to be applied in the resolution of disputes that may arise within the scope of the offset agreements are specified in the related RFP.
- 13.3. All of the activities of the related company, that has the offset obligation, which enters into cooperation with the Turkish industrial companies and other related organizations within the scope of the offset agreements will be realized according to the Turkish laws and Article 13.2. above will be applied in the resolution of the disputes. This matter will be included in the agreements that will form the basis of the implementations.



14. CHANGES TO BE MADE IN THE DIRECTIVE

- 14.1. The MSB/SSM can change this directive partially or completely at any time. The principles of application of the changes made to the offset commitments previously contracted are determined separately by the MSB/SSM.
- 14.2. The principles of applications of the articles of this directive to the offset agreements signed before the publication date of this directive are determined separately by the MSB/SSM upon the request of the related company.



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**APPENDIX**

**TABLE OF MULTIPLIERS**

| <b>I. INVESTMENT</b>                                                                                        | <b><u>MULTIPLIER</u></b> |
|-------------------------------------------------------------------------------------------------------------|--------------------------|
| <b><u>SUBJECTS</u></b>                                                                                      |                          |
| 1. DEFENSE INDUSTRY INVESTMENTS .....                                                                       | 3                        |
| 2. INDUSTRIAL INVESTMENTS CONNECTED TO ADVANCED TECHNOLOGIES<br>OUTSIDE OF THE DEFENSE INDUSTRY FIELD ..... | 2                        |
| 3. THE USE OF THE PROFITS OBTAINED FROM THE INVESTMENTS MADE AS<br>OFFSETS FOR THE CAPITAL INCREASES .....  | 1                        |

In case the industrial investments are made in the regions with development priority, then the multipliers to be applied can be increased up to 8 according to the evaluations made by the MSB/SSM by taking into consideration the features and size of the investment to be made.

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APPENDIX

## II. TECHNOLOGICAL COOPERATION

## MULTIPLIER

### SUBJECTS

|    |                                                                                                                                                                        |   |
|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| 1. | SENSOR TECHNOLOGY                                                                                                                                                      |   |
|    | Active Phase Array Radars .....                                                                                                                                        | 6 |
|    | Synthetic Aperture Radars .....                                                                                                                                        | 6 |
|    | Neural Circuits .....                                                                                                                                                  | 6 |
|    | RFPer Optic Sensors .....                                                                                                                                              | 6 |
|    | Electro Optic Sensors .....                                                                                                                                            | 5 |
|    | Sensor Fusion .....                                                                                                                                                    | 5 |
| 2. | WEAPONS TECHNOLOGY                                                                                                                                                     |   |
|    | Intelligent Ammunition .....                                                                                                                                           | 5 |
|    | Tandem Warhead Ammunition .....                                                                                                                                        | 6 |
|    | Lasers .....                                                                                                                                                           | 5 |
|    | Ramjet Technique .....                                                                                                                                                 | 6 |
|    | Laser Beam Riding Guidance .....                                                                                                                                       | 6 |
|    | Imaged Monitor Guidance .....                                                                                                                                          | 6 |
|    | Infrared Guidance .....                                                                                                                                                | 6 |
|    | Atmospheric and Nonatmospheric Missiles .....                                                                                                                          | 5 |
|    | Hypersonic Missiles .....                                                                                                                                              | 5 |
| 3. | ARMORED VEHICLE PROTECTION TECHNOLOGY                                                                                                                                  |   |
|    | Composite Armor .....                                                                                                                                                  | 5 |
|    | NBC Protection .....                                                                                                                                                   | 5 |
|    | Active/Reactive Armor .....                                                                                                                                            | 5 |
| 4. | C3 AND ELECTRONIC WARFARE                                                                                                                                              |   |
|    | The multiplier is determined between 4-6 as a result of the evaluations to be made by the MSB/SSM according to the features and importance of the proposed technology. |   |
| 5. | SPACE AND AVIATION                                                                                                                                                     |   |
|    | Composite Body Structures .....                                                                                                                                        | 5 |
|    | Low Traceability .....                                                                                                                                                 | 5 |
|    | Unmanned Aircraft .....                                                                                                                                                | 5 |
|    | Avionic Systems .....                                                                                                                                                  | 5 |
| 6. | DATA PROCESSING                                                                                                                                                        |   |
|    | The multiplier is determined between 3-6 as a result of the evaluations to be made by the MSB/SSM according to the features and importance of the proposed technology. |   |

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7. MEDICAL FIELD

The multiplier is determined between 3-5 as a result of the evaluations to be made by the MSB/SSM according to the features and importance of the proposed technology.

8. OTHER

Technological cooperation in other fields deemed to be suitable by the MSB/SSM other than the main technology fields specified above. The multiplier to be applied within this scope is determined between 3-6.

### III. R&D

#### R&D ACTIVITIES

The multiplier is applied between 5-8 provided that it is deemed to be suitable by the MSB/SSM and according to the features and importance of the proposed R&D activity.

### IV. TRAINING

#### 1. HIGHER EDUCATION AT ABROAD

The multiplier is applied between 5-8 provided that it is deemed to be suitable by the MSB/SSM and according to the features and importance of the proposed education.

#### 2. TRAINING ON THE JOB

The multiplier is applied between 3-5 provided that it is deemed to be suitable by the MSB/SSM and according to the features and importance of the proposed training.

#### 3. OTHER TRAINING ACTIVITIES

Training activities other than the above mentioned fields, the multiplier is applied between 3-5 provided that it is deemed to be suitable by the MSB/SSM and according to the features and importance of the proposed training.

## **APPENDIX D. Draft Offset Agreement**

### **UNDERSECRETARIAT FOR DEFENCE INDUSTRIES**

#### **OFFSET AGREEMENT**

1. Purpose
2. Scope
3. Definitions
4. Offset Liability
5. Crediting
6. Pre-crediting
7. Bank Guaranty
8. Penalties
9. Force Majeure
10. Reporting and Meetings
11. Control and Authority of Annulment
12. Termination of PRIME CONTRACT
13. Dispute Resolution and Applicable Law
14. Changes to be made in the Guidelines
15. Effectiveness
16. Language
17. Notices

#### **Preamble**

This Agreement is made at the date of . by and between Undersecretariat for Defence Industries (Savunma Sanayii Müsteşarlığı; "SSM"), and the CONTRACTOR, (together referred to as the "Parties").

Whereas SSM has entered into a contract with CONTRACTOR at the date of ..... for the supply of ..... (the "PRIME CONTRACT") under which SSM requires the CONTRACTOR, to arrange for direct and indirect Offset as defined herein,

Whereas the CONTRACTOR carry out the said direct and indirect Offset obligations ("direct and indirect Offset obligations") and the CONTRACTOR has agreed to take full responsibility for the same,

Whereas SSM agrees that the CONTRACTOR shall carry out the direct and indirect Offset obligations as set forth in this Agreement which includes the procedures and guidelines for the approval and crediting of direct and indirect Offset and provide for

penalties in the event that the direct and indirect Offset obligations hereunder are not met.

Now therefore the Parties hereto have agreed as follows:

#### **Article 1. Purpose**

This Offset Agreement has been entered into to implement the general guidelines and objectives set forth in SSM Publication No. 5, Undersecretariat for Defence Industries "OFFSET GUIDELINES" dated 1991(hereinafter "Offset Guidelines"), as amended from time to time, as well as the specific obligations set forth herein. This agreement shall be subject to such guidelines and, notwithstanding anything in this agreement to the contrary, SSM shall at all times have the right to amend this agreement so as to implement the substantive requirements of any future published amendments to such offset guidelines.

#### **Article 2. Scope:**

The obligations set forth herein are, except where specified, obligations of CONTRACTOR to SSM independent of the Prime Contract and are fully enforceable by SSM in accordance with the terms hereof.

#### **Article 3. Definitions:**

##### **3.1. Abbreviations:**

SSM: Undersecretariat for Defence Industries  
R & D: Research and Development

##### **3.2. Offset concept:**

Defence industry related exports and any other kinds of foreign currency inflows secured pursuant to Agreement in order to compensate for the foreign currency shortfall occurring as a result of foreign currency payments in the framework of SSM projects are treated as "Offset".

The following items, apart from the project related activities stated in the PRIME CONTRACT, are accepted as Offset:

- a. New or expanded foreign capital investments;
- b. License, know-how and Technology Transfers;

- c. Training opportunities both in Turkey and abroad, proposed and financed by the CONTRACTOR for Turkish citizens and approved by SSM.
- d. Research and Development work opportunities and funds created by the CONTRACTOR for Turkish universities and/or other Turkish research institutions,
- e. Investment by the CONTRACTOR in industrial companies to establish and operate R & D facilities particularly to develop prototypes,
- f. Capital contributions by the CONTRACTOR to foreign companies established and/or participated in by Turkish manufacturing companies whose technological development and exports are granted priority by the Turkish Government and which companies are established for the purpose of marketing their products in international markets; provided, however, that SSM's prior approval is obtained for any such capital contribution;
- g. Export of Turkish defence or related industrial goods and services to Defence Industries in CONTRACTOR's country via foreign companies with Turkish capital share participation by Turkish defence and/or related industries;
- h. Exports to be realized by new or expanded investments and any other alternative long-term export possibilities created by the CONTRACTOR,
- i. Turkish defence and related industries exports, government to government sales and sale of machinery, equipment and spare parts within the framework of SSM projects to foreign ministries of defence and international defence institutions,
- j. Transportation of goods with Turkish flag carriers including transportation insurance with Turkish insurers on net value added basis, transportation and freight costs.

### 3.3. Direct Offset:

Direct Offsets are goods and services exported by the CONTRACTOR either to the country of CONTRACTOR or to third countries in Turkish Value Added basis. The goods and services to be exported may include the systems, subsystems, components, parts, materials and services. These exports should be directly or indirectly related with the project, it is not necessary to be the same type or model provided unless similar technology is used in their production.

#### 3.4. Indirect Offset:

Transactions other than the ones defined as direct Offset and set forth in Article 3.2. are treated as indirect Offsets in the framework of SSM projects.

#### 3.5. Prime Contract:

PRIME CONTRACT is the document signed between SSM and CONTRACTOR in order to set forth the terms and conditions of procuring.....

#### 3.6. Contractor:

COMPANY is the contractor for this Offset Agreement.

#### 3.7. Eligible Party:

The following Parties are eligible to fulfill the Offset commitments of SSM projects;

- a. Companies at least 50 % of the voting shares of which are owned by CONTRACTOR or their affiliates owned by these companies (i.e., companies at least 50 % of the voting shares of which are owned by them);
- b. Notwithstanding the foregoing, the 50 % voting capital share ownership referred to in a. above may not be required with respect to:
  - 1) Publicly owned companies the shares of which are listed on a stock exchange and with respect to which CONTRACTOR can demonstrate (to SSM's satisfaction) that CONTRACTOR effectively controls the decision making process, and
  - 2) Turkish companies producing the eligible offset items set forth in Article 3.2 which are defence industry related companies.
  - 3) Upon the approval of SSM, non-(country of the CONTRACTOR) companies partially owned by CONTRACTOR.
- c. Companies suggested by CONTRACTOR and approved by SSM.

#### 3.8. Crediting:

"Crediting" shall mean the process of deducting the value of any Offset transactions realized by an eligible party from its Offset commitment.

### 3.9. Pre-crediting:

"Pre-crediting" shall mean the realization, subject to the prior written consent of SSM, of offset transactions stated in Article 3.2. by an eligible party but to be credited to the account of the CONTRACTOR in cases in which the PRIME CONTRACT is awarded to the CONTRACTOR.

### 3.10. Turkish Value Added:

#### 3.10.1. "Turkish Value Added" shall mean the total value of an offset transaction less each of:

- a. The value of all materials and services imported from outside of Turkey or paid for in a currency other than Turkish Lira;
- b. All profits or distributions attributable to the Prime Contract transferred outside of Turkey.

For the calculation of Turkish Value Added, the books of the eligible party and or its subcontractors may be audited at any time by SSM. At SSM's request, CONTRACTOR shall submit documentation satisfactory to SSM to enable SSM to verify CONTRACTOR's calculation of Turkish Value Added.

### 3.11. Co-production:

"Co-production" shall mean production activities of the CONTRACTOR with Turkish companies in facilities existing and/or to be established in Turkey and which production activities increase the production opportunities and capabilities of Turkish industry.

### 3.12. Libor:

"Libor" shall mean the London Interbank Offering Rate per annum quoted for the corresponding period in the London Interbank Market of United States Dollars for immediately available funds.

## **Article 4. Offset Liability**

### 4.1. Direct Offset Commitment:

#### 4.1.1. The base amount of direct offset to be effected under the terms and conditions set forth in this agreement shall be .....(US \$.....) ( The "Direct Offset Commitment") in Turkish Value Added basis.

4.1.2. The direct offset commitment, which will be increased by a factor equal to (LIBOR + 2%), shall be realized within a period of ..... (...) years from the effective date of this agreement (such ..... year period hereinafter referred to as the "Effectivity Period").

4.1.3. During the Effectivity Period CONTRACTOR shall realize the offset commitment as set forth below, however, none of the projects to be realized in Turkey under the Offset Agreement will be the same as the defence projects which are under evaluation or being implemented by Turkish General Staff, Turkish Army, Turkish Navy, Turkish Air Force, Ministry of National Defence and SSM. In other words, proposals made by CONTRACTOR should not result in interference with the current defence tenders in Turkey.

| Period<br>(Years) | Commitment<br>(\$ Value) |
|-------------------|--------------------------|
| 1.                |                          |
| 2.                |                          |
| 3.                |                          |
| "                 |                          |
| "                 |                          |

TOTAL

4.1.4. If CONTRACTOR fails to realize its direct offset commitment for a particular year as set forth above, the unfulfilled portion of such commitment shall be added to the next year's direct offset commitment and increased by a factor equal to (LIBOR + 2%). Nevertheless, CONTRACTOR is free to realize direct offset commitments in advance of the schedule set forth above, and (subject to Article 6 below) any direct offsets realized in excess of the applicable direct offset target for the year concerned shall be credited to the direct offset commitment for the following period(s).

4.1.5. If for any reason (except, with respect to Prime Contract price reduction, for reasons attributable to CONTRACTOR's default under the Prime Contract), the total purchase price to be paid to CONTRACTOR under the Prime Contract shall be increased or reduced, as the case might be, such that CONTRACTOR's direct offset commitments equal.....percent (.....%) of the revised Prime Contract purchase price.

#### 4.2. Indirect Offset Commitment:

- 4.2.1. The base amount of direct offset to be effected under the terms and conditions set forth in this agreement shall be .....(US \$ .....)  
(The "Indirect Offset Commitment") in Turkish Value Added basis for export type of indirect offsets.
- 4.2.2. The Indirect Offset Commitment, which will be increased by a factor equal to (LIBOR + 2%.) shall be realized within a period of ..... (....) years from the effective date of this agreement (such ... year period hereinafter referred to as the "Effectivity Period").
- 4.2.3. During the Effectivity Period CONTRACTOR shall realize the Indirect Offset Commitment as set forth below, however, none of the projects to be realized in Turkey under the Offset Agreement will be the same as the defence projects which are under evaluation or being implemented by Turkish General Staff, Turkish Army, Turkish Navy, Turkish Air Force, Ministry of National Defence and SSM. In other words, proposals made by CONTRACTOR should not result in interference with the current tenders in Turkey.

| Period<br>(Years) | Commitment<br>(\$ Value) |
|-------------------|--------------------------|
|-------------------|--------------------------|

1.

2.

3.

"

"

TOTAL

- 4.2.4. If CONTRACTOR fails to realize its indirect offset commitment for a particular year as set forth above, the unfulfilled portion of such commitment shall be added to the next year's indirect offset commitment and increased by a factor equal to LIBOR + 2%. Notwithstanding the schedule of realization set forth in Section 4.2.3 above, CONTRACTOR is free to realize indirect offset commitments in advance of the schedule set forth above, and (subject to Article 6 below) any indirect offsets realized in excess of the applicable indirect offset target for the

year concerned shall be credited to the offset commitment for the following period(s).

- 4.2.5. If for any reason (except, with respect to the Prime Contract price reduction, for reasons attributable to CONTRACTOR's default under the Prime Contract), the total purchase price to be paid to CONTRACTOR under the Prime Contract shall be increased or reduced, the dollar value of CONTRACTOR's indirect offset commitment shall be proportionately increased or reduced, as the case might be, such that CONTRACTOR's indirect offset commitment equals.....percent (.....%) of the revised Prime Contract purchase price.

## **Article 5. Crediting**

- 5.1. Offset activities shall be credited against CONTRACTOR's offset commitments pursuant to the following procedures:
- 5.1.1. The multipliers set forth in Annex- 1 of the SSM publication "Offset Guidelines" shall be applied in crediting investment and Technology Transfer offsets (as described in Article 3.2. (a) and (b). The applicable multipliers shall be those set forth in the then most recently published and effective "Offset Guidelines" and shall be applied to CONTRACTOR's portion of:
- a. The total investment amount (less incentives given by the Republic of Turkey); and
  - b. That portion of profits obtained from the investment which is kept in Turkey and utilized for the financing of new investments.

The CONTRACTOR shall submit the following information to SSM with respect to investment offsets:

- a. type of investment,
- b. period of investment and production,
- c. whether the investment will involve exportation of goods or services from Turkey,
- d. share of CONTRACTOR in the total investment amount,
- e. identities of and all required information on other partners or participants in the investment, and

- f. all required information on repatriation of profits realized from the investment,

In crediting investment offsets, the amount obtained by applying the multipliers set forth in Annex- 1 of "Offset Guidelines" to the actual amount of the investment shall be taken into consideration.

If any such investment is made in the first priority regions announced in the Official Gazette of the Republic of Turkey, then 2.5 (two and half) will be added to those multipliers set forth in Annex- 1 of "Offset Guidelines"; if any such investment is made in the second priority regions, then 2.0 (two) shall be added to the multipliers set forth in Annex- 1 of "Offset Guidelines".

Investments described in Article 3.2.(f), shall be evaluated on a case by case basis and will be credited as approved by SSM.

- 5.1.2. With respect to offsets described in Article 3.2. (c),(d),(e) the multipliers stated in Annex-2 of "Offset Guidelines" shall be applied, subject to SSM's evaluation and approval of all related training invoices submitted by CONTRACTOR.
- 5.1.3. Offsets described in Article 3.2. (g),(h),(i) (Exports) shall be credited on the basis of Turkish Value Added. CONTRACTOR shall describe in detail the type of goods and services and the industrial facilities in which the goods are produced.
- 5.1.4. No multiplier shall be applied to offsets described in Article 3.2. (j).
- 5.2. In crediting offsets realized through technology, license and know-how transfers the actual market value and/or comparable value of the technology transferred shall be used in determining the amount to be credited. This value shall be determined by SSM. Technology, license and know-how transfers should be given free of charge and the product should be exported from Turkey in order to be credited as offset. In addition, the Turkish recipient of the technology shall agree to share with SSM (in a manner to be mutually agreed) the benefits of such Technology Transfer.
- 5.3. Investment type of offsets shall be credited provided that CONTRACTOR's equity in the investment shall not be transferred to any other party for a minimum of 10 years following the investment.
- 5.4. Transportation costs of using Turkish flag carriers and insurance cost if insurance is through Turkish insurance institutions shall be credited as offset of the CONTRACTOR subject to SSM's evaluation of the related shipping and insurance documents.

- 5.5. Expenses of the CONTRACTOR or an eligible party related to personnel and other administrative activities, overhead and similar expenses related to the offset programs shall not be credited against CONTRACTOR's offset commitment.
- 5.6. In the event that the total value of direct Offset finally achieved would exceed the total value of the direct Offset commitment, the excess value may be credited to the CONTRACTOR's account upon its request for the purpose of fulfilling its indirect Offset commitment related to the same project.
- 5.7. Offset activities to be credited to the account of the CONTRACTOR for its commitment should be realized after the effectiveness of the Offset Agreement.
- 5.8. Exports made in currencies other than US \$ shall be converted into US \$ at the official cross rates of the Central Bank of Republic of Turkey at the date of the customs export declaration forms.
- 5.9. Offsets realized under this agreement may not be credited to any company other than the CONTRACTOR.

#### **Article 6 Pre-crediting**

- 6.1. Offset proposals of CONTRACTOR made before signing of this agreement may be pre-credited in accordance with the principles set forth in "Offset Guidelines" booklet.
- 6.2. In the event the total value of offsets finally realized exceeds the total value of the offset commitments, the excess value shall be pre-credited to the CONTRACTOR's account, upon its request, for the purpose of fulfilling its future offset requirements. However, any request for pre-crediting should be made within (six) 6 months after the excess value has been calculated and any such pre-credits should be applied against offset commitments within (five) 5 years following the pre-crediting. If CONTRACTOR fails to comply with the time periods set forth in the preceding sentence, CONTRACTOR will not be eligible to obtain or utilize, as the case might be, any such pre-credits.

#### **Article 7. Bank Guaranty**

- 7.1. CONTRACTOR should give a Bank Guaranty as given in Attachment-A in order for this agreement to become effective. This Bank Guaranty should be in the form of a Letter of Guaranty (L/C) obtained from a reputable and trusted bank in the amount of .....million US Dollars (US\$ ..... ) for the coverage of the potential total compounded penalty value of its commitment stated in Article 4.

- 7.2. The purpose of the Letter of Guaranty is to assure SSM of payment by CONTRACTOR of any penalties assessed against CONTRACTOR under this Offset Agreement. Before SSM may draw against the Letter of Guaranty, SSM shall notify CONTRACTOR of the amount of penalty due and the reason the penalty is due. If CONTRACTOR does not pay the penalty within 30 days after the notice is given, SSM may draw against the L/C.
- 7.3. The L/C shall provide that in order to draw against the L/C, SSM shall provide the issuing bank with (i) a copy of the notice given to CONTRACTOR under section 7.2 and (ii) a certification of the amount, if any, of the penalty that CONTRACTOR has not paid.

## **Article 8. Penalties**

- 8.1. If Offset commitments are not met at the time and in the manner required, then:
- a. A penalty at the rate of 10% shall be applied to the unfulfilled and escalated offset amount. Enforcement of penalty does not relieve the company of liability for losses resulting from its failure to meet its contractual offset commitment.
  - b. Any CONTRACTOR who fails to realize the offset commitment shall be prohibited from participating in any additional SSM projects for a specific period of time to be determined by SSM.
- 8.2. CONTRACTOR shall pay all such penalties to SSM no later than 30 (thirty) days after SSM's written demand, which demand shall provide a justification for the assessment of such penalty. In the event CONTRACTOR does not so pay any such penalty within 30 days, SSM shall have the right to (i) draw down such penalty from the Bank Guaranty (Article 7) and/or (ii) withhold any other amounts payable by SSM. Moreover, and without limiting the foregoing, any such unrealized commitment shall be added to the applicable commitment of the succeeding year and escalated as described in Article 4.
- 8.3. The unfulfilled portion of the offset commitment of any year shall be transferred to and escalated with the offset commitment of the next succeeding year in accordance with the procedures set forth in Article 4.1.2 or 4.2.2.
- 8.4. For each year set forth in Article 4 above, CONTRACTOR shall pay to SSM the penalty assessed pursuant to Section 8.2 on the then unrealized portion of all commitments outstanding at the end of such year.

- 8.5. In the event that any portion of the commitments remain unrealized at the end of the Effectivity Period, CONTRACTOR shall pay to SSM all penalties assessable on such unrealized commitments and shall remain responsible to realize its offset obligations; provided, however, that CONTRACTOR shall not be asked for penalty for succeeding years beyond the Effectivity Period.

## Article 9. Force Majeure

- 9.1. The CONTRACTOR shall not be liable for the delays resulting from any event of Force Majeure set forth in Section 9.2. below, provided that (i) such event of Force Majeure directly and materially prevented the CONTRACTOR from performing its obligations hereunder. (ii) the affected party took all reasonable precautions, due care of reasonable alternative measures in order to avoid the effect of such event of Force Majeure, (iii) the affected party took all reasonable measures to mitigate the effect of the same and, (iv) The CONTRACTOR has given SSM prompt notice of the same in the manner described in the following sentence. The CONTRACTOR shall submit to SSM all necessary information and details relating to an event of Force Majeure and the consequences of the same no later than 30 days after commencement of the event of Force Majeure. Failure to so inform SSM shall constitute a waiver by the CONTRACTOR of any right to claim Force Majeure (and the benefits of this Article 9) with respect to such events. Notwithstanding the foregoing, SSM shall have the right to independently investigate the nature and consequences of any alleged event of Force Majeure. When an event of Force Majeure has in fact prevented performance of CONTRACTOR's commitments hereunder, SSM shall extend the effectivity period for a reasonable period of time depending upon the circumstances, and CONTRACTOR shall not be liable for any penalties which would otherwise have been assessed during the period of any such extension. However, all applicable commitments shall be escalated during the period of any such extension.
- 9.2. Force Majeure means, and shall be limited to, any of following events:

(Please contact SSM for this part of the document)

## Article 10. Reporting and Meetings

- 10.1. The CONTRACTOR shall prepare and submit to SSM Semi-annual Development Report on all realized exports and Annual Reports concerning all of its commitments hereunder. The CONTRACTOR shall submit the Semi-annual Development Reports to SSM within the first fifteen (15) days after the first six (6) months of the applicable program year and shall submit the Annual Report to

SSM within first thirty (30) days after the end of the program year relating to such Annual Report.

10.1.1 The Semi-annual Development Reports shall include the following information:

- a. the amount of US \$ exports realized,
- b. country and company to which such exports were made,
- c. type and amount of the exported goods and services,
- d. amount of Local Value Added constituting such exports,
- e. name, title and addresses of Turkish producers of the exported goods and services,
- f. a certified copy of custom clearance declaration showing the realized export value and a certificate of CONTRACTOR declaring that such export complies with the requirements of this agreement.

10.1.2. The Annual Reports should contain the following information:

10.2. A working group designated by the parties shall meet at SSM's offices promptly after this Agreement comes into effect in accordance with Article 15. Such working group shall meet every six (6) months thereafter. The members of the working group shall consist of at least one representative from each of SSM and the CONTRACTOR. The subjects for discussion, recording and mutual agreement shall include:

- a. the total amount of each commitment achieved to date, and
- b. the effect of the price escalation formula calculation on the amount of the commitment for the following year.

## **Article 11. Control and Authority of Annulment**

11.1. SSM shall at all times have the right to use either independent auditing firms or its own personnel to audit the accounts, books and records of CONTRACTOR, all Eligible Parties and/or their subcontractors with the objective of verifying the realized commitments. SSM shall be responsible for all expenses incurred by it in conducting such audits.

11.2. In the event any commitments are incorrectly credited, SSM shall have the right to annul any such crediting within the offset program period, and shall notify the

Eligible Party by letter, and if appropriate, a reasonable period of time for realization of the annulled offset shall be granted.

## **Article 12 Termination of the PRIME CONTRACT**

- 12.1. In the event that the PRIME CONTRACT is terminated for the default of the CONTRACTOR, then CONTRACTOR and/or Eligible Party will maintain all projects currently in place active and viable for the balance of .....(...) year Effectivity Period.
- 12.2. In no event shall this agreement and/or CONTRACTOR's commitments hereunder be affected or reduced if the contract is terminated for reasons attributable to CONTRACTOR's default.

## **Article 13. Dispute Resolution and Applicable Law**

- 13.1. This Agreement is made under and shall be governed by and construed in accordance with the substantial and procedural laws of the Republic of Turkey and shall not be governed by the laws of any other jurisdiction.
- 13.2. Both Parties hereto irrevocably submit to the jurisdiction of the courts of Ankara, the Republic of Turkey in relation to any claim or dispute arising from this Agreement and acknowledge their competence.

## **Article 14. Changes to be made in the Offset Agreement**

- 14.1. SSM, at any time, has the right to amend this Offset Agreement partially or completely.

## **Article 15. Effectiveness**

This Agreement shall become effective on the date the PRIME CONTRACT comes unconditionally into effect in accordance with its terms.

## **Article 16. Language**

- 16.1. The contractual language is English.
- 16.2. This Agreement shall be written in both languages and only the English version shall be legally binding.

## **Article 17. Notices**

Any notice to be given under this Agreement shall be deemed to be properly given if left against receipt at or sent by registered mail to the parties of this agreement to the party concerned at this address below, and shall be deemed to have been received and effective on the tenth (10) working day following the posting thereof if sent by registered mail.

### **NOTICE TO SSM:**

SAVUNMA SANAYİİ MÜSTEŞARLIĞI,  
İNÖNÜ BULVARI, KİRAZLIDERE MEVKİİ BAĞÇELİEVLER 06100, ANKARA  
TURKEY

TELEPHONE: 90 (312) 417 23 26

TELEFAX: 90 (312) 417 32 66

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## **Vita**

Captain Ahmet Ilbas was born in Aydin, Turkiye. He graduated from Maltepe Military High School in Izmir, Turkiye in 1988, and received his Bachelor of Science Degree in Aircraft Engineering from Turkish Air Force Academy in Istanbul 1992. He completed the RF-4 weapon systems officer-training course in August 1994.

He began his military service career as an RF-4 weapon systems officer in the 173.Squadron, 7<sup>th</sup> Main Jet Base, Malatya, Turkiye. He graduated from Flight Safety Officer Course in Safety School at Kirkland AFB, New Mexico, in August 1999. He began working as an Aid de Camp for Lt. Gen. Ibrahim Firtina, Commander 1<sup>st</sup> Tactical Air Force and Combined Air Operation Center 6 in Eskisehir, Turkiye.

In August 2000, he entered the School of Logistics and Acquisition Management at the Air Force Institute of Technology at Wright-Patterson AFB OH to work toward a Masters of Science Degree in Logistics Management.

| REPORT DOCUMENTATION PAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                  |                                   |                                         | Form Approved<br>OMB No. 074-0188                                     |                                                                                                   |
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| 13. SUPPLEMENTARY NOTES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                  |                                   |                                         |                                                                       |                                                                                                   |
| <p>14. ABSTRACT</p> <p>This study sought to describe Turkish defense offsets in foreign procurements. Located at the epicenter of regions fraught with crisis, Turkiye is a secular, democratic, liberal country sharing western moral values. With the tradition of its 1,000 years of statehood, its constitutional order, and its strong armed forces, Turkiye is a center of power that can affect delicate balances of power in the region.</p> <p>Offsets started to become an important way of obtaining industrial and technological benefits when importing military equipment in the early and mid-1980s. Offset deals remain an important aspect of Turkish arms importing policy and offset applications in Turkish foreign procurements show that offsets are likely to appear increasingly in the foreseeable future. Consequently, the study of Turkish defense offsets is important.</p> <p>The history of offsets is introduced for the background of this research. As a major user of U.S. defense systems, Turkiye each year buys American weapons worth more than \$ 1 billion. So, U.S. offset policy is described as a main supplier. A history of the offset policy in Turkiye and an analysis of the application of the offset policy is provided. The conclusion is reached that offsets might prove beneficial for development of the Turkish defense industry, provided that the appropriate policy measures create a defense industrial base capable of assimilating future offset benefits programs.</p> |                  |                                   |                                         |                                                                       |                                                                                                   |
| 15. SUBJECT TERMS<br>Turkey, Offset Agreements, Foreign Military Sales, Foreign Trade, International Trade, Military Procurement                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                  |                                   |                                         |                                                                       |                                                                                                   |
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