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The Italian Defence Industry:
from the NATO umbrella to a renewed
projection of hard power (1945-2023)

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Abstract

The following study navigates the particular bond between the Italian defence industry and its economy. More specifically, this research will put forward data and analytical information showcasing how the defence industry from 1945 fostered the Italian economy. Likewise, this thesis aims to demonstrate how the production and export of specific military equipment, via the various defence hubs that populated Italy, were able to gain a strategic position in the MENA region (Middle East and North Africa), traditionally a sensitive area of the world for Italian foreign policy.

Furthermore, this thesis explores how Italy was able to bolster its soft power via the equipment exports, often remaining the only NATO Country able to retain a credible diplomatic foothold in neutral Countries. This thesis draws its main analyses from a number of strategic and diplomatic findings that tackled the complex issues of the Cold War. The most notable contributions remain the many publications of Prof. Varsori, one of the most important Italian scholars in regards to the complicated Italian history of the First Republic. Additionally, the thesis aims to demonstrate how the economic integration fostered by the construction of European Coal and Steel Community (ECSC) and subsequently the European Economic Community (EEC), reflected in a shared approach in terms of R&D with the ultimate capacity of engaging in complex projects such as the Panavia Tornado.

Thus, the overarching goal of the thesis is to provide evidence that the Italian defence industry was and to this date still remains an important asset for Italy's foreign policy, both in regards to traditional soft power and the resurging hard power dynamics.

Introduction

The history of the Italian defence industry shares many of the traits common among the development of the various national militaries operating in Europe. However, similarly to the cases of Germany and Japan, the role of the Italian industry of defence disappears almost overnight following the Italian defeat at the end of the Second World War. Virtually non-existent anymore, the role of the Italian industry of defence was diminished in the two decades of following 1945. Italy itself resorted to purchase and use foreign equipment, mainly American weapon systems. The reasons why Italy stopped developed new armaments are clear enough. The Nation was included among the enemy States of the UN; similarly, its autonomy was de-facto not existent, as the Allied military maintained a strong presence in the region. Eventually, the logic of the Cold War caused a first spark of realignment, thus leading to the re-armament of Japan, Germany, and Italy. The reasons why there is a conspicuous lack of research about Italy's weapons production during the Cold War is clear enough; the stigmas and the traumas of the World War were still present in the public perception. Instead, there is quite an abundant literature comparing the various European powers (including Italy) until 1945. Most of the previous work has been collected by Paul Kennedy.

The development of the Cold War was eventually replaced by a strong European commitment, one that led to a renewed role of the Italian defence industry. This political and European commitment has waned at times, but eventually, the Italian industry defence retained an important role in the NATO and EU framework, following the logic of hard power. The most recent examples of this importance are Fincantieri activities devoted to bolster the US navy and the Naval Law of 2014: in a world that is slowly sliding into the rules of hard power once more, the Italian industry of defence must retain a prime, active role lest Italy falls behind the growing number of menaces. Italy's historical position within the intricate tapestry of European politics and conflicts has been rather unique. Unlike its more established counterparts, such as France, the UK, and the German Empire, Italy entered the scene as a relative newcomer. This peculiarity was largely attributed to the belated process of Italian Unification, which culminated in the late 19th century. As a consequence, Italy found itself facing a considerable structural gap compared to the already well-developed economies of Western Europe. This disparity was glaringly evident in various

economic sectors, with Italy's GDP significantly lagging behind its contemporaries. The period following World War II witnessed a remarkable transformation in Italy's economic landscape, commonly referred to as the "Economic Miracle." It was during this time that Italy embarked on a journey of rapid industrialization and modernization, propelling it into the league of advanced Western economies.

The Economic Miracle was instrumental in closing the economic gap that had persisted for so long. However, it is crucial to recognize that this transformation was not solely driven by economic factors. The thesis seeks to illuminate the pivotal role played by the Italian defence industry in this overarching narrative of Italian development. It delves into the industry's historical evolution, from its shortcomings during the turbulent World Wars to its subsequent ascent as a significant player in the multipolar global arena. A particular focus is placed on the naval sector, where Italy's expertise and contributions have been notable. The most important authors and contributors utilized are the works of Kennedy and Varsori, the latter being one of the most important Italian historians of recent dates. A number of public databases, such as FIAT's shareholders acts, CIA analysis documents, and SIPRI records of army exports are used. This thesis includes an important part devoted to comparing Italy to most important contemporary States. Much of this comparison mainly revolves around the different industrial output of the the Axis members and of the Allies during the Second World War and its immediate aftermath. Other important sources utilized in this thesis include the enormous work of Heuser. The SIPRI Database, the Italian Ministry of Defence and Paul Kennedy's work are the sources for the table indicated regarding the sales of weapons. Moreover, the thesis expands its scope to explore the intertwined relationship between the defence industry and broader European integration efforts. Italy's defence industry, with its growing capabilities, played a vital role in strengthening the ties that bind European nations, especially in terms of security and defence cooperation. Additionally, the research investigates Italy's role in Mediterranean diplomacy, highlighting its historical involvement in the complex geopolitics of the Mediterranean Sea. This includes its engagement with countries traditionally associated with the Eastern bloc, revealing Italy's diplomatic prowess and versatility on the international stage. In a sense, the pivotal role that Italy played in engaging historically with the MENA States can be reconducted to the importance of its exports.

In conclusion, this thesis endeavors to provide a comprehensive historical account of Italy's journey from a latecomer in European politics to a prominent player in the global defence industry and diplomatic arena. Drawing from a diachronic methodology, it synthesizes information from diverse historical sources and case studies to paint a vivid picture of Italy's multifaceted role in shaping the geopolitical landscape. Ultimately, the thesis offers insights into potential policy proposals that can further enhance Italy's standing and influence in an ever-evolving world order.

Chapter 1: From the Second World War to the Economic Miracle (1945 – 1960)

Italy and economic unification

The bond between a State's economic might and its military prowess has followed the history of wars for the entirety of human existence. The capability of a polity to muster resources, train warriors, and deploy them has shaped the conflict. It should be no surprise that the heavy industrialization that enveloped the Western World through the XIX and XX centuries was reflected in the military industry. The military industry became an important technological tool to define a State's military capability: the American Civil War and the French-Prussian War exemplified the importance of mass production, industrial output, and technological edge (Gunderson, 1974). Italy's history makes no exception. In the mid-1950s, Italy's historical national accounts were meticulously compiled by the Istituto Centrale di Statistica. These estimations provided a comprehensive breakdown, encompassing both the production and expenditure sides at current prices. Furthermore, they presented data for the expenditure side alone at constant (1938) prices. Specifically, for core agriculture (cultivation and herding) and manufacturing industry, 1938-product series were also made available (Istat 1957).

A decade later, Ornello Vitali, the esteemed statistician of the 'Ancona group,' coordinated by Giorgio Fuá under the auspices of the SSRC (Ercolani 1969; Fuá 1965, 1969; Vitali 1969), compiled 1938-price estimates of the production side in accordance with the Istat series. These 'Istat-Vitali' aggregate estimates of production (including private consumption) spanning the years 1861-1913 are summarized in Table 1.

The key takeaway from these estimates is the stark revelation that growth experienced a significant acceleration in the mid-1890s (Gallegati, 2015). Prior to this point, real per capita output exhibited minimal improvement, while real per capita consumption actually experienced a decline, as illustrated in Figures 1. Vitali's sector-specific data pinpoint this discontinuity primarily within commodity production, as demonstrated in Figure 3. Agriculture, which is dominated by the Istat cultivation-and-herding series, displayed growth in tandem with population until approximately 1880. Subsequently, it entered a period of stagnation through the mid-1890s, before rebounding to its previous trend line. In the final decade leading up to the outbreak of the Great War, it resumed growing at a rate roughly comparable to population growth,

marking a notable shift in economic dynamics (Fenoaltea, 2005).

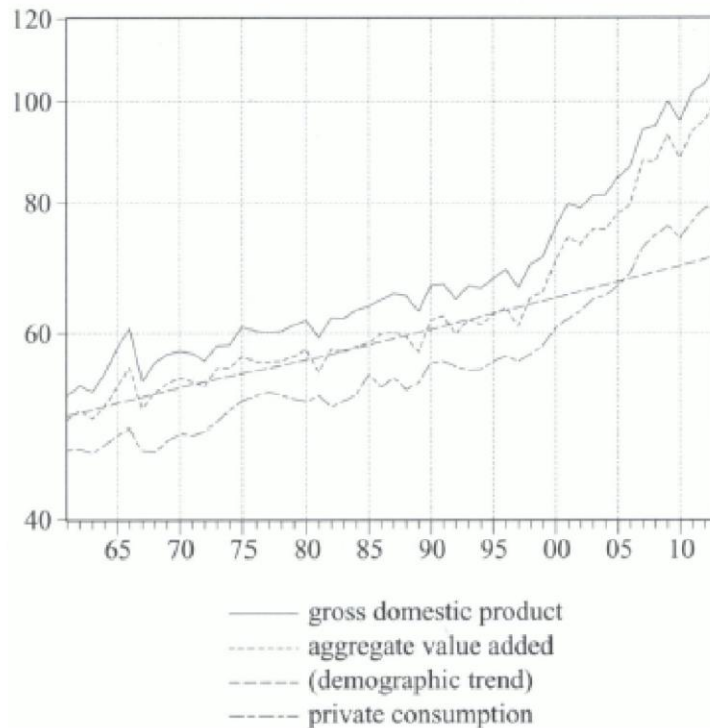


Figure 1. *Istat-Vitali aggregate estimates (bn lire at 1938 prices).*

Source: Table 1.

The lateness of the unification, coupled with the country's scarce natural resources, meant that the industrial conglomerations experienced a harder time while developing. The manufacturing hubs were mainly located in the North-West, resulting in a small, albeit competitive belt (Fenoaltea, 2005).

Rise of the industrial war

The First World War uncovered the grim bond between the defence industry and the war effort. The belligerents were forced to research inventive new ways to beat the enemy in battle; as such, the gas, the tank, and the airplane were born. The flamethrower and the gas mask followed suit; so, did the steel helmet, the camouflaging uniform, and the machine gun (Gilbert, 1994).

Not only it was necessary to deploy better weapons: it was vital to mass produce them. Italy lagged. Its factories could not supply all the weapons needed to wage war. It did not possess the industrial capability of the Second Reich nor the rich colonial empire of Great Britain. The lack of heavy industry became a cumbersome burden during the Second World War. Italy focused mainly on the production of naval

units. The results were excellent; the numbers, however, proved to be insufficient. Nonetheless, the industrialization of war was completed even in Italy. Ansaldo, Fiat, and Oto Melara emerged as the main producers of military equipment. A similar trend was shared among all the belligerents: for example, Rolls Royce manufactured the Spitfire's engine, whereas Porsche developed a Tiger variant (Kennedy, 2017).

Italy's industry had never been able to compete to the same level as the huge arsenals that were the more advanced countries. The handicap had been true during the First World War. It had become even more evident in a war that required huge amounts of a wide range of equipment. Likewise, the Italian industry of defence suffered the fate of the losing States. What had been already a fledging force was now constrained by limits imposed by the winning Allies. In a way, the bond theorized between industrial economy and hard power had been proved true by the World Wars. While tactics and troops' quality proved to be instrumental (especially in the first years of war), the sheer weight of the populations, economies, and industries of the USSR, US, and UK ultimately shaped the conflict. The strong tie between the economy and defence industry, and conversely between the defence industry and military might, would eventually include technology. While technology had indeed played a role in all the wars of humanity, it had never been more striking in the XXth Century. The nuclear weapon was the most striking of the terrible scale of war humanity had attained. The fighter jet and the cruise missile played a smaller role, albeit still important. These three weapon systems signified the undeniable edge reached by warfare technology. Furthermore, they ossified the truth that the industrial warfare had become: only the richest and most developed States could develop the weapons of the nuclear edge. Naturally, money alone does not buy warfare capability. Skill, training, and experience are equally important factors; so are numbers and technology. Italy's case study is particularly striking to understand the merits that the economy brings warfare (Kennedy, 2017).

Economy and warfare

As introduced earlier, the Italian industry had been lagging following the unification of the Italian Kingdom, and the industrial output reflected over the quality and quantity of armaments. Italy unified in 1861. Compared to France, which unified as a whole in 897 AD, or Great Britain, which was unified in 1066, the fragmentation of the peninsula had been an obstacle to a proper, unified economy. The amount of

customs duties laid a heavy burden on the fledging economy. For this reason, the industrial hubs that had emerged in Savoia enjoyed limited competitiveness. This lag can be seen throughout the entirety of the remaining wars Italy had waged for the unification: its logistics lacked, and its armaments were inferior compared to the ones France, Great Britain, and Prussia employed (Dotto, 2016).

At the edge of the First World War, the Italian GDP per capita amounted to 2,507 US dollars; the German GDP per capita amounted to almost twice that figure, reaching 5,817 US dollars. France retained similar per capita numbers, whereas the United Kingdom reached more than eight thousand dollars per worker. The main belligerents of the First World War, thus, were richer than Italy: it should be no surprise how they were able to wage war effectively over many important and different fronts. Germany, for example, produced thrice the amount of steel France smelted in 1913. The combined production of steel in Germany and Austria in 1913 was 20,2 million tonnes. The manufacturing production of the Central Empires amounted to 19,2 percent of the world's production, consuming 236,4 million tons of coal. Conversely, the UK, USA, and France produced 51,7 percent of the world's production. Five States were enough to amount to 66% of the global steel production (Harrison, 2005)

These numbers, at the same time, confirm the presence of strong economic and industrial hubs of the various States that took part in World War I. Warfare boils down to a matter of numbers, and the Allies' industrial capability proved unstoppable compared to Austria and Germany. Italy mobilized 5,6 million soldiers, spending a total of 3,2 million dollars (1913 prices). These numbers pale in comparison to the main forces of the Entente. For example, the UK mobilized 9,5 million men, with a total expenditure of 23 million dollars. On the other hand, Germany was the biggest spender among the Central Empires, its spending amounted to 19,9 million dollars, arming a total of 13,25 million men. The contribution of Italy, while important, is to be framed among the interventions of smaller nations. The starting economy of Italy prevented it to take more effective measures during World War I (Kennedy, 2017).

The Italian GDP per capita experienced a rise during the Roaring Twenties: nonetheless, Italy lagged. The effects of the industry defence proved similar to what had happened during the previous conflict. Italy possessed a smaller population, which was both poorer and less educated compared to the citizens of the other belligerents. Its production was weaker compared to its main rivals (Harrison, 2005).

	Japan	Italy	Germany	USSR	UK	France	US
1930	218	266	162	722	512	498	699
1933	183	351	452	707	333	524	570
1934	292	455	709	3479	540	707	803
1935	300	966	1607	5517	646	867	806
1936	313	1149	2332	2933	892	995	932
1937	940	1235	3298	3446	1245	980	1302
1938	1740	746	7415	5429	1863	919	1131

Table 2, Military Expenditure of main WWII combatants

In 1930, its defence budget amounted to 266 million dollars (adjusted to current inflation). By comparison, URSS spent 722 million dollars, UK's expenditure reached 512 million dollars, and France's figure stopped at 498 million dollars. In 1938, one year before the start of the war, the defence budgets depicted the grim reality of Italy's capabilities. The Italian defence budget reached 746 million dollars. By comparison, Germany was spending ten times that figure. Military figures and civilian ones alike help us understand the difference of powers among the States, and why the Italian defence industry fared so poorly compared to its contemporaries. The manufacturing capability of Italy amounted to 2,9% of the world quota in 1938. The Italian GDP per capita reached 5,250 \$ only in 1939. The threshold of five thousand dollars per capita had already been breached by Italy's neighbours before the start of the First World War; Italy was still lagging economically. Coupled with the resources already spent for the occupation of Ethiopia, the fragile economy of Italy could not spend the resources necessary to develop the heavier armaments needed to wage the war that would soon ignite. Italy suffered also from the lack of doctrine regarding the use of mechanized infantry and combined arms. It should be noted how the theorization of the use of modern warfare was effectively lagging in most States, excluding Japan, Germany, and the US (Kennedy, 2017).

The aircraft carrier was still considered inferior to the battleship, and the use of the tank was still anchored to the ancient tenets of the First World War. In 1938, Italy accounted for only 2.8 percent of global manufacturing and produced 2.1 percent of steel, 1 percent of pig iron, 0.7 percent of iron ore, and 0.1 percent of coal. Its energy consumption from modern sources was significantly lower than that of major powers (Federico, 2012).

Despite Mussolini's eagerness for war with France and sometimes even France and Britain together, Italy remained heavily reliant on imports of essential raw materials, including fertilizer, coal, scrap iron, rubber, and copper. These imports, 80

percent of which had to pass through Gibraltar or Suez, were primarily transported by British ships (Kennedy, 2017).

No contingency plan existed for potential import disruptions, and stockpiling essential materials was unfeasible due to Italy's lack of foreign currency reserves in the late 1930s. This scarcity also hindered Italy's ability to purchase essential machine tools from Germany, necessary for producing modern aircraft, tanks, cannons, and ships starting around 1935 (*ibidem*).

Economic backwardness contributed to the modest condition and performance of Italy's armed forces, which were gradually deteriorating. The navy, although the best-equipped among the three branches, was likely insufficient to challenge the Royal Navy in the Mediterranean. Italy lacked aircraft carriers (as Mussolini had forbidden their construction) and had to rely on the Regia Air Force, which suffered from a lack of cooperation with the navy (Sullivan, 1988). Italian cruisers were unreliable, and the numerous submarines quickly became obsolete due to various technical deficiencies. Similarly, the Italian air force, once capable of limited bombing and striking in Abyssinia and the Spanish Civil War, struggled with outdated Fiat biplanes CR42, which were surpassed by modern British and German monoplanes. Even the bombing squadrons were hampered by the use of light and medium bombers with delicate engines and ineffective bombs. Despite this, both the air force and navy received a growing share of the defence budget (*ibidem*).

In contrast, the army saw its budget share decrease from 58.2 percent in 1935-1936 to 44.5 percent in 1938-1939, despite the urgent need for modern tanks, trucks, artillery, and communication systems. Italy's primary battle tank, the Fiat C33, lacked a radio, had poor visibility, and was equipped with only two machine guns. Meanwhile, other nations were developing much more advanced and heavily armed tanks. The Italian economy under fascism suffered from inherent weaknesses, making it improbable that Italy could win a war against another major power. These prospects were further diminished by the rapid aging and shortcomings of its armed forces (Kennedy, 2017).

Lack of industry and doctrine

Furthermore, the main belligerents proved to be more adaptable to the shock. In an era in which newer and better weapons were rolled out by the year, the results of the Italian defence industry proved meagre. Some important reasons explain why FIAT

could not have the same results as Mitsubishi, Porsche, or Rolls-Royce. In the first instance, Italy could not rely on a vast empire like Britain, nor it did possess the material wealth of Germany, nor the industrial might of the USSR or the US (Federico, 2012).

The war economy of Fascist Italy devoted many resources to the development of weapons, which reached almost 40% of the GDP in 1939. By comparison, the US, arguably the richest belligerent, would never spend more than 35% of its monstrous GDP on the war effort. Fincantieri and FIAT were the two main hubs for military developments, aided by Ansaldo. The models produced by the Italian Armed Forces were not inferior, especially regarding naval or air units. The Littorio class was one of the most powerful and modern lines of battleships at the time, while the airplanes, especially the various FIAT Freccia series, proved to be in line with the results of the contemporary crafts of the Allied powers. It is not a quality that lacked within the Italian industry. Italy's military was in line with the medium powers, especially considering the state of other belligerents with similar dimensions (such as Poland or Romania). Not every State could afford the number of tanks produced in the Urals, nor the quality and quantity of American ship making. The real crux of the Italian industry was quantity. The economy of scale of the Fascist nation suffered from the reasons mentioned in the first two paragraphs. The economic net of Italy was weak. In 1937, the national income of Italy was 6 billion dollars, of which 14,5 percent was devoted to the defence budget. Its industrial hubs were relatively new, few, and isolated. Its 1939 GDP totalled 140 billion dollars, which was smaller than the Japanese one by circa 19 billion. The main ally of Italy, Germany, produced an industrial output worth 350 billion dollars, while its national income amounted to 17 billion dollars, of which 23,5 percent was spent on defence (Harrison, 2005).

Italy, in 1930, was producing only 500 airplanes per year, most of them outdated models. In 1935, the figure had reached 1000 aircrafts per year. The USSR, for comparison, had been producing circa 2500 models per year since 1930. While other States (such as Germany) possessed a smaller production than Italy, they were able to exponentially kickstart their military production at the offset of the war. In 1939, Italy was able to produce circa 2000 airplanes per year, whereas Japan, Germany, and the USSR were respectively producing four, eight, and ten times that number (Kennedy, 2017).

Global industrial figures

The global industrial figures showed the grim reality of the industry. The pre-war GDP of the combined Allied powers exceeded that of the Axis powers by 2.4:1. Subsequently the ratio moved somewhat against the Allies, falling to 2:1 in 1941 because the Axis economies expanded while the resources of France, knocked out of the Allied coalition in 1940, became available to Germany. In 1941 Soviet GDP was also beginning to fall under the impact of the German attack. But 1941 was the Allied low point. From 1942 onwards, the ratio moved steadily in the Allied favour (Kennedy, 2017).

However, Italy's intervention proved capable of only distract partially the attention of the British Forces, as Churchill was forced to react in North Africa and the Mediterranean Sea. Nonetheless, much of the vaunted potential displayed by Italy during the previous decade proved to be only an illusion. Eventually, like the other Axis forces in the Pacific and Eastern Europe, Italy capitulated. The quality of the troops proved an important factor: for example, in 1944 the USSR was still losing five casualties to one against the Wehrmacht. Nonetheless, the forces the Allies were able to field were unmatched. The monstrous losses of men suffered by the USSR did not dissuade the Red Army to continue resisting. In 1941, five months after the start of Operation Barbarossa, the Red Army had suffered already 3 million casualties counting prisoners, and yet, maintained a numerical advantage over the Wehrmacht. Equally, in 1944, the American forces enjoyed a numerical advantage that numbered 20:1 or 25:1 concerning armoured warfare, the precise number depending on the war theater (Atkinson, 2013).

In a way, the outcome was rigged from the start. The Axis was forced to scramble for the little resources it could muster in the areas it controlled, whereas the Allied powers could count on an enormous trading bloc, capable of delivering large amounts of goods. Italy did not possess a huge colonial empire. Its GDP peaked in 1939, reaching 151 billion US dollars. This lower output is also reflected in research and development. For example, Italy started developing its model of the national radar only after the disastrous defeat at Cape Matapan. The high cost of entering research of such a costly system meant that Italy faced a disadvantage in aerial and naval warfare, as its forces were forced to face a British Navy equipped with radars. Likewise, FIAT could not count over the Lend-Lease (Kennedy, 2017).

The colonial empire of Italy could have provided valuable resources; however, Mussolini lost Eritrea, Africa, and Ethiopia in less than a year. It is interesting to note how the Italian defence industry faced the same challenges that many other economies of war faced. For example, the USSR was forced to design a tank that could be equally reliable, effective, simple, and capable to be fielded in ad numbers. The US was forced to rebuild a navy that had been crippled at Pearl Harbour, while also producing the naval units the United Kingdom demanded with great insistence. However, once again the momentous industrial might of the Allied powers proved able to turn the tide. It is crucial to understand how many nations started the war without the full industrial might needed to operate within the context of a modern, highly mobile war. However, the most prominent belligerents were able to effectively fill the technological gap they might have had at the start (Greenfield, 1947). It is no surprise that the richest nations were able to develop nuclear weapons or fighter jets. It is equally unsurprising how the economy of Italy was unable to match the requests for technology and materials demanded with great insistence.

The weakest aspect of FIAT proved to be in the mass production of airplanes. Considering all the various fighters, bombers, and cargo planes, Italy produced 1800 planes in 1939 and 1940; in 1941 and 1942, the yearly production rose to 2400 units per year. During its last year of war, Italy produced 1600 airplanes, before stopping the fight as a coherent, autonomous entity. By comparison, the US production in 1941, which is the year when the American forces joined the fray, amounted to 26.277 planes. The difference in resources is evident. In that same year, the entirety of the Axis force produced 19.264 planes (Kennedy, 2017). The US alone was able to best the entirety of the Axis production, eventually resulting in an aerial dominance that would prove momentous nonetheless, the know-how and the results reached during the conflict proved to be instrumental to build the first steps that would eventually lead to developing an important defence industry in Italy.

Post-war equilibrium

As mentioned in the previous paragraphs, the Italian industrial output had been lagging behind its contemporaries since the unification. This gap of development was not only evident in the military field; such a gap was equally evident in civilian production. Coupled with the destruction suffered during the war, the newfound Italian

Republic was considered a weak State, lacking the infrastructure, capital, and manpower needed to attain pre-war levels of economic capability (Felice, 2012).

This general scepticism was the reason the period of absurd growth experienced by Italy following World War II has often been dubbed a 'miracle'. The GDP of Italy experienced tremendous growth, reaching the numbers of the richer Western States in barely a decade. The new entrepreneurship of the renewed Italian Republic enjoyed a sizable aid granted by the US, nicknamed Marshall Plan. The combined efforts of reconstructing Italy meant that now the US and the newfound Republic were to share not only economic collaboration but equally military expertise (ibidem).

This development meant that much of the Italian equipment following the Second World War was not national, but rather, borrowed. Not only Italy was forbidden to develop national weapons for political reasons. The Republic had been pounded to the ground, and its industrial hubs were reduced to ruins; to put it simply, Italy lacked all the resources necessary. It should be no surprise that the first tank used by the Italian Army after 1945 was not any of the M tank lines, but the M4 Sherman of the US Army. However, this situation could not last. With the pressing menace brought forth by the USSR, the US could not allow leaving two important European States to not possess a national army (Mistry, 2016). The decision to enter NATO taken in 1948 was pressed by Prime Minister Alcide De Gasperi, who was able to count on only a narrow margin for support after the Italian Communist Party (PCI) had been expelled from the governing coalition in 1947 and given that opposition to NATO was not uncommon even in government circles, was underpinned by three main arguments: first, it provided a traditional alliance to protect Italy from the Eastern threat; second, it was a way of regaining sovereignty and prestige as one of the organization's founding members only a few years after having signed a peace treaty as a loser; third, and more concerning politics, it was a means of anchoring Italy into the Western camp and ensuring the liberal development of the country's economic and social institutions (Varsori, 2017). Given all these reasons, the Italian military development followed reasons that were as political as they were economical.

For example, the weak border with Yugoslavia was heavily fortified. Italy itself formed a special mountain unit tasked with repelling the possible invasion. Italy attempted rationalization of the armed forces and military spending. However, the situation at the start of the Cold War meant that Italy was effectively relying on its partners, favouring multilateral solutions following and spending the bare minimum

(ibidem). Furthermore, as mentioned earlier, Italy was considered one of the Enemy Nations of the UN. It should be no surprise that much of the military research that followed was hindered by the self-image Italy was trying to promote. For all these reasons the Italian defence policy and its military spending cannot be analysed in a void. Italy had been one of the main enemies of the Allies and had been punished. The country had lost its colonies and virtually any of its projection capabilities. Compared to Germany, which was prohibited to rearm for ten long years, Italy enjoyed a higher degree of autonomy (Mistry, 2016).

The rebuilt Italian industry was able to refinance the industrial conglomerates that had been active during the War. However, much of the expertise gained during the war did not produce relevant terrestrial or aerial units. The first mass-produced MBT in Italy would be the Ariete model, and it would take three decades to develop its production. Instead, Italy aimed at rebuilding a navy that had been dismembered among the winners as a prize. The main proponent of this undertaking was Fincantieri, which enjoyed the expertise gained during the war. Nonetheless, this first rearmament was not undertaken lightly. After having renounced war as a means of resolving international issues, Italy was deemed one of the Enemy States to the UN, together with Japan and Germany. This particular clause put Italy in an awkward position, shared by its former Axis partners. Italy was not officially prohibited to reform its army nor to develop heavier weapons like Japan, which had been forced to ratify the treaty of collaboration in 1951. Nonetheless, any sort of military development would have been heavily scrutinized. Moreover, the US military maintained a strong presence in Western Europe (Varsori, 2017).

Given all these reasons, it can be noted how the restraints imposed on the Italian defence industry were not only material and economic but equally of political nature. In a way, Italy enjoyed less strict scrutiny compared to the doubts the rearmament of Germany would bear: however, it was not completely free. This is exemplified in the weapon systems Italy chose to develop. Unable, or unwilling, to develop the prime systems of the time, such as the nuclear weapon, the aircraft carrier, or the fighter jet, Italy focused on the production of medium tonnage ships. It is for this reason that the flagship role of the Italian Navy post-1945 was a missile cruiser, and not a battleship nor an aircraft carrier. In a way, the Italian defence industry reflected the military equilibrium the NATO alliance had crystallized (Miller, 2011).

The main hitter of the NATO alliance was, of course, the US Army. The percentage of personnel and equipment in force to the UN was massively skewed towards the American forces. In a way, their allies were forced to fill the military roles that have been considered minor by the US military. It was not that the winners of the Second World War could not produce escort ships or territorial guards. On the contrary, its military was now so developed and incumbent it could specialize in the most important tasks. The technical expertise and the military experience coupled with their advanced equipment meant that the military projection the US forces were able to deploy anywhere in the world was simply unrivalled (Mistry, 2016).

Naturally, Italy was relegated to a smaller role. The main expertise of the Republic during WWII was aimed at navy units and commando units, given the two fields that had proved more important for a nation that had been forced to fight in the Mediterranean Sea. The rise of GDP proved momentous; however, the switch operated within the defence policy of Italy was as much economical as it was political. The context in which Italy was now operating enjoyed a wider scope, granted by the fledging European community and by NATO (Miller, 2011). Nonetheless, the military contribution to NATO was not particularly noteworthy. In 1948, the Italian expenditure failed to reach half a billion dollars, stopping at 0,4. By comparison, the US spent almost 11 billion dollars. URSS was the richest spender, reaching 13,1 billion dollars. Just one year later, the USA had equalized the Soviet expenditure. The two giants were unreachable, as Great Britain and France equally struggled to assert once more the dominance that had been completely lost following the war. In 1946, France's expenditure did not reach the threshold of the billion, stopping short at 0,9 billion dollars. Great Britain was the European State that spent most of its defence budget, with an expenditure of 3.4 billion dollars. Italy was given the flexibility that Germany did not enjoy. The former Reich did not have a standing army anymore: however, Italy was allowed to maintain a token force and maintain a military expenditure. While not enough to effectively research the new armaments of the Cold War, namely the cruise missile and the atomic weapon, the budget was nonetheless effective in preserving the expertise learned during the war (Kennedy, 2017).

The role of Fiat in the post-war reconstruction

As mentioned in the introduction, FIAT and Fincantieri were the most important industry in Italy at the time, and conversely, their many sub-agencies such

as Leonardo. FIAT enjoyed an important share in the world car market in the period from 1866 to 1946. The “Fabbrica Italiana Automobili”, a joint-stock company founded in 1899 and based in Turin, known from 1906 onwards as “Fabbrica Italiana Automobili Torino” (F.I.A.T.), entered the expanding European car industry with a dynamic and receptive point of view. (Paolini, 2004). Giovanni Agnelli was the leader of a cohesive management group, able to act on the intuition that the car, although intended for an elitist public, was not poetry, but a product to be sold. Its expertise led FIAT to become an important car manufacturer in the world market. The main endeavour of Agnelli was to penetrate foreign markets, with a clear understanding of what this challenge meant. Its efforts were compensated by a rising car industry, appreciated in the Western world. In 1929, the year after the appointment of Vittorio Valletta as Chief Executive, Fiat came to represent over 80 percent of total Italian production and about 90 percent of Italian exports in the automotive industry. Italy, with more than 23,000 vehicles sold abroad, representing 43 percent of national production, took its place among the top car exporting countries –sixth in the world and fourth in Europe, after the United States, Canada, England, France, and Germany respectively (ibidem).

This output (which represented 90% of the Italian automotive export at the time) was left in disarray at the end of World War II. Whilst from 1947 onwards the nearly 6 million units produced took the world production to 92.6 percent of the absolute maximum reached in 1929, Italy, while maintaining its participation in this production almost unchanged (from 0.9 percent in 1929 to 0.8 percent in 1947), saw a dramatic decrease in its exports, from 2.5 percent in 1929 to 1.3 percent of the exported volumes of the five major producing countries (United States, Canada, Great Britain, France, Italy). These numbers depict the dire situation that the European States faced. It should be no surprise that the same States that were suffering from a beleaguered market were the ones to follow the US-sponsored decision to develop the European market. The common market was a crucial challenge to the economic stability of Europe (Kennedy, 2017).

Nonetheless, this massive decision would wait until 1954. In the meantime, Italy enjoyed the effect of its massive economic growth. It was the only European State, coupled with France, which military expenditure grew steadily from 1948 to 1954. FIAT was the main motor of Italian economic growth. After being administrated by the CNL in 1945, FIAT suffered the general recession that hit Italy. However, 1948 proved

to be momentous to FIAT. In the first instance, it enjoyed 12% of the Marshall Plan aid offered to Italy and received 26,4% of the funds devoted to the automotive and ironworking industry (Casalino, 2010). The rationalization of FIAT operated by Valletta allowed FIAT to rebuild its historic presence. The improvements achieved are undeniable: the number of cars exported rose from 2,290 in 1946 to 13,275 in 1948, and the most favourable markets, those open to Italian production, started to be identified—in 1948, Fiat was present in 42 countries. The focus on the needs of every individual market, on the new models launched by competitors and their strengths, on the monetary and fiscal benefits with which the Italian government would facilitate foreign sales, shows how, two years after the resumption of exports, the Fiat trade organization was already ready to take decisive action in all markets, very similar to the action which had marked the international growth strategy of the Turin-based company during the twenty years preceding the Second World War. The rise of FIAT proved momentous (Casalino, 2010). It operated in Spain and was present in Latin America. The 1950 shareholders' assembly depicted the current state of FIAT, which was currently producing 115.000 cars per year. It illustrated the success of the “1400”, “1100E” and “500C” models. Already in 1950 FIAT was producing military trucks for the army to be employed (Assemblea Generale degli Azionisti, 1954). The production of success of FIAT would only increase, culminating with the decision of 1954 to join the North Atlantic Alliance. In that same year, FIAT was producing Eventually, FIAT would join the NATO combined effort, lending its expertise to the new conglomerate that was the West (Miller, 2011).

Chapter 2: The NATO Protective Umbrella & The Enemy State Clause of the UN Charter

Italy joins NATO

Italy's decision to join the nascent NATO as a founding member proved to be crucial. After its entrance in 1949, Italy was firmly anchored to the Western Bloc, enjoying protection and a more favourable treatment from its former enemies (Pons, 2001). The first chapter depicted the various reasons why the Italian defence industry was weaker compared to its contemporaries. However, other important reasons stand out why Italy did not invest as much as the US.

In first instance, there was simply no need. The US offered an unrivalled protective umbrella to the nascent ECSC. It provided much-needed economic support

to the beleaguered nations of Western Europe, as the former belligerents enjoyed the steady influx of American capital and grants. Similarly, it helped stabilize the internal situation of those countries where the nascent friction between the different political parties threatened to plunge those States back in a war situation. Italy was able to avoid a fate similar to the Greek one thanks to the resources poured by the US (Varsori, 2015).

Finally, the NATO umbrella secured any possibility of military intervention from the USSR, as its nuclear retaliation would have destroyed any Soviet ground invasion. The military interventions the Soviet Union was able to commit in Eastern Europe found no feasible ground past the de-facto conflict of the Cold War. This marked the beginning of a new era of diplomatic relations between Italy and the US (Heuser, 1992).

Formerly included in the Clause of enemy State under Article 107, Italy now enjoyed a more prominent role in Europe. De Gasperi had fruitlessly rallied against the loss of the colonial empire, but his next approach had proved to be far subtler. He gradually emerged as the most reliable non-communist centrist leader during the peace treaty process, rising to prime minister in late 1945. Cultivating close personal relationships and alliances with American figures, De Gasperi monopolized the channels through which Italy interacted with the Truman administration. Contemporaneously, he gained crucial domestic backing from influential political independents and economic elites. (Varsori, 2015).

Italy had been one of the focal points of the American foreign policy post-WWII. While the harshest terms proposed by Allied partners were resisted, the treaty left Italy and its supporters in the United States disappointed. American reconstruction efforts prioritized Britain, France, and Germany. For all the similarities with France – the other West European country with a large communist party and seemingly prone to a Marxist takeover – Italy was, initially, a lesser concern. This changed dramatically as Italy threatened to undermine American plans for European recovery in 1947, with heightened anxiety in the run-up to 18 April (Varsori 2017). The financial help lent by the US firmly anchored Italy in the Western block. The American army lent not only its expertise but likewise, a sizable garrison force. The lower defence budget of Italy can be ascribed to the resources the US poured in. Likewise, a similar trend was shared among many of the Western States: for example, both UK and France reduced their defence budget. In 1950, they were spending respectively 2.3 billion dollars and 1.4 billion dollars (Kennedy, 2017). The general trend of decline of the former world

powers was equally evident in the defence numbers of the US, as it spent 15.5 billion dollars. Equally evident was the difference in economic magnitude; even with the efforts of FIAT detailed in the previous chapter, Italy was producing a gross national product of 29 billion dollars. By comparison, Japan and West Germany were producing 32 and 48 billion dollars' worth of national products. The European States were not the biggest kid on the block anymore. Two bloody wars had effectively ended their prominence, turning what had been the most powerful continent of Earth into a barren wasteland. Germany, France, Italy, Poland and Yugoslavia had become a battlefield, being thoroughly ravaged during the war by the armies of the different alliances locked in the struggle (Eichengreen, 2008).

Moreover, the European economic and military decline were not the only reasons why Italy was spending a meagre amount of its national product over the industry of defence. In the first instance, even a booming Italy did not have the resources necessary to develop the advanced equipment that was becoming the new queen of the battlefield (ibidem). Another important point in this regard was that military equipment development was starting to enter an age in which a single State alone could not develop military equipment autonomously, as Chapter 3 will highlight.

Italian constraints to a new weapon systems

Secondly, there was also an image issue. Italy's identity had been destroyed by the war, and now the public diplomacy of Italy faced the issue to present a new, polished face to Italy. The constraints faced were as much economical as they were political. The Republic not only faced the issue to present itself to the new superpower that was occupying its State; likewise, it had to repair those diplomatic ties that had been utterly severed by the war. At the same time, the internal affairs of the Republic involved a large cohort of voters traditionally aligned to the left. This particular delicate balance meant that Italy would eventually engage in diplomacy with States that were traditionally enemies of the West. It would take four long years for Italy to forge those ties with its former enemy, the US. The rocky uncertainty that De Gasperi had to face from 1945 to 1949 to renew the public image of Italy proved a tortuous path to navigate (Heuser, 1992).

In 1945 and 1946, the convoluted logic of the post-war equilibrium meant that not only De Gasperi negotiated with government officials, but also with British and American forces, both with their anti-communist agendas to pursue. Moreover, the

general opinion of Italy among Anglo-American forces considered Italy immature, and the offered help, whether it was financial, economic, or military would only be lent if Italy accepted if it accepted the American terms and “if the Italian were willing to take advice from the two democratic powers who are willing to help them” (Varsori, 2015).

Only through the establishment of a comprehensive peace treaty could the precarious situation be stabilized, effectively unravelling the tangled web of uncertainties that had plagued the Truman administration. Amidst this intricate geopolitical landscape, Italy, though deemed a minor belligerent in the broader context, stood as a pivotal focal point. The delicate balance of power hinged upon a delicate negotiation dance, where the Western influence over the Italian peninsula was strategically weighed against the Soviet influence exerted over states like Romania and Bulgaria. This intricate manoeuvring sought to strike a delicate equilibrium, where concessions and compromises were deftly orchestrated to ensure regional stability and preserve vital national interests (Heuser, 1992).

De Gasperi was aided by the support of Italian-Americans lobbying abroad: eventually, the treaty was ratified thanks to the American efforts, even as other former Allies (especially the British) pushed for stronger terms. Another challenge De Gasperi had to face was to affirm the importance of a country that dominated strategically the Mediterranean Sea. Much of the efforts that saw the US treat Italy as a strategically important partner involved the efforts of Secretary of State Byrnes, who was forced to negotiate the peace treaty over and over again. The convergence between the Truman administration and De Gasperi centrists was more than a diplomatic affair. It was actively shaped by non-state actors and transnational groups, who occasionally compensated for meagre diplomatic activity (Mistry, 2016). The main point of convergence between Italy and the US was the collective anti-communist sentiment. The effective Italian lobbying meant that the US could look at Italy as a partner of convenience. The campaign around 18 April 1948 encapsulated the idea that America was responsible for Italy’s fate (Varsori, 2015).

The USSR was not yet an enemy of the US: however, it was a rival, and the growing hostility between the two former allies would culminate in the Berlin Blockade of 1948. In this forming bipolar world, the US was willing to close an eye over the past of its former enemies. The most pressing matter De Gasperi faced was the historical frailty of Italy, given the fact the country had always been a latecomer to the European powers. Italian democracy was ‘learning to walk’, noted Roy Melbourne, and should

be allowed to find its own feet. However, the country's progress still faced the twin threat of communism and its inherent backwardness (Mistry, 2016).

Alcide De Gasperi also considered Italian democracy a fragile entity (Varsori 2015). Unlike his American interlocutors, he was eager that the country's recovery should not be dictated by outside forces. De Gasperi was looking to eradicate the previous Machiavellian tradition that had plagued Italy's public image. The Father of the Constitution played an open hand, showing the remittance and the atonement for past sins. Italy was to play a new open hand. De Gasperi signalled this new course with a famous visit. Thanks to the efforts of De Gasperi and Sforza, aided by Tarchiani in Washington, Italy would join the United States, Canada, and nine other European nations in signing the North Atlantic Treaty in April 1949. It was the culmination of arduous fights to gain support within the DC, the coalition government, and the country as a whole. The decision was marked by hesitation, the scars of World War II, and subsequent longings for pacifism – led by the self-proclaimed communist 'partisans of peace' – and neutrality, occasional hostility, and vacillation right up to the prime minister's announcement that Italy would seek membership one month before NATO was formed. (Varsori 2001). This membership was not perfectly smooth. Italy maintained one of the strongest communist parties in Western Europe. The mere fact that the Partito Comunista Italiano (PCI) occupied such a central role in domestic Italian politics meant that every general election became a referendum on whether Italy should stay in the Atlantic alliance and the EEC, whether it should remain a market economy, and whether it should continue to retain close ties with the Americans (Varsori 2015).

Thus, Italy enjoyed a special relationship: the country was a strategic partner to the US, which offered many protective umbrellas (Nutti, 1998). The anchor the US provided allowed Italy to present itself as a credible, useful partner to the various European countries which were still dubious about Italy. The stronger economic ties with NATO granted an important boost to the export-based economy of Italy. Likewise, NATO settled the internal turmoil of Italy, as the prime importance of the allegiance to the West showcased the real strategic interest of Italy: Washington was a much more favourable partner than Moscow. Likewise, the closer economic ties meant important access to the rich American market, which had finally managed to absorb the last throes of the Great Recession. (Eichengreen, 2008).

Economic Reconstruction: joining ECSC

Economic reconstruction was indeed the main focus of Italy at the moment. The decision to join ECSC as a founding member underlies not only the diplomatic path that De Gasperi had chosen but also a more pressing matter. The countries of Europe were razed to the ground. France had been occupied, its economy ruthlessly exploited by Nazi Germany; Italy and Germany had suffered the allied bombings; Poland, Hungary, Bulgaria, and Romania were bearing the brunt of years of warfare between the Wehrmacht and the Red Army. The decision to build a common European community was not only a political play meant to leverage votes or power: it was a raw matter of survival (Varsori, 2001).

The urgent imperative to swiftly mobilize resources, capital, and manpower within the struggling economies of Europe assumed paramount importance. At the core of De Gasperi's principles lay a steadfast commitment to pacifism, and he was profoundly touched by the resolute aspiration to preserve Italy's peaceful stance in the realm of public diplomacy, particularly as the nation endeavoured to rebuild its credibility in the aftermath of the devastating World War II. Nevertheless, De Gasperi's discerning intellect and pragmatic disposition enabled him to recognize the inherent benefits of forging an expansive realm of free trade, spanning the entire European continent. Thus, he astutely grasped the potential advantages that would arise from fostering an environment where trade could flow unimpeded, fostering economic growth, and ultimately contributing to the overall well-being of the continent (*ibidem*).

The advantages that FIAT was able to gain were already described in the previous chapter. The rise of European GDP proved momentous, especially when compared to the inter-war period. Although the golden age was global, the acceleration between 1950 and 1973 was even faster in Western Europe than in the United States. Hence, in this period Europe succeeded in eliminating about 40 percent of the initial post-World War II gap. This is why the golden age is commonly portrayed as a period when Western Europe converged toward the technological frontier defined by the United States. (A. C., 1946). The various GDP growth showcases the depth of the Golden Age. Western's Europe GDP grew by 5 percent between 1950-1973. By comparison, the growth rate of Western Europe from 1870 to 1913, considered by Kennedy one of the most peaceful and prosperous moments, was 2.3 percent. Likewise, the period between 1913 and 1950 saw a rise in GDP of only 2.2 percent. There is no precedent to the growth that Western Europe enjoyed during the so-called "Golden

Age”. Furthermore, the rise of GDP stabilized after 1973, as the time frame between 1973 and 2000 saw the return to numbers more in line with the previous quarter (Federico, 2012).

Italy enjoyed an unrivalled growth during the Golden Age. Its GDP grew by a momentous 15.9 percent, surpassed only by Germany, with attained an 18.9 figure. The group of States nicknamed EU-12 eventually managed to obtain an average of circa 12 percent. This growth remains without parallel. Western Europe’s GDP enjoyed steady growth from 1820 to 1950. However, never once it had managed to retain a double-digit figure. The traction that the ECSC would have been able to propel was very clear to De Gasperi. The Italian leader knew that not only Italy would benefit diplomatically and politically while being an important Western partner; but after almost a century of lag, Italy’s economy would have finally managed to reach Western standards. The prediction of the Gasperi proved correct, as the figures effectively depict that the Italian “Economic miracle” was indeed an Italian Golden age (Eichgreen, 1992).

The nature of the conflict permitted Western Europe to free-ride on the security system provided by the United States. Less defence spending allowed Western European countries to devote more government revenues and investment to private ends. In effect, the subsidiary role that Europe played in the Great Power conflict yielded a peace dividend that freed up resources for productive capital formation. (Kennedy, 2017).

The Italian defence industry not only did not focus on research and development for many political and internal reasons: simply, the economy was freed from the burden of defence. Priority was given to heavy industry. Thus, the Monnet Plan, the ambitious modernization program rolled out by the French government in 1946, emphasized investment in transportation, energy, and iron and steel. It was implemented mainly through the provision of public funds on favourable terms from budgetary accounts such as the Modernization and Equipment Fund. It assumed an ability to import large amounts of coal, intermediate inputs, and machinery. The Monnet Plan, however, required strong coordination among the European States. Likewise, De Gasperi’s political will was strongly committed to not allowing Italy to be left behind (Daniels, 1998).

The new Berlin-Paris collaboration would prove to be the engine that fuelled the reconstruction effort. It was paramount for Italy to join the traction. For example, the resources Italy needed in 1946 are briefly summarized in the import report of the

Ministry of Economic Affairs (A. C., 1946). For example, Italy burned 32 million tonnes of coal yearly just for home heating, while consuming another half of that figure in industries alone. With a yearly production that barely reached 3 million tonnes of coal, Italy was desperate to manage other fuel sources. Likewise, the heavy losses suffered by the Italian merchant navy meant that Italy was able to receive imports only via the destroyed roads that still littered Europe, as maritime trade was almost non-existent. Unemployment was rampant, as the number of jobless workers reached two million people in 1946. Italy enjoyed a surplus of manpower while suffering a shortage of steel and coal. Furthermore, the traditional Balkans market was effectively closed to Italian exports: not only trade was difficult, but many political events had been described as isolating some of the States behind an iron curtain. Moreover, any trade agreement ratified with any of the Countries under Soviet influence would have resulted in scrutiny by the US, if not worse. Conversely, Italy abandoned the former autarchy and was able to export its agricultural goods. Export figures for agricultural goods to the UK alone amounted to 3 million pounds in 1946 (*ibidem*). Additionally, the renewed opening to the Allies meant that Italy was now able to trade with the entirety of the Commonwealth, potentially finding new markets. Another potential liability that plagued Italy was the huge sum of debt that had been accumulated before and during World War II. In 1946, Italy was indebted by a sum of 1,600 billion lire. The liability of such an enormous debt stunted growth and courted bankruptcy. Not only Italy needed an influx of capital, lest it defaulted; the Country desperately needed a stabilization effect only a foreign power could lend (Eichengreen, 2008).

In addition, the Cold War provided an impetus for regional integration. The United States would not have acquiesced to the creation of a customs union of European nation-states capable of discriminating against American exports except for the priority it attached to building a bulwark against communism. And the Soviets would not have insisted so strongly on the integration of the Eastern bloc but for the example of Western Europe and the incompatibility of their economy with those of Western European countries. Italy's decision to join the growing Western alliance was not dictated by free riding. De Gasperi firmly believed in cementing Italy's position in the West, and his stance was widely supported, both internally and externally. The huge campaign of 1948 determined the political stance of the Italian Republic for the entirety of the following Cold War. While not the true purpose of De Gasperi, Italy did indeed

bandwagon after joining NATO. However, the reasons are much nobler than pure, cynical bandwagon (Varsori, 2015)

Italy had always been a fragile democracy. By cementing the position of the fledging Republic, De Gasperi effectively anchored what was considered a brittle and immature regime by a portion of American observers. Likewise, by cementing the Italian position with Washington, De Gasperi was able to avoid the claustrophobic interventions of Stalin via the Comecon. (Kennedy, 2017).

Italy and US Align

In a way, Italy's policy followed the American one. The logic of the Cold War was indeed dividing Europe; the attempts made by the US to forge a more stable continent were regarded with suspicion from Stalin, at best, and with outright hostility at worse. The polarization of the starting moves of the Cold War would explode with the Berlin blockade, which would mark the highest point of tension between the West and East. Germany suffered what Italy had sought to avoid: two split Germanies, each one fostered by the main contender of their faction (Kennedy, 2017). Between 1955 and 1957, Italy tenaciously obtained all the objectives that it had set for itself: the insertion into the EEC Treaty of a European social policy, which subsequently led to the establishment of the European Social Fund; a declaration in favour of regional policy; free circulation of capital within the Common Market, with the subsequent institution of the European Investment Bank; and the free circulation of labour, and hence the reopening of European labour markets, especially West Germany's, to Italian migration (Sloane, 1968).

All these objectives were "part and parcel of a broader vision of the country's modernization, of economic growth, and of the solution, in a wider European context, of the 'southern question'". (Varsori, 2017) Throughout the Cold War, the United States was conscious of Italy's importance as a friend it could count on in Europe and the Mediterranean; an area of traditional concern for Italy whose interests in North Africa and parts of the Middle East were of course longstanding (Varsori, 2015). Joining the EEC meant that Italy could shoulder its claim with a more European basis and scope. Moreover, after having learned a hard lesson from what had happened in Greece, the Italian DC was able to negate the potential effects of a civil war thanks to the stabilizing effects of the influx of money, financial aid, and market openings. The Korean War crystallized the polarization effect between the West and East. Italy's integration into

NATO meant that now the country was effectively rooted within the foreign policy of the US (Mistry, 2016).

The British assumption that the Middle East deserved second priority in Western defence efforts clashed with the American 'priority list', in which it was the Western Mediterranean that was placed immediately after Great Britain.²⁶ (thoughts). In the context of NATO, the Western Mediterranean became a part of the 'Southern Europe/Western Mediterranean Regional Planning Group'. France, Italy, and Great Britain were full members of this group, while the USA only held a consultative role.

Italy's attitudes towards NATO and the EDC were intimately connected. In Washington, the new Republican administration had made the ratification of the EDC by the six European countries and the constitution of the European Army its prime aim in its policy towards Europe. Italy was subjected to strong political pressures. De Gasperi, on the other hand, had tried to link the ratification of the EDC with Western attitudes towards the Trieste question. In early 1953 the Palazzo Chigi still assured Washington of Rome's willingness to press on with quick parliamentary ratification of the Paris Treaty, but due to internal difficulties, the Italian Government felt compelled in March to postpone the parliamentary debate on the EDC, bitterly disappointing the Eisenhower administration (Varsori, 2015).

Italy would become one of the main NATO strongholds in the Mediterranean Sea, together with Greece, Turkey, and the islands of Cyprus and Malta. Not only Italy was a "land carrier" for NATO aircraft; it was likewise able to host, supply, and repair the American fleets that would operate in the area in military harbours and dry docks. (Nutti, 1998).

Technological Advancements

The military importance that the new partnership of NATO would bear to Italy was not only evident in the decision to place the AFSOUTH in Italy: it was equally noteworthy in the field of technological development, both civilian and military. Selenia began designing civil air traffic control systems in 1961 and completed the ATCR-2 radar in 1963. This was the first civil radar system designed by Italian companies, building on their experience gained under NATO contracts. Selenia rapidly became a leading player in this sector and develops greatly within the Finmeccanica Group, selling ATC systems globally. (Leonardo). Likewise, in 1965, Aerfer's first major sub-contracting agreement with the American company Douglas is for DC-9

fuselage panels. The DC-9 was a new short-to-medium-range passenger airliner that achieves long-term commercial success. Following this breakthrough came further collaborations with McDonnell Douglas for the DC-10 and MD-80 programs. In 1962, after a long development period that had lasted since 1952, OTO Melara's produced the 76/62 naval gun, its most successful product, sold to customers worldwide (Leonardo).

Another technological collaboration, albeit civilian, was Aerfer's first major sub-contracting agreement with the American company Douglas for DC-9 fuselage panels. The DC-9 was a new short-to-medium-range passenger airliner that achieved long-term commercial success. Following this breakthrough came further collaborations with McDonnell Douglas for the DC-10 and MD-80 programs. Furthermore, an equally important sign of shared development was NADGE (NATO Air Defence Ground Environment) ground defence system integrated the European radar network with that of NATO. This marked a turning point for Selenia as it steered towards new technological frontiers (Leonardo).

These important collaborations, both strategic and technological, showcase the newfound importance Italy had gained in NATO. Not only Italy hosted an important naval base, which was a vital point for the American fleets based in the Mediterranean; but after the significant economical breakthrough of Italy post "Miracolo Economico", Italy was able to present itself as a credible and important partner in regards to military equipment. It should be noted how the OTO Melara 76/62, the naval cannon developed by Leonardo in 1965, proved to be extremely popular. Further designs would only enhance what was a successful project, ultimately resulting in a gun (the 76mm Rapido OTO Melara) that would be used by more than one hundred different national navies (MDIF, 2013).

Italy had been established not only as an economically important country; now, that same economy was being invested in research and development, resulting in the kind of excellence that Italy would be famous for. The sales of OTO Melara proved momentous.

Italy in the EEC and NATO

While the results of the De Gasperi leadership would bear important advancements in military and technological partnership, it would equally be important for the economic partnerships of Italy. When the Republic finally overcame the

tumultuous years of the post-war period it enjoyed a firm standing within NATO and EEC. The European integration allowed Italy to enjoy some important civilian breakthroughs. The automotive sector mentioned earlier, showcased the global reach FIAT had managed to obtain (Casalino, 2010). The textile sector, for example, enjoyed the presence of strong industrial clusters located in the same economic triangle that had carried much of the Italian industrial output since the first inception of the Kingdom of Italy in 1861. The spill over effects of a common market carried over this transformation were: (a) the GATT process of progressive trade liberalization that permitted the various tariff and non-tariff barriers to trade and extended the potential market; (b) the catching-up of the newly industrialized low-wage countries, the competition from which the weakly competitive textile industry in the developed countries was unprepared to face, owing to obsolete technology and high labour costs; (c) product differentiation induced by the change in consumer demand, important market niches such as cotton products for tapestries, and home furnishings; (d) the shift to higher unit-value products based on traditional natural fibre with new, sophisticated technologies (Foa, 1963). The increase in technology would eventually bring greater yields with a smaller number of people traditionally employed in the first sector, resulting in better yields in 1970 (Ferrero, 2021).

The results of the integration into the NATO alliance and the EEC meant not only strategic, political, and material gains but also food security, something that not even the fascist regime had been able to attain. After World War II, Italy showed a gradual improvement in rice and maize yields, which were significant at 99.9% for 1948–1966 for rice. The after-war period was characterized by consecutive periods that showed a steep increase, which is significant at 99.9% (+0.1091 Mg ha⁻¹ year⁻¹ for 1947–1963, +2.053 for 1964–1978) in regards to maize (Mariani, 2021). The results show that, in Italy, the most important growth in maize and wheat yields occurred only after World War II. Similar trends can also be observed in the reference countries, with the beginning of significant yield growth phases in the early 1930s for wheat and maize in the United States, in the 1940s for wheat in the United Kingdom and after World War II for wheat in France (Cola, 2021). The process of filling the development gap with the advanced Western countries showcased how huge was the magnitude of difference between old powers and newcomers. Once again, the process of European integration and the influx of foreign capital played an important role in the breakthroughs Italy was able to accomplish.

Chapter 3: Rearmament as a mean of NATO integration

Case study: Panavia Tornado

First steps towards integration

In the context of structural changes in the aircraft industry, it was observed that governments were inclined towards collaboration, while firms continued to favour national alternatives. Dassault Aviation, France's leading aircraft producer, perceived commercial advantages in the AFVG project, which marked the initial but unsuccessful attempt at collaboration. The dynamics of national political economies in both France and the UK played a pivotal role in shaping the preferences and actions of various actors within the industry (DeVore & Weiss, 2014).

In France, the prevailing framework featured a statist structure and a predominance of non-market modes of interaction. There was a strong presence of a meritocratic network with close ties between the government and large firms. The DMA/DGA played a significant role, with extensive personal and professional exchanges with major firms. In contrast, the UK exhibited a liberal market structure with a predominance of competitive market arrangements. Multiple competing networks operated, and a relatively clear separation existed between government and large firms. The defence procurement organization in the UK was notably weaker, primarily serving as a monitor of market functioning (ibidem).

The increasing complexity of superpower weaponry led French firms to believe that simpler, domestically produced aircraft could gain a larger share of the international export market. British firms, on the other hand, aimed to maintain broad-based industrial capabilities while emphasizing national autonomy. Hawker-Siddeley proposed an upgraded version of its Buccaneer fighter bomber to fulfil the UK's strike aircraft requirements. Meanwhile, the BAC held onto hopes for the national TSR.2 project's revival (ibidem).

Despite corporate preferences, British and French leaders initiated Europe's first collaborative combat aircraft programs in May 1965 through a Memorandum of Understanding (MoU). This MoU outlined joint production of two jet aircraft: the cutting-edge combat aircraft known as the Anglo-French Variable Geometry Aircraft (AFVG) and an advanced jet trainer. The expectation was that procurement bureaucracies and firms from both countries would cooperate in realizing these aircraft projects as outlined in the MoU (Bennell, 2002).

The BAC in Britain engaged in the AFVG project since the government had ruled out funding for non-AFVG research and had ordered the destruction of existing TSR.2 prototypes, effectively eliminating the possibility of a national project. In contrast, Dassault received strong support from the DMA in its pursuit of a national program, effectively side-lining the collaborative endeavour that French politicians had attempted to impose. The DMA and Dassault, sharing common backgrounds and well-established networks, collaborated to enhance France's indigenous aircraft production capabilities and its share of international markets (*ibidem*).

Anglo-French Commitment

This collaborative effort between Britain and France marked a significant milestone in European combat aircraft development, shaped by the intricate interplay of national political economies, corporate interests, and government decisions. The rise of Italy as a strategic and economic partner proved momentous, and the Cold War equally followed. The discounted phases of the Cold War alternated warmer relations with colder ones, resulting in diplomatic engagements and dangerous crises. (Mistry, 2016).

The EEC not only succeeded at unifying economically the Six Founders: but it was also able to encroach among many other States, adding newcomers to what was able to be presented as a stable, unified market with exponential growth and lenient trade barriers. The much-discussed rearmament of Germany had proven to be finally overcome. A new collaboration was rising in Europe. The EEC came into force in 1957, and would eventually become the EC before becoming the European Union in 1993. What had begun as the ECSC, led by Jean Monnet, would eventually turn into one of the most successful economic markets in the world (Eichengreen, 2008).

The collaboration among the growing club of the EEC was not only economic or political. It would take time for what would become the European Union to develop a unified strategic document to be followed by the entirety of the Union. However, the increasing costs of Research and Development, coupled with the looming threat of the Cold War, meant that the European countries equally developed their own military and defence military equipment (Mistry 2016).

The military expenditure of Western Europe was not comparable to the number of resources the US poured into their own defence expenditure. Notwithstanding the brief intervention of France and the UK in Egypt after the nationalization of the Suez

Canal and the small contingents sent to the Korean peninsula to aid the UN intervention of 1951, most Western European countries remained peaceful for almost the entire duration of the Cold War. The United Kingdom would participate in a brief war to wrestle control of the Falklands, and France fought hard on two occasions in Algeria and Vietnam to try and preserve the last fragments of their colonial empires. Naturally, these brief conflicts paled in comparison to the amount of money and personnel that would be spent by the two superpowers in Vietnam and Afghanistan, respectively. Nonetheless, Western European States did try to collaborate and share military and technical know-how: that was especially true after the GDP levels attained by the growth rates of the Golden Age provided enough income to effectively develop weapon systems. Moreover, the political scenarios had changed. Europe was not regarded anymore as a defeated enemy or as an unreliable partner (Kennedy, 2017).

Instead, NATO had grown increasingly more expectant, particularly after the alternating views over Europe. The US was still the most important contributor to the shared budget of the treaty they had founded in 1949. However, many voices called for a minor commitment in Europe, reducing important garrisons to smaller strong points. The token forces left behind were deemed adequate to repel a Soviet invasion via the use of nuclear weapons; however, the hosting countries were encouraged to develop their standing armies (Kennedy, 2017).

An Attractive Cooperation

In this developing framework, collaboration among the various militaries became natural. The increasingly high costs of R&D involved several capitals that lone nation States could not afford to spend anymore. One of the most emblematic examples of European collaboration was the development of the Panavia Tornado aircraft fighter.

The monstrous costs needed to develop new generation aircraft meant that the national solutions adopted up to this moment. For example, France had the resources to develop and maintain the Mirage class; however, Italy, UK, Germany, and Spain were forced to develop a new, European fighter after having mothballed the obsolete Starfighter (Stewart, 2002). The birth of the Tornado, the formidable weapons system we know today, was predictably entangled in a web of national politics, strategic manoeuvres within the MOD, financial constraints (or rather, a severe lack thereof), and ambitious industrial goals. However, it is important to acknowledge the various

projects that exerted their influence on this aircraft during the preceding decade, as it now stands at the forefront of the Royal Air Force's offensive capabilities. By the late 1950s, it had become evident that the V-bomber Force, with its impressive 1,500-mile range at high altitude, was increasingly susceptible to surface-to-air missiles. This realization prompted the need for a low-altitude, all-weather strike, and attack aircraft capable of high-speed penetration beneath enemy radar systems, thus evading early warnings and fire control measures. This aircraft would initially supplement the strategic V-bomber platforms before eventually supplanting them as the United Kingdom's primary manned aircraft for nuclear weaponry. Even with the subsequent abandonment of the Blue Streak and Skybolt missile systems and the adoption of the submarine-launched Polaris strategic missile, the necessity for a complementary tactical strike and attack aircraft persisted. At the time, the outdated Canberra fulfilled this role. Concurrently, other nations were also developing their own all-weather, low-level tactical nuclear bombers (*ibidem*).

The American F-105D, the French Mirage IIIE, and the widely utilized F104G were all introduced into service during the 1960s, but their operational range was limited. They relied on long runways and substantial airfield infrastructure, and were unable to execute blind attacks using conventional weaponry. In the late 1950s, a slew of similar British projects emerged with the intention of replacing the Canberra, one of which was the Hawker P1121. However, following the infamous Sandys Defence White Paper of 1957, it was among the many manned aircraft projects that faced cancellation. Nevertheless, the fundamental need for a Canberra replacement endured, eventually materializing in the form of the TSR2. This ambitious undertaking boasted a range of 1,000 miles, with the capacity to carry six 1,000-pound bombs or a nuclear weapon internally. It was designed to operate from austere bases with short runways and minimal ground support. Concurrently, the Royal Navy intended to employ the Buccaneer as its primary strike and attack aircraft, offering a potential range of over 450 miles when carrying a nuclear weapon or four 1,000-pound bombs internally. However, much like its counterparts, the Buccaneer could not execute blind attacks over land using conventional weaponry. It was unanimously decided to procure a limited quantity of modified F-111 aircraft, devoid of a conventional bomb bay but possessing a comparable operational range to the TSR2 (Heron, 2002).

Additionally, a larger fleet of the compact BAC/Dassault Anglo-French Variable Geometry (AFVG) strike/attack aircraft, boasting a 600-mile radius of action

but lacking internal weapons storage, was intended to complement the F-111 contingent within the Royal Air Force. Unfortunately, the AFVG accord suffered a setback when the French withdrew their participation in June 1967. To compound the predicament, the Labour government, six months later, made the decision to cancel the F-111 altogether. By January 1968, despite an order for a number of Buccaneers, the prospects for the RAF's strike/attack front line appeared dim, with plans in disarray (Willox, 2002).

The challenges faced by the United Kingdom were not unique and mirrored those encountered by other European nations. Italy and West Germany, having relied on American aircraft throughout the Cold War, also found themselves in need of new aviation solutions. The conceptual mission, aimed at determining the aircraft's specifications, necessitated a 250-mile radius of action without external fuel while carrying four 1,000-pound bombs. Incorporating two underwing fuel tanks expanded the requirement to a radius of action of 400 miles, with the external load consisting of four 1,000-pound bombs and two unspecified stores on the outboard pylons. The sortie profile encompassed take-off within a maximum ground roll of 2,500 feet, cruising at the optimum range speed at low altitude until reaching an acceleration point for final penetration towards the target at Mach 0.9 over a distance of 150 miles. The external tanks were to be jettisoned once empty, followed by a two-minute presence in the target area at full power. The egress involved traveling at Mach 0.9 for another 150 miles, returning to base at the best range speed with ample fuel reserves, and concluding with a ground roll during landing not exceeding 1,500 feet (Willox, 2002).

Italy joins the Project

During the period from July 1967 to October 1968, two interconnected themes were examined. The first theme revolved around the air staff requirements of several NATO nations, namely Britain, Germany, and Italy, which ultimately culminated in the formulation of the Tornado specification. The second theme delved into the political backdrop against which this specification took shape, as well as the circumstances that led the British government to ultimately endorse British involvement in a collaborative project (Lewis, 2002). The advantages and disadvantages associated with collaboration varied depending on the level of participation from the respective nations involved. When it came to the Jaguar project, the French possessed comparable industrial capabilities and technology, an adept governmental procurement organization similar

to our own, and strong support from research and development establishments. By evenly distributing the workload and the number of aircraft, substantial savings were attainable in contrast to pursuing a purely national endeavour (Lewis, 2002).

However, in the case of other European countries, their industrial capacity lagged significantly behind that of the UK. Additionally, they lacked procurement experience and had comparatively limited research and development support. Consequently, considerable disadvantages had to be taken into account when assessing the Tornado project. Complicating the evaluation was the way the program evolved. During the initial stages, when pivotal decisions were made, there were six countries involved, and the emphasis on aircraft quantity left the UK with a mere 20% stake. Ultimately, in the production phase, the Royal Air Force (RAF) assumed nearly half of the aircraft. Hence, in hindsight, the UK conceded the establishment of a substantial international military procurement complex in Munich, providing a considerably larger share of technology and the support of research and development establishments to the project (Thornber, 2002).

The development of the process proved strenuous. Each participating country maintained different needs and specifications, as the fighter in development answered the need of many. The result would prove to be a very flexible fighter jet, which could fulfil a variety of roles. The development of the Tornado necessitated substantial improvements in thrust-to-weight ratio, fuel efficiency, and compactness, which posed a challenge as no existing engine could meet these goals. Additionally, the inclusion of a thrust reverser was a unique feature not commonly found in previous fighter engines. The specifications provided by Panavia required the creation of a new engine capable of operating at high turbine temperature and pressure ratios, while also maintaining a relatively high bypass ratio to achieve the desired fuel efficiency for low-level missions. The mechanical design had to incorporate advanced manufacturing techniques and materials to meet these requirements. During the cancellation of TSR 2 in 1965, the United Kingdom had two prominent engine companies: Rolls-Royce, who were advancing the RB 211 engine and collaborating with Germany on VTOL aircraft engines, and Bristol Siddeley, dedicated to engines for Concorde and Harrier while partnering with France on a range of engines for Anglo-French military projects (Stewart, 2002).

Following the cancellation of the AFVG by France and the gradual abandonment of German VTOL projects, two parallel streams of advanced engine

studies remained. It was in this context that Rolls-Royce acquired Bristol Siddeley in 1966, where the two-spool arrangement at Bristol and Derby's three spools characterized their respective engine development approaches. Although the two-spool work was primarily conducted within the UK, the three-spool approach was subject to an advanced component program in collaboration with Germany. When the MRCA emerged in 1968, both engine projects were viable and competing for company support. A decision had to be made to effectively position against the emerging competition from the United States (Hearne, 2002). While the military application strongly favoured the two-spool engine, particularly based on the Pegasus configuration, the three-spool formula garnered significant promotion due to its substantial potential in the civil market. The German company and officials backed the RB 199 concept and the plan for a joint advanced engineering program. The collaboration among the European States echoed the same process of a political and economic union that had been furthered by Monnet, De Gasperi, and Juncker (Varsori, 2001).

The resources poured into the process were expensive. In 1968, Rolls-Royce made a strategic decision to endorse the RB 199 engine and entrusted the program to the capable hands of the Bristol Division. This momentous shift required the Bristol team to adapt to a design that had been transferred from another division, while also forging new collaborative partnerships. Simultaneously, they had to navigate a period of heightened activity, diligently addressing the airframe requirements to ensure that engine data aligned with the specifications for both single and twin-engine aircraft, all while coordinating with various government agencies involved in the project.

As the participating countries narrowed down to the United Kingdom, Germany, and Italy, Fiat was brought into the consortium, joining forces with Rolls-Royce and Motoren und Turbinen-Union (MTU). A conscious decision was made to offer a fully collaborative program, necessitating the establishment of appropriate Joint Company arrangements (Lewis, 2002).

However, it became evident that among German officials and the Air Force, there existed a preference for an American engine, driven partially by factors external to the MRCA program. British Aerospace raised concerns about the RB 199, harbouring doubts that a completely new design could be developed to meet the necessary standards within the prescribed timeframe. Furthermore, no existing engine of suitable size was readily available to power the prototype.

While the airframe suppliers had already been selected and were proceeding with a definitive design, the engine companies were faced with the critical task of submitting a competitive bid against formidable contenders such as Pratt and Whitney and General Electric. A strict deadline of sixty days was allocated for a comprehensive response to the Request for Proposal. It was explicitly communicated that for the RB 199 proposal to succeed, it had to demonstrate competitiveness against the offerings from the United States. Substantial supporting design and test data were required to lend credibility to the proposed development timeline. The comprehensive response included a fully collaborative plan, outlining technology transfer arrangements with MTU and Fiat, as well as a commitment to an incentive and penalty-based contract structure. The extensive proposal documentation was submitted to the Agency in Munich within the specified timeframe, and in September 1969, the RB 199 was announced as the selected engine. In terms of organization, Turbo-Union Ltd. (TU) was registered in the UK to handle contract negotiations, allocate work to partner companies and manage revenue and expenditure. A dedicated office was established in Munich to facilitate effective liaison with Panavia and NAMMA. The entire program was meticulously coordinated through Working Groups comprising personnel from the participating companies, reporting to the Turbo-Union Management Meeting (DeVore & Wess, 2014).

Efficient communication played a crucial role, with corporate jet aircraft serving as a means of transporting components and personnel, thereby obviating the need for a large administrative structure within TU. This lean organization, initially established to handle the response to the RFP, proved to be effective throughout the development program, offering advantages such as cost-efficiency, improved team collaboration, direct decision-making by responsible parties within each company, and flexibility to adapt as the program progressed (Wilcox, 2002).

Issues and economic constraints.

The issues were as economical as they were political. The UK was the main proponent of such an important collaboration, and it had chosen to do so after the withdrawal from the French-British joint program. Global defence policy was marked by uncertainty, and the resolve expressed in the July 1967 White Paper regarding force deployments appeared to be more superficial than genuine. In reality, the Cabinet was divided, and the prevailing opinion at the time, which opposed a swift withdrawal from

the Far and Middle East, could have easily been reversed (Wilcox, 2002). To address the challenge of modernizing the RAF's frontline, one potential solution would be to replace the ineffective AFVG (Anglo-French Variable Geometry) with another collaborative project, for which several potential partners were available. For instance, Bonn indicated in July 1967 that the FRG (Federal Republic of Germany) might be willing to replace France in such a program, after receiving a presentation on the operational capabilities of the AFVG earlier that year. There was a degree of optimism that broader support within NATO could be secured if the operational requirements of the F-104 Replacement Group (consisting of Germany, Italy, Canada, Belgium, and the Netherlands) could be aligned with the British proposals, which seemed feasible (*ibidem*).

An agreement was successfully reached with the French concerning both the Jaguar and AFVG programs. Shortly after BAC (British Aircraft Corporation) began working on the AFVG, a collaborative brochure was issued in partnership with Dassault. While most aspects of the design had been agreed upon, there were notable exceptions, such as the positioning of the pivot pin. BAC preferred a pin mounted slightly inside the fuselage side with a retractable nib, whereas Dassault wanted it just outside the fuselage side with a fixed nib. Another point of disagreement was the engine installation, with BAC advocating for a drop-out arrangement and Dassault favouring rear insertion. Although a joint engineering study was planned to resolve these issues, it never materialized due to Dassault's increasing focus on the Mirage G. It's worth noting that the intake would have resembled a semi-conical arrangement similar to those seen in the Mirage series and the TSR. After the French withdrew, BAC continued working on the project independently, resulting in the final configuration of the UKVG depicted in Figure 4. This layout, featuring a fuselage-mounted pin, retractable nib, and drop-out engine installation, served as BAC's precursor to the MRCA (Multi-Role Combat Aircraft) feasibility studies of 1968 (Stewart, 2002).

On the German side, MBB (Messerschmitt-Bölkow-Blohm) had initiated VG project work on the AVS (Advanced Vertical Strike) in collaboration with Fairchild Republic. However, due to cost concerns, this highly complex VG-V/STOL (Variable Geometry-Vertical/Short Take-off and Landing) project was soon cancelled. Consequently, MBB began working on the NKF (Neuen Kampfflugzeug) in 1967 to meet the German Air Force's requirement for a strike fighter, as depicted in Figure 6, illustrating the desired characteristics of the MRCA (DeVore & Weiss, 2014).

In a concerted effort to tackle this challenge head-on, joint industrial studies were initiated with a sense of urgency instilled by governmental advisories, stipulating that a solution must be reached by the end of March to safeguard the entire program from jeopardy. Remarkably, fuelled by a spirit of collaboration, a mutually agreeable joint configuration was established by the end of February, maintaining the integrity of the underlying technology. Notably, when it came to the airframe, divergent preferences emerged, with the German Air Force advocating for a single-engine single-seater, while the RAF insisted on a twin-engines two-seater arrangement.

Drawing upon the findings of thorough cost-effectiveness studies conducted by BAC, which meticulously scrutinized the merits of single- versus twin-engines options, Germany swiftly acceded to embracing a twin-engines design. Conversely, it proved to be an arduous task to persuade the German counterparts that the cockpit workload inherent in the MRCA demanded the presence of two individuals to ensure the optimal effectiveness of the weapon system. Eventually, in March 1970, all stakeholders acknowledged that the IDS design would be predicated on a configuration housing two seats and two engines. Nonetheless, national variations persisted regarding avionics and weapons integration (Wilcox, 2002).

Tornado takes flight

In pursuit of bestowing the project with the utmost prospects of success and harnessing the collective prowess and manpower of each participating company most efficiently, delineating system design responsibilities and establishing workshare allocations took precedence early on in the process. This strategic step was complemented by the formulation of a well-structured joint engineering management committee, serving as the bedrock for effective coordination and decision-making throughout the endeavour.

The inaugural full-scale engine test, a significant milestone, took place in September 1971, marking the commencement of a rigorous development phase aimed at addressing a performance deficit vis-à-vis the remarkably ambitious specifications. As the program progressed, a cascade of additional challenges surfaced, casting a shadow on the endeavour. Notably, failures of high-pressure turbine blades, deficiencies in the oil and air systems, and issues with engine control and handling emerged as prominent concerns. Compounding these difficulties was the vexing predicament presented by the Tornado's air intakes, which subjected the engine to a

formidable level of distortion in the inflowing air (Millet, 2002). However, among the array of challenges faced, one particularly noteworthy setback carried profound business and political ramifications—a major contractor's failure to deliver the crucial electronic engine control units. To salvage the program from the brink, Rolls-Royce undertook a Herculean effort, pouring exceptional resources into designing and manufacturing suitable units in-house (ibidem).

Throughout the arduous journey of development and flight testing, acute problems with parts supply plagued the program, necessitating rapid adjustments to meet evolving build standards. Regrettably, the situation was further exacerbated by industrial disputes that gripped the United Kingdom, causing substantial delays in securing Initial Flight Clearance. Eventually, in August 1974, the first Tornado took to the skies, albeit with engines operating at dated power. The critical issue of engine supply continued to loom large, hampering the flight test program due to the subpar performance of the early engines (ibidem).

Even in the early stages of service operation, lingering problems persisted, most notably the short lifespan of the initial high-pressure turbine blades, which posed challenges in parts supply and engine overhaul. To address these deficiencies, a series of improved engine standards had to be swiftly approved, accompanied by the retrofitting of delivered engines to enhance their performance. As the fleet of Tornado aircraft gradually grew in number, the engine's behaviour in all aspects witnessed marked improvement. The RB 199 engine proved to be highly competitive against its contemporary American counterparts, boasting the sought-after multi-role characteristics that perfectly aligned with the Tornado's demanding operational requirements—an achievement that no alternative engine could have matched (O'Brien, 2002).

An acknowledgment of the significant, albeit not always favourable, impact of collaboration is imperative when discussing the Tornado. From the outset, it became evident that a project of such intricacy, involving a multitude of stakeholders, would necessitate the presence of a robust and efficient system integration team. This team would bear the weighty responsibility of formulating a comprehensive top-down system design that would effectively fulfil the program's requirements. Subsequently, they would meticulously partition this design into meticulously controlled technical and purchasing specifications, ultimately overseeing the integration, testing, and validation phases (ibidem).

In the previous TSR2 program, the System Integration Group at Vickers, led by Howard Surtees and bolstered by the expertise of Frank Bond and John Daboo, had successfully fulfilled this crucial role. However, with the advent of the Tornado program, this accomplished team made a seamless transition as a unified entity to form ESAMS—an entirely independent and fiercely autonomous system integrator, albeit still under the ownership of Elliott's. Given the collaborative nature of the program, the political significance of German and Italian contributions could not be understated. Consequently, a distinct entity known as ESG (Elliott System Group) was established, with ESAMS at its helm. Nevertheless, at the time, this imposition of an independent systems team seemed to be viewed as a significant impediment by suppliers of avionic systems, engendering a sense of concern and hindrance (*ibidem*).

European collaboration

The European collaboration that developed the Tornado was capable of ultimately producing a sophisticated piece of military equipment, which would bring excellent results, especially considering the three-national challenges it had to face.

Acknowledging the significant and, at times, adverse influences that collaboration exerts on the selection and evolution of design solutions when discussing the Tornado is crucial. From the outset, the magnitude and complexity of the project, involving numerous stakeholders, made it evident that a robust and efficient system integration team was essential. The team's primary task was to craft a top-down system design that effectively met the required specifications. Subsequently, they meticulously partitioned the design into tightly controlled technical and purchasing specifications, assuming ultimate responsibility for overseeing or assisting in the integration, testing, and validation phases (O'Brien).

In the earlier TSR2 program, this pivotal role was fulfilled by the System Integration Group at Vickers, led by Howard Surtees and supported by Frank Bond and John Daboo. However, this accomplished team seamlessly transitioned as a cohesive unit to form ESAMS, a wholly independent system integrator, albeit still under Elliott's ownership. Given the collaborative nature of the program, the political significance of German and Italian contributions cannot be underestimated. As a result, a group named ESG (Elliott System Group) was established, with ESAMS at its helm. At the time, the imposition of an independent systems team seemed to be viewed as a significant hindrance by suppliers of avionic systems, presenting concerns and obstacles. Looking

back, it is evident that this independent systems team played an indispensable role in a tri-national program (Stewart, 2002).

One of their initial responsibilities was designing the computing system architecture and establishing a digital data transmission system, both of which were crucial aspects identified during the TSR2 development phase. Fortunately, given their background, there was little difficulty in dismissing a German initiative led by IBM (Germany) to consolidate all system functions, such as autopilot, engine control, wing sweep, and stores management, into a single computer, albeit reluctantly acknowledging the need for duplication to ensure reliability. Instead, they opted for a federated system based on individual system-dedicated computers, a concept that emerged strongly from the TSR2 experience of BAC and Elliott (*ibidem*).

Selecting a data transmission system presented greater challenges. The options ranged from a multiplex data bus ring highway to a "star" dedicated link system connecting individual boxes to the centre. The Americans were in the final stages of developing the MIL STD 1553 system, which served as the precursor to a series of successful ring highway systems that significantly reduced interface complexity and facilitated the retrofitting of upgraded or modified sensors and subsystems. On the other hand, the "star" system resembled the digital data transmission system being developed for the new 747/DC-10 series of civil aircraft. It offered notable weight and cost savings, albeit to a lesser extent, but traded lower technical risk in the present for substantially increased difficulty in future retrofitting or upgrades. Undoubtedly, the later Tornado GR4 would have experienced easier, more cost-effective, and faster integration of additional components, such as TIALD, if the 1553 system had been initially chosen. Over time, the "star" system has performed satisfactorily and is now complemented in the aircraft by ring highway bus systems (Millett, 2002).

Test flights

The birth of the Tornado was also quite laborious. The juxtaposing interests meant that not only the raw interests of different militaries clashed; it equally meant the various participants would compete for the prestige of the various milestones. During the negotiating stage of the program, the Germans insisted on the first flight taking place in Germany due to their larger aircraft purchases compared to Britain and Italy. Sir Frederick Page reluctantly agreed to this arrangement but stipulated that a British pilot should be the one to conduct the flight. As a result, in early 1974,

preparations began in Bavaria for this significant event. The second flight involved expanding the handling capabilities to the initial limits of 3G and 300 kts. It marked the first wing sweep, which, remarkably, resulted in minimal trim adjustments or alterations in handling characteristics, a testament to the skilful work of the aerodynamicists. The exceptional handling observed during the initial flight was fully affirmed, and the air conditioning noise that had been encountered earlier had been resolved. Upon landing, there were no reported issues (O'Brien, 2002).

Following the successful outcomes of the first two flights, it appeared appropriate to involve the German pilots in operating their aircraft promptly. Consequently, on the third flight, Nils Meister assumed control, confirming the aircraft's impressive handling characteristics. The flight demonstration encompassed a comprehensive display within the cleared flight envelope, showcasing the aircraft's manoeuvrability to the fullest extent. This entailed demonstrating the complete range of wing sweep, rapid roll capabilities, acceleration in full reheat, and a short landing run employing reverse thrust. Based on the feedback received afterward, the demonstration was well received by all (Thornber, 2002).

The second prototype, P02, closely followed P01 in its construction at Warton. The engine running and ground systems testing were conducted by Dave Eagles, adhering to the established routine from Manching. As a gesture of solidarity, Pietro Trevisan, the Aeritalia chief test pilot, was invited to join the joint test in the back seat for the inaugural flight on October 30th. Notably, P02 encountered significant challenges in setting up the flight control system, prompting us to conduct the first flight in "direct link" mode. In this mode, the pilot's control inputs directly influenced the control actuators, without any computer-generated inputs or auto stabilization. The aircraft's Command and Stability Augmentation System (CSAS) offered three modes: full CSAS, direct link, and manual, which engaged a mechanical connection between the control column and the all-moving tail plane. The flight encompassed the full cleared flight envelope, including a brief supersonic run, and revealed that the aircraft flew reasonably well even without auto stabilization. This accomplishment once again highlighted the skill of the aerodynamicists. The cockpit indications and telemetry readings indicated no apparent issues with the engines (Hearne, 2002).

The primary objective of P02 was to expand the clean aircraft flight envelope. Each of the nine prototypes was assigned specific tasks to clear the aircraft for use by their respective Services, although there were inevitable overlaps and changes as time

progressed (ibidem). P02 was equipped with "bonkers," small explosive charges on the wings that could be fired to induce oscillation in the control surfaces. The damping of these oscillations was then evaluated to ensure the aircraft was clear of any potential flutter issues. Subsequent "bonker" tests were conducted at higher speeds (Thornber, 2002). The focus then shifted to expanding the supersonic flight envelope clearance. The early flight engines fell considerably short of the required thrust, resulting in slow supersonic acceleration and rapid fuel consumption. To address this, it was implemented in-flight refuelling by fitting the IFR probe and securing flight refuelling clearance much earlier than initially planned. The Royal Air Force cooperated extensively by providing their tanker aircraft, and the clearance for flight refuelling was swiftly granted. Tornado's excellent handling and stability made the process of flight refuelling easier (ibidem).

At this stage, the third prototype, P03, commenced flying from Warton. This was the first dual-control aircraft and was tasked with flying with heavy external loads under the wings and fuselage. P02 had already cleared the wing tanks for flutter, and progressive clearances were conducted on the complete range of external stores to be carried. P04 took flight shortly after P03, in September 1975, from Manching. This particular aircraft was equipped with the full Tornado avionics system and focused on clearing the navigation, autopilot, and ground mapping systems.

In December 1975, the first Italian prototype, P05, flew from Caselle. Like P02, P05 experienced challenges in preparing the CSAS for flight, and as a result, it also flew in direct link mode initially. After the fifth flight, the CSAS was deemed ready for operation. During the landing approach on that flight, Trevisan, the pilot, was advised to switch back to full CSAS. However, the CSAS approach mode, which required larger control inputs, caused a divergent pilot-induced pitch oscillation. At the bottom of one of these oscillations, the aircraft made contact with the runway, resulting in significant damage.

Fortunately, the pilot remained unharmed. However, P05 was subsequently removed from the development program for over two years. In December 1975, P06, the third British prototype, also took to the skies. This aircraft was equipped with two Mauser guns, and the flight test instrumentation, typically installed in the ammunition bays of other prototypes, was placed in the rear cockpit. Consequently, P06 could only be flown in solo mode.

In 1976, the Tornado prototypes P07 and P08 took their inaugural flights, with P07 flying from Manching and P08 from Warton. These aircraft boasted the latest avionics advancements, and as a significant portion of their flight envelope had already been cleared with and without external stores, the focus shifted towards testing the aircraft as a fully integrated weapons system. Remarkably, the handling of the aircraft remained exceptional even with various external stores attached, prompting an intensive program of weapon aiming, releases, gun firing, and comprehensive avionics and radar testing. initial flight tests, making for quite an intense and demanding experience.

Production of the prototypes was completed by the first flight of P09 in Italy in February 1977. Later the same day, P11, the first of six pre-series aircraft also flew. These aircraft were used to back-up the development programme and subsequently to go either to the respective Service test flying units for evaluation, or direct to the Services after conversion to full production standard (Hearne, 2002).

During the years 1977 and 1978, Tornado development flying maintained a rapid pace due to the considerable number of aircraft involved in the program. Various Service VIPs had the opportunity to acquaint themselves with the Tornado and were duly impressed. Additionally, a Canadian Air Force team visited Warton for an aircraft evaluation; however, no further communication was received from Canada thereafter. Tornado P02 underwent modifications, including the installation of an anti-spin parachute and an emergency power unit (EPU), to commence a series of handling tests at high incidence angles in preparation for full spinning trials (Lewis, 2002). Tragically, in June 1979, P08 and its crew were lost in an accident, followed by another unfortunate incident in May 1980 involving P04 and its crew in Germany. These losses inevitably caused some delays in the test program. Nonetheless, the test aircraft were designed with the capability to fulfil multiple tasks, minimizing the disruption caused.

Full spinning trials commenced in January 1980 with P02. Modern military aircraft typically do not experience a conventional stall; instead, they tend to enter a fully developed spin once a certain angle of incidence is reached, leading to the loss of directional control. Considering the anticipated challenges of air intake at angles of up to 90 degrees from the aircraft's forward direction, an emergency power unit utilizing hydrazine was installed on P02. This unit was activated immediately prior to each spin test and connected to the gearboxes supplying hydraulic and electrical power to the aircraft (Willox, 2002).

Tornado Begins Production

The first British production Tornado, BT001, successfully completed its maiden flight in July 1979, followed by its subsequent deployment to Boscombe Down for weapons trials. BT002 took to the skies in December 1979. The general belief regarded the Tornado as an excellent product, capable of serving the combined aviation forces of different countries admirably. Including R&D, a model was deemed to cost circa 45 million dollars (current estimates). Given the multi-national development and procurement programme for Tornado, it was a natural extension of the process for the three MODs to consider aircrew training on a joint basis (Hearne, 2002).

As with some of the early national aspirations for the range and capability of the aircraft, not all the training aims were achieved. Nevertheless, a Tri-National Tornado Training Establishment (TTTE) was formed and joint conversion training took place very successfully for some nineteen years, until the establishment was closed in 1999 and the three nations elected to go their separate ways. The training story started in June 1972, some two years before the 101 light of the first Tornado prototype, when the Joint Operational Training Study Committee (JOTSC) met to discuss the feasibility of carrying out, 'Some or all MRCA training on a co-operative basis' (Stewart, 2002).

The JOTSC was a wing commander/lieutenant colonel-level Air Staff group representing the three nations, which in due course was to become a sub-committee of the Tornado Steering Committee (TSC), when it formed in 1976. The TSC operated at colonel/one-star-level with the principal UK representative being Director Training (Flying) RAF. The TSC rotated its chairmanship between the nations and was very much the driving force behind the setting up and running of TTTE. This committee structure, which also included Engineering, Personnel and Finance sub-groups, was arguably bureaucratic and certainly, slowed decision making. However, given the significant financial commitment involved in joint training, and the occasional weakening of resolve along the line shown by individual nations, it served to ensure that all concerns were addressed and the politically important goal of joint training was achieved. In March 1975 the JOTSC recommended Tri-National Training at two levels: A Joint Operational Conversion Unit at RAF Cottesmore and a Joint Weapons Conversion Unit at the Italian Air Force base at Decampment on Sardinia (Wragg 2002).

Joint Aircrew Training

The multinational development and procurement program for the Tornado aircraft naturally led the three Ministries of Defence (MODs) to consider joint aircrew training. Although not all training objectives were fully achieved, a Tri-National Tornado Training Establishment (TTTE) was established, and successful joint conversion training took place for a period of nineteen years. In 1999, the establishment was closed, and the three nations decided to pursue separate training paths (O'Brien, 2002).

The training initiative began in June 1972, two years prior to the first flight of the Tornado prototype. The Joint Operational Training Study Committee (JOTSC), comprised of senior Air Staff representatives from the three nations, discussed the feasibility of cooperative MRCA (Multi-Role Combat Aircraft) training. Over time, the JOTSC became a sub-committee of the Tornado Steering Committee (TSC), operating at a higher level and overseeing the establishment and operation of TTTE. The committee structure, which included various sub-groups, addressed bureaucratic challenges and ensured all concerns were addressed, given the significant financial investment and occasional wavering of commitment from individual nations. In March 1975, the JOTSC recommended the establishment of a Joint Operational Conversion Unit at RAF Cottesmore and a Joint Weapons Conversion Unit at Decimomannu, an Italian Air Force base in Sardinia (Wragg, 2002).

The decision to establish a Joint OCU at RAF Cottesmore was influenced by each nation's procurement position. The Italians, having ordered fewer aircraft, did not assert for the use of an Italian base. The Germans, while potentially able to provide a base, conducted much of their training in the United States and faced pressure related to low flying complaints. The UK, eager to maintain close involvement in its own training, had the advantage. RAF Cottesmore, being large, relatively modern, and unoccupied at the time, was deemed an ideal location. The national MODs endorsed the recommendation, and a Memorandum of Understanding was signed in May 1979, outlining the arrangement. The refurbishment costs were controlled, existing facilities were utilized where possible, and innovative approaches were implemented, such as converting an aircraft hangar into an on-base Engine Repair Factory to expedite engine maintenance. RAF Cottesmore also provided a large servicing platform capable of handling the required number of aircraft for the TTTE flying task (O'Brien, 2002).

Lessons learned

Firstly, significant aspects relevant to the industry have emerged from the Tornado program. Rolls-Royce, driven by the program, has introduced new approaches to meet customer requirements at reasonable costs. A preliminary framework for future European collaboration in the industry was tentatively established, but it lacked the necessary support to be successful. Ultimately, it served as a cautious stepping stone towards the eventual solution of international takeovers and mergers (O'Brien, 2002).

So, what specific lessons can we learn from the Tornado program? Managers or shareholders who find satisfaction in the profitability of a secure share in a massive program must realize that this will continue only if the individual company can conceive and develop the next product better on its own than with other partners. Economy and companies must follow R&D. This message aligns with Gordon Lewis's advocacy of timely research and demonstration programs. It is vital to minimize the impact of changing customer demands on the engine development program. Moreover, the outcomes of these programs must not be disregarded due to political or emotional biases. Bonn's share of MRCA program costs was \$6.2 billion, out of a total cost of over \$13 billion. The program would provide 70,000 jobs for West German industry over the next 10 years. The unit cost of the MRCA was projected by the West Germans at \$10.6 million — more than double the original estimate in 1970 of \$4.6 million — but even the new price was probably understated. It did not include the necessary spare parts, ground-support equipment, and research and development costs; these would bring the cost to over \$19 million a copy. The cost of the closest comparable fighter, the US F-111, was about \$15.6 million. Exports outside the Anglo - West German - Italian consortium would lengthen production runs and, thereby, lower unit costs. Lastly, there are examples of the significant challenges currently faced by the industry in general, as exemplified by the Tornado program. This situation was compounded by inadequate forecasting of program timelines and cost estimates, as well as fragmented project management arrangements. In response to the budgetary constraints, major projects were cancelled, and attempts were made to find cost savings through collaboration (DeVore & Weiss, 2014).

To address these challenges, the Project Time and Cost Analysis Section was established in January 1965. Its purpose was to provide more detailed statistical insights from previous projects to both the government and industry/government working groups. Furthermore, program management underwent reorganization, with Project

Directors assuming integrated technical, programmatic, and financial responsibilities. During the following three years, there was a period of collaboration between the UK and France. However, this collaboration only partially applied since the French possessed a similar level of industrial capability and technology as the UK, along with comparable government procurement structures. In contrast, the consortium countries had significantly less capability in nearly all areas and required substantial support and guidance from the UK. This marked a new era of collaborative project management (O'Brien, 2002).

By the time discussions for the MRCA (Multi-Role Combat Aircraft) commenced in 1968, government procurement management had become more adept at handling the situation. Government-industry relationships had improved, and military procurement had transitioned to the Ministry of Technology. The close association between military and civil activities, as well as the increased collaboration with industry within the Ministry of Technology, influenced the MRCA program significantly. Notably, there was strong government support for Rolls-Royce, as their failure to continue in the advanced military engine field would have had disastrous consequences. The Ministry also aimed to maintain technical advancements in equipment and avionics (*ibidem*).

Critical decisions regarding program management had to be made swiftly. It was determined that international industrial and governmental organizations would be co-located in Munich, although this decision sparked some controversy. Despite the limited options available at the time, the UK had to adapt accordingly. Consequently, substantial industrial and governmental teams were promptly established. The provision of highly competent staff from the UK, their co-location, complemented by home-based staff for the working groups, and the support of our research and development establishments, ensured effective international management arrangements. There were initial delays, often frustrating the industrial partners. However, it was necessary to recognize that some countries had not been involved in the development of advanced combat aircraft. Resolving conflicts related to countries' aspirations, extent of participation, aircraft capability, and financial commitment required time and effort. Extensive endeavours were made to retain as many countries as possible within the program. Nevertheless, Belgium, Canada, and later the Netherlands decided to withdraw. Through further concessions to Italy, the three-country program was agreed upon, enabling more rapid progress. Design and

construction of prototypes advanced smoothly, albeit with a delay in the first flight due to engine issues. Challenges also arose from late equipment deliveries. Nonetheless, considering the project's complexity, the lack of experience in other countries, and the establishment of new management agencies, the overall outcome could be considered successful. While there was a slight increase in development costs, some of it was attributed to modifications aimed at facilitating production. Consequently, the combined development and production program remained within 1% of the original estimate, excluding the special ADV (Air Defence Variant) development costs (Wragg, 2002). When it came to the subsequent major project, Eurofighter, Spain joined Germany, Italy, and the UK. Given the economic benefits and achievements of the international industrial/governmental complex established in Munich, it was almost a foregone conclusion that the international management organization for Eurofighter would be co-located alongside the Tornado program in Munich (DeVore & Weiss, 2012).

When compared to its predecessors, each with their own merits when evaluated against the contemporary threats, Tornado represented a significant leap in capability, particularly in low-level operations. The reason behind such admiration is simple. Tornado emerged as a weapon system that could fulfil all operational requirements and deliver on its operational declaration, regardless of whether it was day or night. When considering the reality of engaging in aerial warfare while being on Quick Reaction Alert (QRA) around the clock, it is incredibly encouraging to have the assurance that the aircraft you are piloting was purpose-built for the task. This was precisely the case with the SACEUR-assigned GR1s operating in the low-level role (Millet, 2002).

Take, for instance, the Canberra, which boasted an impressive range of approximately 600 nautical miles. However, its airframe was relatively slow, and flying above speeds of around 400 knots became uncomfortable due to its straight wings. Additionally, it lacked defensive aids for low-level use, and its visual navigation system, even with the assistance of DECCA, raised doubts about accurate weapon delivery in anything other than visual conditions.

Both the Buccaneer and Phantom, on the other hand, featured more suitable airframes. In fact, the Buccaneer's performance at 550 knots was just as commendable as that of the Tornado. However, neither aircraft possessed a truly effective navigation and attack system. Furthermore, the radars of both the Phantom and the Buccaneer were not designed for low-level overland use. Despite the availability of some defensive

aids, both aircraft would have been vulnerable when flying at the altitudes required for all-weather penetration. The Jaguar, while equipped with an up-to-date navigation and attack system, was hampered by the absence of radar or a terrain-following system.

The growing costs of new weapon systems will encourage potential customers to consider upgrading their existing fleets. Today's aircraft will therefore be expected to remain longer in service and counter the threats of the future. Industry will need to adapt from developing and manufacturing new weapon systems to finding ways to improve the capability of an existing asset to maintain a deterrent in a higher technological environment (DeVore & Weiss, 2014).

The Royal Air Force's IDS (Interdictor Strike) Tornado aircraft are expected to have a service life-span of up to 40 years and are currently undergoing the largest MLU of its kind in Europe. The MLU programme, with a budget of £1 billion, returned 142 IDS Tornado aircraft to industry and upgrades them to a new variant, designated Tornado GR4/4A, which will become the new common standard for the RAF IDS aircraft. The longevity of the Tornado is a testament to what was such a massive programme. The joint cooperation and the know-how shared among the different European industries represent important good news for sharing European concerns and security. Considering that the cost per Tornado model clocks at about 60 million euros per craft, this shared endeavour reflected the waning economical power of the European countries and the immense costs needed for modern R&D (DeVore & Weiss, 2014).

Chapter 4: The defence industry as a projection of economic diplomacy

Case Study: The most recent expansion of the Italian Navy

National military equipment: Ariete and Centauro

The production of the Tornado was an immense endeavour that spanned years of joint development, shared knowledge, and intricate political collaboration. This fourth-generation fighter jet left an indelible mark as it served with distinction in the Royal Air Force (RAF), Luftwaffe, and other allied air forces (Willow, 2002). The arduous process of arming and equipping the Tornado had far-reaching implications for Italy's defence doctrine, giving rise to the imperative of developing a national tank. Historically, the Italian Armed Forces relied upon the natural defensive barriers of the Alps while upholding naval and air superiority. At the conclusion of World War II, Italy received the "gift" of M4 Sherman series tanks, but subsequent tank lines, such as the Patton, were not domestically developed. In contrast, West Germany and Japan had already challenged the notion of national development, breaking free from the constraints imposed by post-war treaties. Italy, at least not by written law, had never encountered such an obligation (Mistry, 2016).

The development of the Ariete MK I tank proved to be a protracted and challenging journey. The traditional doctrine of the Italian Armed Forces prioritized the Navy over the Army, thereby diminishing the significance of armoured vehicles like the Ariete. Despite the success of adopting the Tornado, the Ariete project commenced with only a fraction of the resources dedicated to the tri-national consortium. Aligned with NATO's armoured warfare doctrine, the Ariete aimed to be a versatile Main Battle Tank, capable of supporting infantry and engaging enemy armour. It was conceived as a substantial vehicle, prioritizing crew comfort. Emphasizing quality over quantity, the NATO Main Battle Tanks were primarily tasked with defending fortified positions against enemy columns (NATO 1945-69). The contrasting Eastern and Western armoured doctrines shed light on the divergent use of tanks. While Warsaw Pact forces were primarily focused on breaking through enemy positions, NATO divisions were expected to hold strategic chokepoints. This difference in tactical approach revealed disparities in personnel dimensions and quality. Theoretically, NATO's higher quality troops were meant to hold off the numerically superior, albeit less-trained and equipped Warsaw Pact columns. However, the practical application of this theory never fully materialized, at least not

in Europe. The combat deployment of the Olifant against the T-62 and T-54 tanks during the Arab invasion of Yom Kippur serves as a prominent example. Despite being scarce in number, the Olifant maximized the effectiveness of its gun by strategically deploying in advantageous defensive positions, hence entrenching in the West military doctrine the idea to focus over quality rather than quantity (ibidem).

The development of the Ariete began in 1984, driven by a confluence of international and domestic factors. After a period of relative calm, the tensions of the Cold War resurfaced, intensifying the competition between the two superpowers. President Reagan's resolute actions exerted pressure on the Soviet Union, compelling them to escalate military spending. The NATO alliance dutifully followed suit, recalibrating its strategies and bolstering its capabilities to counter the evolving geopolitical landscape. The quest for a national tank stemmed not only from NATO considerations but also from political motives. The autonomous development of a weapon system was and continues to be, a colossal undertaking that can provide significant advantages to the state capable of producing a successful model. Strategic autonomy, self-sufficiency, increased know-how, and potential export sales were all factors that underscored the need for a national tank. Moreover, the M60 Patton and the Leopard I was now obsolete, compared to the third-generation MBTs that were being rolled out in mass production, like the Leopard II (Hampson, 1986).

The Consorzio Iveco-Oto Melara (CIO) commenced the first steps necessary to develop Italian armour, with the strategic goal to produce not only a national MBT, but also a TD (Centauro) and an IFV (Freccia). Iveco took charge in designing the hull, while Oto-Melara applied its expertise to the development of the main cannon. The first prototype was to be rolled out in 1988, followed by other six mock tanks. The fact that the development was national proved to be advantageous to expedite process. Without the need to satisfy the request of the three different nations, the CIO was able to begin testing only three years after the design of the first blueprints (IAI, 2012).

The doctrine of the Italian armed forces had already changed. The Centauro was to be the main vehicle, and not the Ariete. The lack of armour had been the crux of Ariete for the entire development. The Centauro represented a leap forward. Armor was deemed useless, especially considering the geography of the terrain the Italian army. There was no point in beating a dead horse, especially considering the amount of money Ariete would have needed to be upgraded. The real edge of the Italian army bore the resemblance of a compact, wheeled vehicle with superb speed, handling,

comms and gun. Furthermore, Italy was focusing more on its navy. The need for a national tank was quickly being superseded (ibidem).

Continuing from the Ariete tank, another notable addition to Italy's armoured warfare capabilities was the Italian Centauro series. The Centauro emerged as a result of the lessons learned from the Ariete and aimed to address the need for a highly mobile, wheeled armoured vehicle with substantial firepower. The Centauro series encompassed different variants, but the focus here will be on the Centauro 105 and Centauro 120. These vehicles were developed to provide rapid response and reconnaissance capabilities, while also delivering significant firepower when needed. One of the key advantages of the Centauro series was its wheeled platform, which offered enhanced mobility on various terrains and allowed for high speeds on roads (ibidem). The tank destroyer as a concept had fallen out of favour after the Second World War, and the production of a vehicle that exemplified such a concept could effectively be perceived as obsolete. The only other vehicle that performed a similar role was the S tank series of Swedish production, which was nonetheless classified as a tank by the Swedish armed forces. In a way, the Centauro was to fulfil the same role that the S tank series was to perform in the rough terrain of the Scandinavia peninsula.

The Centauro possesses paper thin armour insufficient to stop any MBT shell. The classified information that surround military vehicles do now allow for a precise evaluation of the effective protection granted by the composite armour employed. Nonetheless, the weight of Centauro, clocking in at about 26 tonnes, allows to gauge the effectiveness of the armour of a vehicle that roughly weighs like the Freccia models. Centauro entered service in 1991, whereas Freccia began services in 2006. The similar weight presumes that Centauro enjoys a protection similar to the one of an IFV would have. The FV510 Warrior the British IFV that saw service during Operation Desert Storm, is possibly the NATO vehicle that resembles most closely the Centauro. Deployed in 1987, the Warrior IFV almost matches the weight of the Centauro series, and possesses a similar shape (ibidem).

The Italian terrain, which possesses very little open ground bar in the Northern and Central areas, is perfectly suited for the defensive capabilities of the Centauro. Its speed allows the Centauro to relocate itself, while the gun and superb targeting systems can engage hostiles at the maximum possible distance. The performance of the Centauro proved crucial in following military Italian R&D. Not only the vehicle had been designed to perfectly follow the military doctrine of a Country had been

traditionally tied to the sea and naval power; the huge success of the vehicle allowed an important national export. The Centauro line operated under the colours of the UN, serving with distinction in the Blue Helmets operations in Bosnia, and participating in the operations in Somalia and Iraq. The B1 Centauro enjoyed a number of different operators, being employed by the Kingdom of Spain and by the Kingdom of Jordan (MDIF).

The B1 Centauro enjoyed a thorough program of upgrades that prolonged its existence, and allowed what was a 1986 project to remain effective and competitive. Furthermore, the Italian Army appreciated the Centauro's performance, going as far as to order another batch consisting of two hundred B2 vehicles in January 2021. In fact, the success of the B1 model has carried over its supposed development, striking a deal worth two billion dollars with Brazil (MDIF). Consequently, the lessons learned from the proxy conflicts of the Cold War had a profound impact on weapons research and development. Armor and firepower became paramount in European mechanized warfare, exemplified by the British Challenger model—a formidable tank renowned for its thick armour and all-around protection. While each NATO country pursued specialization in specific fields, Italy chose to prioritize the main gun of the Ariete as its standout feature. The OTO Melara 120mm smoothbore cannon maintained a high combat standard throughout the Ariete's service. However, this emphasis on firepower came at the expense of armour, resulting in a vehicle whose performance lagged behind its NATO counterparts. The predilection for a potent gun protected by modest armour would find further application in the Centauro line (MDIF).

The introduction of the Tornado fighter-bomber aircraft provided Italy with a highly capable platform that could deliver precision strikes and effectively support ground forces. The Tornado's advanced avionics, long-range capabilities, and all-weather operation allowed it to conduct deep strikes, interdiction missions, and close air support for ground operations. This experience highlighted the value of close coordination and synchronization between air assets and ground forces (Stein, 1987).

The successful integration of the Tornado into Italy's military arsenal demonstrated the effectiveness of combined arms operations. It showcased how the synergy between ground forces and airpower could significantly enhance the operational capabilities of the Italian military. The Tornado's ability to conduct precise strikes on enemy targets, gather reconnaissance information, and provide real-time situational awareness greatly supported ground units in their tactical decision-making

processes (Hampson, 1986). In summary, the previous utilization of the Tornado aircraft in the Italian military reinforced the significance of combined arms operations. It highlighted the need for close coordination, interoperability, and synchronization between air and ground forces to maximize operational effectiveness. Italy's experience with the Tornado helped anchor its tactical approach, ensuring that combined arms operations remain a cornerstone of their military doctrine. The tactical level of Italy's doctrine reflected on its strategic thought, and its increasing reach (IAI, 2012).

Italian Arms Sales in the MENA Region

The Italian defence industry had grown voraciously. The inception of Ariete had begun in 1984. In 1981, the total sales of the Italian defence industry amounted, as a whole, to circa one thousand and four hundred million US dollars, a stellar increase from the much more modest sum of one hundred million US dollars attained between 1970 and 1972. Italian sales were mainly addressed to non-NATO buyers, especially African and South-American States. In 1981, the main recipient of military equipment was Iraq, which mainly bought Italian warships to bolster its navy. The decision to export in countries which were unaligned or closer to the Eastern block was taken after the petrol crisis of 1970, as Italy explored new markets to overcome the economic slump. 80% of the equipment manufactured in Italy was exported, and the defence industry employed 300,000 workers (CIA, 1982).

It is important to note the double effect of exporting weapons to States that were not traditional allies of the West. In first instance, the economic agreements signed between Italy and the buyers meant that Italy was able to share many of the West's ideologies and doctrine. Secondly, Italy acted as a counter presence to the USSR, often times remaining the only NATO State actively engaging and negotiating with foreign armed forces. A special tie was forged with many of Italy's former colonies, especially Somalia (ibidem).

The Freccia Infantry Fighting Vehicle (IFV) would later garner interest from several countries seeking to enhance their armoured vehicle capabilities. Some of the countries that expressed interest in acquiring the Freccia for their armed forces included:

- United Arab Emirates (UAE): The UAE has shown interest in procuring the Freccia IFV to modernize and strengthen its armoured vehicle fleet;

- Tunisia had considered acquiring the Freccia IFV to enhance its ground forces' capabilities and replace outdated armoured vehicles.
- Qatar had shown interest in acquiring the Freccia IFV to bolster its armoured vehicle capabilities and improve the effectiveness of its ground forces.

These countries recognized the advanced features and capabilities of the Freccia IFV and saw it as a valuable addition to their military inventory. The Freccia's modular design, advanced armament, and superior protection made it an attractive choice for those seeking a state-of-the-art infantry fighting vehicle. The industry of defence helped shape the Italian doctrine in the MENA region as well. The sales that are continuing to this day are the result of the strategy of exports implemented during the Cold War (MDIF).

Strategic goals and Libya partnerships.

One of Italy's primary objectives was to prevent any Soviet influence from expanding in the Mediterranean. The Soviet Union had established a significant presence in countries like Libya, Syria, and Egypt, raising concerns about the spread of communism and potential threats to Italy's southern flank. Italy actively participated in NATO's efforts to monitor and counter Soviet activities in the region, including intelligence sharing, joint exercises, and maintaining a robust naval presence (MDIF, 2020).

To achieve its strategic objectives, Italy pursued a multi-faceted approach that encompassed diplomatic, economic, and military components. Diplomatically, Italy engaged in dialogue and cooperation with Mediterranean countries, fostering relationships based on mutual interests and promoting regional stability. It sought to build partnerships through trade, cultural exchanges, and political alliances, strengthening its influence and creating a network of supportive nations in the region. Nonetheless, Italian foreign policy had long ceased to be adventurous. De Gasperi had to accept the harsh Treaty of Paris in 1947, in which Italy gave up all African colonies and relinquished some Alpine territories to France and the Dodecanese islands to Greece. But thereafter Italy joined the North Atlantic Treaty Organization (NATO) and became a respectable member of the Western alliance. NATO—in effect, the United States—guaranteed Italy's political stability and security. Italy also joined the European Coal and Steel Community (1952) and in 1957 was a founding member of

the European Economic Community (EEC; later succeeded by the European Union) (Kennedy, 2017).

Economic growth revived in the mid-1980s, once terrorism had ended and the 1979 oil crisis had subsided. In autumn 1980 Fiat laid off more than 20,000 workers in Turin, and the unions' protest strike quickly collapsed. The long season of protest that began in 1969 was finally at an end. Other employers followed Fiat's example, and the power of trade unions went into decline. Big industry began to slump all over Italy but especially in the industrial northwest. Historic factories, linked to mass production and class struggle, closed or scaled down their operations. A 1985 referendum markedly reduced the indexation of wages, despite a strong Communist campaign against this action. However, northern Italy prospered in the financial boom years of the middle and late 1980s, helped by the low price of oil, and people spoke of a "new economic miracle" (Gray and Miggiano, 1988). Economically, Italy played an active role in supporting the economic development of Mediterranean countries. It promoted investment, trade, and economic cooperation, which not only enhanced regional prosperity but also contributed to the stability and security of the area. Italy's economic engagement served as a means to foster political stability and prevent the emergence of socio-economic grievances that could potentially lead to conflict (CIA; 1982).

From a military perspective, Italy maintained a robust naval force in the Mediterranean, which acted as a deterrent against any hostile actions. Its naval assets, including aircraft carriers, frigates, and submarines, conducted patrols, surveillance, and exercises to ensure maritime security and protect vital sea lanes. Italy also participated in NATO-led naval operations, such as monitoring and intercepting Soviet naval movements, and contributed to the collective defence efforts in the region. The operations in which the third generation of Italian combat vehicles was employed revolved mainly around peacebuilding and peacekeeping operations mandated by the UN. The B1 Centauro served with distinction in Operation Desert Storm. While not exactly the most effective NATO MBT to ever grace the Alliance, the lessons learned from the Ariete not only helped the development of Centauro but would equally help to boost the sales of the Italian defence industry. Italy's strategy in the Mediterranean during the Cold War aimed to balance its security concerns with regional stability. By actively engaging with neighbouring countries, strengthening economic ties, and maintaining a credible military presence, Italy sought to prevent any direct threats to its national security while promoting a cooperative and secure Mediterranean

environment. This strategic approach helped Italy navigate the complexities of the Cold War.

In the previous paragraph, it has been mentioned how the double effect of exporting weapons to States that were not traditional allies of the West. To expand on this particular point made earlier, Italy was one of the few NATO States actively engaging and negotiating with foreign armed forces. A special tie was forged with many of Italy's former colonies, especially Somalia. The export sales to the country were divided among the following weapon systems:

Supplier/ recipient (R) Comments	ordered	No. designation	Weapon description	Year(s) Weapon of order	Year delivery	of delivered	No.
Italy							
R: Somalia	(270)	Type-6614	APC	1977	1978-1979	(270)	
	30	Type-6616	armoured car	1977	1978-1979	(30)	
	(6)	SF-260	trainer aircraft	1978	1979	6	SF-260W armed version
	2	G-222	transport aircraft	1979	1980	2	4 more ordered but never delivered
	4	P-166	light transport aircraft	(1979)	1981	(4)	
	4	Bell-212/UH-1N	helicopter	1980	1982	(4)	AB-212 version
	6	SF-260TP	trainer aircraft	(1980)	1981-1982	(6)	SF-260C version

Table 3, Source: SIPRI Arms Transfers Database.

Notably, the steady increase in weapons sales reflected the need of Italy to expand an industry that had been increasingly growing in importance (SIPRI, 2023).

The diplomatic activism of Italy in unaligned or formally hostile Countries had been a common practice in the Italian doctrine following the end of WWII. Italy had routinely engaged its partners in the North Africa and Middle East regions for many diplomatic and economic ties, especially in regard to the sector of energy. Most notably, Italy had gained prominence in Libya, its former colony. The foreign policy of Italy, at the time, had rejected the notion of armed conflict as a means to resolve international disputes. The new course of Italian doctrine focused instead on pure diplomacy, as mentioned in the earlier paragraphs. The doctrine reflected in the ties

forged to open new markets to the influx of Italian weapons, something that would eventually allow Italy to become one of the main suppliers of the MENA region (Varvelli, 2012).

For the most part, the Libyan government carefully limited its early relations with the Soviet Union to the commercial sphere and the purchase of Soviet weapons in particular. The first delivery of Soviet military equipment was made in July 1970 and it was exhibited during the parade of the 1st of September, commemorating the first anniversary of the Revolution. Reports of additional Soviet weapons purchases continued throughout the 1970s, including a deal in 1974-75 of approximately 1\$ billion-dollar worth of military equipment, Libya's single largest arms agreement. Soviet arms were accompanied by Soviet military advisers, but the Libyan government attempted to keep their numbers as small as possible. To accomplish this objective, the Libyans relied on other foreign advisers, including Cubans, Pakistanis, and even Americans. As the purchase of Soviet weapons mushroomed, the Libyans maintained a degree of independence by diversifying their arms suppliers. This policy was marked by early success- as exemplified by the purchase of 110 French Mirage fighters, announced at the beginning of 1970. However, as the decade progressed, Libya's policy of diversified arms suppliers collided with the growing concerns in the West for maintaining a military balance in the region. Moreover, the Libyans' government strident anti-colonialism and anti-imperialism, its vehement denunciation of Israel, and its repeated links with terrorist activities also dampened the enthusiasm in the United States and Western Europe for further arms sales to Libya. In this sense, an insatiable appetite for a foreign policy and a foreign policy with increasingly isolated Libya from the West combined as a primary reason for the growing Soviet-Libya relations. During the '80s and the '90s Italy remained Libya's only real Western reference point, reinforcing its complementary function in the Libyan economy. In Libya, Italian companies built civilian infrastructures and supplied primary goods and finished products to population. Thanks to Libya's abundant financial resources, companies have won important contracts and Italy had consolidated its role (John, 1982).

In 2008 a number of favourable conditions allowed Italy and Libya to bring the political dispute on colonial past to an end with the Treaty of Friendship, turning over a new leaf and reinvigorating bilateral relations. The most important condition was Libya's full reintegration into the international community after the sanctions imposed by the UN and the US were revoked and US-Libyan diplomatic relations completely

re-established. This normalisation of international relations, to which Italy contributed significantly, strengthened the regime, allowing it to relaunch its oil industry and reinforce relations, above all economic relations, with various European countries. The Treaty of Friendship, signed on the 31st of August 2008, between Prime Minister Silvio Berlusconi and Libyan leader Muammar Qadhafi, paved the way for more stable co-operation between the two countries, especially in sectors of more recent interest such as immigration. International polemics followed the Treaty, centred mainly on the appropriateness of Berlusconi – Qadhafi tight connections. These polemics, which appeared mainly in the British, US and French press, highlighted the fact that relations with Tripoli had developed in a complex framework that had to take account of national interests as well as international concerns. In this respect, Italy’s bilateral relations with Libya in recent years have revived one of the most historically typical characteristics of Italian foreign policy and rhetoric: even the most controversial bilateral relations are justified in multilateral fora as being “bridges” between the institutions in which Italy is a member and the others. They are not, therefore, vindicated in terms of freedom of action, but are basically seen as a way of directly strengthening Italy’s influence with the more important ally thanks to the offer of privileged relations with other partners (Varvelli, 2012).

At the same time, they aimed at preserving the stability of the Libyan regime, long perceived as a fundamental partner for Italy (John, 1982). The main surge of Italian weapons developed throughout the 1979-1981 period, doubling the total sale in just over a year from 1980 to 1981.

Source: SIPRI Arms Transfers Database			
Generated: 21 September 2023			
	1970	1971	Total
Czechoslovakia	13	33	46
Egypt	25		25
France		421	421
Italy		2	2
Soviet Union	99	85	183
United Kingdom	11		11
United States	224		224
Total	371	540	910

In 1971, the military equipment exports to Libya were negligible, revealing the start of actual sales. Two million dollars as the total value of the equipment sold can appear as insignificant. However, just ten years of export would showcase a far different reality:

Source: SIPRI Arms Transfers Database			
Generated: 21 September 2023			
	1980	1981	Total
Brazil		22	22
China	3	3	5
Czechoslovakia		98	98
France	155	173	328
Italy	271	262	533
North Korea	5		5
Soviet Union	2445	2549	4994
Turkiye	23	11	34
United Kingdom	18	32	50
Yugoslavia	23	23	45
Total	2941	3172	6113

In just the two years span 1980-1981, Italy would sell 533 million dollars' worth of military equipment to Libya. Most notably, it would be its most important NATO trading partner, Weapon sales would steadily increase, allowing for an expansion of the Italian defence industry as showcased in the tabs. Most importantly, however, it is the notation that Italy is by far the NATO Country with the highest number of sales. The special relation that was alive between Rome and Bengasi was maintained not only with diplomacy and carefully constructed efforts; weapons sales allowed Italy to maintain a strong foothold. Likewise, a similar trend can be observed with Egypt. While not enjoying the

same level of closeness, Rome and Cairo nonetheless maintained stable relationships for the entirety of the Cold War (CIA, 1982).

In 2020, the sales of Italian weapons to Egypt were worth 991.2 million euros, the largest value among all the countries importing weapons manufactured in Italy. The United States ranked second with an export value of 456.4 million euros. The United Kingdom and Qatar followed in the ranking, with 352 and 212.2 million euros, respectively (Sipri, 2023).

In 2021, Italy's exports to Egypt amounted to a substantial \$3.81 billion. Among the primary products exported by Italy to Egypt were Refined Petroleum, valued at \$425 million, followed by Air Pumps at \$142 million, and Other Heating Machinery at \$102 million. Notably, over the past 26 years, Italy's exports to Egypt have demonstrated a consistent growth trend, expanding at an annualized rate of 4.39%. This remarkable growth has seen the exports surge from \$1.24 billion in 1995 to reach \$3.81 billion in 2021. In addition to goods, Italy also made significant strides in exporting services to Egypt in 2020, amounting to an impressive \$1.07 billion. The leading services in terms of value were Other Business Services, contributing \$943 million, followed by Transportation services at \$60.2 million, and Travel services at \$29.9 million (Trade Data LCC, 2020).

The weapon sales to Egypt (in millions of dollars) were instead divided as follows:

Source: SIPRI Arms Transfers Database			
Generated: 21 September 2023			
	2020	2021	Total
France	10	257	267
Germany	285	388	672
Italy	526	567	1093
Netherlands		17	17
Russia	454		454
UAE	35	36	71
United States	94	22	116
Total	1403	1287	2690

The SIPRI database reveals that Italy remains the most active military equipment and equipment seller to Egypt. The diplomatic capability of Italy to maintain cordial relationships with important strategic partners while utilizing its weapon sales remains a rather obscure but extremely important asset. The lessons learned during the Cold War should be followed through, enhancing the capability of maintaining stable relationships with strategic partners while expanding what is effectively a very important sector.

Changing prospects: a renewed assertiveness

Since the end of the Cold War, the Italian defence industry has experienced two complementary phases: concentration and internationalization. The latter can be further divided into two specific moments: the European phase of internationalization and the transatlantic one (Marrone & Ungaro, 2014). For most of its post-war history, Italy has been a reticent, essentially pacifist actor in terms of foreign and security policy. Inoculated against mid-adventurism and even assertiveness by the experience of the fascist period the leaders of the Italian republic have found it most convenient to leave others define the context and direction of foreign policy. Italy has of course made certain external choices since 1945, the principal ones being the commitments to key western institutions such as the Atlantic Alliance (ibidem).

In most cases, however, Rome was content to follow the lead of other western governments rather than pursue any overt, carefully def national interest in joining NATO and, later, the Common Market. the 1970s, Italy's passive commitment to Western security and econ institutions also fulfilled a key function of organizing the domestic polit scene into insiders and outsiders - those who ostensibly rejected the west (above all, the PCI) and those who accepted the therefore potential government partners (the DC, and the small part of the PSI by 1963). Although the fundamental options of Italian post-war foreign policies have not been overtly challenged by any major party since the characteristic that any difficult foreign policy decision embroiled in, and often fatally compromised by, the equilibrium among political parties. Whereas the debate was once over 'East' (or semi-neutralism), now it is over whether Italy has to adopt a more assertive foreign and defence policy or not. As the decision into the Gulf demonstrates, this cleavage between the activist centrists does not coincide with the formal division into government opposition - hence the difficult situation that is now

about how Italy faces an external crisis. Italy's hesitant move towards a more activist foreign PO around 1980, after a decade of terrorist challenges to the seemingly endless wrangling over the so-called 'historic com' finally left the PCI still only on the fringes of national politics. Once the country had sensibly decided that the PCI co outsider (but a respectable one), this introspective phase parties turned to important security issues. Chief among them was the 'Euromissile' decision of December, 1979, in which Rome chose to accept a NATO base for nuclear-armed cruise missiles Sicily (Harrison, 1989). A great national debate accompanied this decision, given that for the first time since the late 1940s Italian politics focused on foreign policy. Moreover, the comfortable illusion of the previous decade that Italy had virtually committed itself to the West - was shattered as the communists somewhat reluctantly joined the opponents of the INF deployment, mainly pacifists and peace activist groups. The intense public debate surrounding INF marks the emergence of a certain national maturity in the face of complex foreign policy decisions, as the public, politicians, and the press all developed an unprecedented expertise on defence and related questions. It is no exaggeration to note that the Euromissile question effectively ended Italy's long-standing parochialism on security affairs (Mistry, 2016).

There were also other factors reinforcing this trend. Starting in the late 1970s, Italy adopted a series of ten-year modernization plans for the armed forces that increased defence spending remarkably and brought this issue before the public. A 'new model of defence' was also developed during the early 1980s, one which shifted attention from the north-east sector towards the Mediterranean - a controversial move because it implied a more national, less NATO-oriented, and perhaps riskier defence profile. During this same period, Italy engaged in a number of international military activities that reflected the country's new penchant for a certain careful activism in such matters. In July, 1979, Italian troops replaced the Norwegian contingent as part of the UNIFIL force in northern Lebanon. Later, the 1982 Beirut peacekeeping mission of the Italian armed forces Italy's most significant extra-territorial m since World War II, creating a great sense of national pride some trepidation at the risks involved. In March 1982, Rome contribute to the multinational force created to guarantee of the Egyptian-Israeli peace treaty, eventually sending to patrol the Gulf of Aqaba and the Tiran Strait. Finally, in Italy met a request to send a small force of minesweepers to clean the Gulf of Suez of mines that had been impairing navigation. In regards to the operations of

the Beirut mission, these actions were fairly small and involved minimal risks; all took place in the context of international, multilateral peacekeeping efforts (Harrison, 1989).

The parties supporting the decision to send a naval task force into the Gulf were the lay parties in the government coalition - principally the Socialists (PSI), but also the Liberals (PLI, including the defence minister, Zanone), the Social Democrats (PSDI), and the Italian Republican Party (PRI). After some initial hesitation, Bettino Craxi and his representative in the cabinet, vice-premier Giuliano Amato, took the lead in forcing Goria's hand and pushing the cabinet towards a decision to head into the Gulf. Craxi was apparently motivated by genuine indignation over the Jolly Rubino incident, and his natural inclination in such circumstances was for Italy to take decisive actions. Craxi and others also felt that the European states, singly or (preferably) jointly, should accept their security responsibilities in the Gulf and not leave Western interests there solely in the hands of the United States. As summarized by the PSI vice-secretary, Claudio Martelli, the socialist position was that Italy should go into the Gulf 'to protect the lives of Italian citizens and the country's strategic interests' (ibidem).

Achille Lauro: the first symptom of a multipolar world.

Italy became involved for the first time in a crisis originating in international terrorism in October 1985 with the hijacking of the Italian cruise ship, Achille Lauro. During the rest of October, the effects of the Achille Lauro incident produced a government crisis with the resignation of Giovanni Spadolini, the Republican (PRI) minister of defence, claiming as his justification 'insufficient consultations' from his colleagues, the Socialist (PSI) prime minister Bettino Craxi and the Christian Democrat (DC) foreign minister Giulio Andreotti. However, Spadolini announced his resignation just as he criticized the government's decision to transfer Abu Abbas, the presumed author of the hijacking, to Yugoslavia. Spadolini made public his objections simultaneously with the mounting recriminations pronounced by the Reagan administration against the Italian government for the latter's handling of the hijackers, in particular, the refusal to extradite Abbas to the United States following his capture by Italian troops. In contrast with Craxi and Andreotti, however, Spadolini did not clarify his own line of action, which had been publicly identified with the American position. After a month of near crises, the differences of opinion between the Republicans and the other four political parties in the coalition government came to an end. At the beginning of November, Craxi was back as head of the government. The

minimal cabinet shifts that took place did not affect the ministries that define defence policies. Spadolini remained as defence minister and Andreotti as foreign affairs minister. No one seemed to have perceived the somewhat absurd character of the situation: the government fell for the first time in the history of the Italian Republic over the issue of security policy; the initial crisis resulted from concrete opposition which was never really clarified; the government was recomposed along further unclear lines and the ministry of defence was reassigned to the man who resigned on the basis of opposition government's action. The governmental crisis, resolved amid mess and unity, did not end the question. In February 1986 budget presented in parliament by Spadolini was vetoed by 'snipers' of the majority. It was the first time that this sort of thing in Italy. Even if a second version of the budget was rapidly approved, the fact remained that there existed a hidden and strong in the government on the subject of security policies (Miggiano, 1988).

At the end of 1985 and at the beginning of 1986, terrorist initiatives sudden leap with the hijacking of Egypt Air's Flight 648 over nine victims) and the Christmas attacks at the El-Al desks at and Vienna airports (fifteen victims). The principal suspects of these terrorist attacks were the group led by Abu Nidal, a Palestinian the PLO and hostile to any solution of the Palestinian problem acceptance of the existence of the state of Israel. The terrorists Rome and Vienna possessed the undeniable mark of Palestinians least one member of the Vienna commando unit was a young survivor massacre of Sabra and Chatila in 1982. Equally clear in these attacks is the involvement and support of a state. Some of the organizers of these attacks, in fact, were travelling with Tunisian which the government of Tripoli had previously confiscated legitimate owners expelled from Libya. As a result, the Italian decided to block all arms exports to Libya, but it refused, along European countries, to support the economic sanctions against claimed by the American government (ibidem, 1989).

The conflict between America and Libya produced different and contrasting effects on Italy, both in security policy and in the more limited field of defence. The harsh tests sustained by Italy had thrown into crisis every biased conception of security policy. It had often appeared that foreign policy should be subordinated to the immediate economic interests of this or that private company. This situation had led to the possibility that the same Italian armaments sold a few years before to Libya might have been used against Italian allies, or even against Italy itself. In the same manner, it is no longer taken for granted that the country's need for oil should necessarily dictate,

as is assumed by some companies, a policy of aid to destabilizing countries of the Mediterranean area, especially to those that sponsor terrorism (Domini, 1986).

Italian foreign policy in the Middle East, based on the illusion of being able to maintain good relations with all Arab countries, including those who refuse to negotiate with Israel, seems to have seen its better days. Rather, it becomes increasingly more evident that the interlocutors necessary to the political solution of the Palestinian situation are the moderate Arab states. Italian economic and diplomatic initiatives toward Arab countries, therefore, should become selective and aim to strengthen the stabilizing countries. On the other hand, there seems to be an increasing awareness of the necessity for greater Italian autonomy, while remaining within NATO, from certain aspects of American security policy. Hopefully, this autonomy would not be limited to the role of 'good offices' that could be assigned to Italy, but would define some of Italy's own aims revealed by an analysis of specific Italian interests. More selective relationships with the Arab world, for example, would constitute a midpoint between safeguard of energy supplies indispensable into the life of the other aims of a political and military nature of interest in the over, the determination of a homogeneous and credible security would succeed in affirming itself against the traditionally contradictory sectarian approaches even after the crises have passed. The effects of the Mediterranean conflict on other aspects policy are substantial. The decision to respond to international threats principally with police measures has produced good collaboration between the police units of the different Western and even of some moderate Arab countries, has had positive effort to locate terrorist networks and thereby prevent terrorist Strong diplomatic and police measures have been taken by the in the case of Libyan activity in Italy. In addition, Fiat has buying back the Libyan quota of company shares (Harrison, 1989).

Proposals Italian autonomy overall, especially in the military field, have success. No reactions from the different government coalition partners registered in response to the Italian Communist Party's (PCI) reform NATO in order to guarantee that the Alliance's bases for purposes established in its institutional structure. The PCI establish regular conferences at which the Mediterranean countries coordinate discussions on the subject of security suffered the Even though this proposal was taken up by many political exponents last few years, no one has considered it seriously as a possible fighting terrorism. The very climate created by military actions and counteractions deemed more difficult wider-term discussions and has intimidated

Italian supporters of a more autonomous military policy. Furthermore, it is deniable that- even if provoked by the use of American bases situated Italian territory- the Libyan missiles against Lampedusa constitute the first military aggression against Italy since 1945. It is, therefore, partly understandable the extent to which the debate has developed around the missiles which exploded 200 meters off the coast of Lampedusa, and on future means of avoiding the repetition of such attacks. While the media have reported little information on the point, defence ministry officials declared that they foresaw a possible missile threat even though the threat was not publicly announced (Miggiano, 1988).

A necessary element for managing crisis situations in an efficient availability of appropriate military means. Discussions between military leaders have centred on this specific aspect and focused on upgrade present military structures. The emergence of international terrorism and the shock caused by the missile attack on Lampedusa strongly conditioned the debate within the armed forces, thus concreteness to doctrines on strategy. First, it should be noted, positions within Italian military circles which favour the American of attacks against those states which sustain terrorism. According of staff of the allied ground forces of southern Europe (Lucio Innecco (1986), 'if terrorism carried out a determined tent series of actions a substantially heavy reaction could those areas which are considered to be the sanctuaries of terrorism'. In a speech given at the Centre for Advanced Military Studies by the defence chief of staff, General Riccardo Bisogniero, the threat of terrorism was defined in a fashion closely resembling that used by Washington. Bisogniero (1986) emphasized that terrorism is 'a direct military threat perpetrated against the NATO nations' and, as was subtly implied, integral part of the indirect, destabilizing strategy' of the Soviet Union. According to Bisogniero, in the face of undefinable terrorist attacks military nature, directed against a country of the NATO alliance, it is the latter to respond collectively. Reflecting on the alarm caused by Lampedusa attack and speculating on possible future threats of a similar nature, Bisogniero observed that 'the unforeseeable nature of the adversary's potential' has led Italian military leaders to foresee the possibility terrorist attacks of the type of the Achille Lauro, air attacks, sabotage against civil and military installations, and land-launched missile attacks against islands of the Sicilian straits. Spadolini's cabinet chief, General Pietro Giannattasio, has observed that even if Tripoli does not possess efficient landing craft, the possibility of a military landing on Lampedusa is not to disregarded (Nigro, 1986). In addition, scenarios of terrorist

actions analysed in military reviews (Monticone, 1986a and 1986b). According Bisogniero, the Lampedusa crisis imposes a priority commitment to upgrading defensive tactics and improving the military's ability to locate terrorist threats and responding quickly. For example, surveillance capabilities the Mediterranean area should be enhanced with the acquisition of satellites capable of immediately detecting missile (Harrison, 1989).

The increasing number of threats in the Mediterranean was foremost in the thinking of senior Italian military leaders. And while military officials make routine declarations of faith in the spirit of inter-military collaboration and coordination, it is equally clear that senior officials desire to make their own branch of the military play the primary role in prevention and/or punishment missions in southern Mediterranean waters. According to the new commander of the navy, Giasone Piccione (1986), it was of the utmost importance to pass from a strategy of sea denial to one of sea control which would require forces, 'in a relationship of ten to one favouring the country that wants to interdict it'. Even if Piccione (1986) declared that the capacity of NATO denial forces in the Mediterranean is still weak, especially in the capacity to survey and counter Soviet submarines, the limited nature of the resources available establishes a priority in favour of acquiring aircraft carriers and navy planes. The availability of a stronger air-naval group, with its operative flexibility, would allow for the best possible 'high sea police Operations'. The presence of such a force, furthermore, would create a Mediterranean situation with a 'heavy and contentious potential' also useful in a 'political-diplomatic role'. Aircraft carriers would be even more useful in a military role because they would permit opposition to threats 'on the country's doorstep or in the adversary's zones of interest' thereby increasing Italy's capacity for air defence in the south. Finally, this would be a role that combines sea control with 'force projections' far from home, centred on the cruiser Garibaldi. In a reflection of increased political consensus for the role of the navy, the Italian government formulated in August 1985, a law on marine aviation which assigns to the navy the role of placing aircraft on the Garibaldi. The control over all other air vehicles, including those destined for maritime patrol and anti-submarine warfare, remains with the air force. In this case also, the solution to the polemics which emerged last year between the navy and the air force favours the request for projected naval appropriations rather than an increased capacity of the navy in anti-submarine warfare (Harrison, 1989).

While the navy seeks inspiration for its own potential projection from British operations conducted in the Malvinas Islands or in American operations in the Sirte, Italian military aviation finds its inspirational model in the long punitive flights of the American F-111 planes against Tripoli, or in the 1985 Israeli raids against Tunis. According to the air force chief of Basilio Cottone (1986), it is necessary for Italy to make a doctrinal air defence planning that could possibly lead to the acquisition systems. The jump would necessarily have to be from the objective to the 'defence of an area' which in Cottone's opinion type of efficient defence. For Cottone, area defence consists defence system along lines directed towards the adversary to be carried on progressively farther away from the objectives detected. It would be more correct to define this strategy control and force projection against enemy potential. This desire for invulnerability which results in slightly exaggerated Cottone declares that the three types of threats which fronted are air-tactical, standoff missile threats (involving missiles dozens or hundreds of kilometres from the objective), and missile threats. In order to contrast the third type of attack, the existence of preventive attacks against missile bases. order to neutralize the threat constituted by standoff arms piloted planes, Italian aircraft must intercept the attacking their take-off and therefore at a distance of 200 to 250 nautical miles'. This can be achieved by pre-stationing intercepting aircraft in the vicinity of pre-established interception zones. The systems capable of rendering this doctrine operative are of two types: those that furnish information and those that carry out the attack. Among those that correspond to the first type, Cottone emphasized the build-up of a radar network and the acquisition of one or two satellites (one for the control of the Mediterranean and the other for alarm warnings and communication). Retaliation and preventive attack units, presently made up of Tornado aircraft, should utilize the new European fighter plane EFA. Moreover, the aircraft should not be ground-based but should be in permanent flight in the proximity of interception zones. Such a design would constitute a solution similar to the one adopted by the American Strategic Air Command which is formed by planes continually in flight, carrying nuclear arms and capable of directing themselves against the Soviet Union at any moment. The continual in-flight permanency of the Italian conventional deterrent would be guaranteed by the acquisition of cistern-type aircraft that could furnish fighter planes in flight, thereby increasing the action area and the mission duration. Cottone is hopeful that in the long run the tactical ballistic missile threat could be countered by the development of the Strategic Defence Initiative (SDI). In addition, Cottone

emphasizes the need for the air force to dispose of a single C31 system (command, control, communication and information) in order to coordinate the responses of all flight vehicles presently in the three branches of the armed forces. The administration of this system would obviously lie with the air force. As with the naval high command, the Lampedusa incident provided an opportunity for the discussion of military appropriations by the air force and the re-emergence of corporative pressures within all branches of the armed forces. According to Bisogniero, it is first of all necessary response capabilities and, secondly, it is equally necessary capacity for a rapid and precise anticipation of threats. statement, the heads of the three branches of the armed forces have done nothing other than utilize the climate of fear following the Lampedusa attack to stretch their individual 'shopping lists'. They have also asked for indiscriminate increases in defence and force projection capacities as well as inserted new missile threats in pre-existing military strategies created for other types of threats. The renewed assertiveness of Italy as a Mediterranean power followed naturally in the 90s, after the developments reached during the 80s. The lessons learned during the period of general instability in the Mediterranean Sea saw advancements in the traditional diplomatic approach Italy had steadily maintained since the end of the Second World War. While not abandoning completely the diplomatic work, Italy. The expansion and the renewal of the fleet culminated with the production of the Cavour, an aircraft carrier posed to become the new admiral ship of the Navy. This new entrepreneurship had been evident since the support Italy had given to the Euromissiles; however, the rearmament of the fleet was the most prominent indicator of Italy's new strategic views (Harrison, 1989).

The setting up, under the rubric of the West European Union, of the Eurofor and Euomarfor forces in the mid- 1990s was perhaps the most notable signal that inclusive-cooperative approaches would apparently not entirely eclipse exclusionary-defensive approaches. As new missile threats to southern Europe have emerged, and as Libya and Syria have developed facilities for producing chemical weapons, European powers are seen by many to have re-oriented towards more traditional containment perspectives. Italy and Germany began cooperating with the US on the development of an air missile defence system specifically designed for the Mediterranean's zone (ibidem).

The political volet of the EMP has sought to initiate security cooperation aimed at increasing the predictability and understanding of Mediterranean states' military

capacities. Sitting uneasily with the new commitment to fostering political reform, tighter security cooperation between European governments and the security forces of incumbent regimes has been sought. On policy-makers' own admission, far more negotiating capital has been expended on trying to secure Mediterranean partners' adherence to international arms control agreements than on pushing political, economic, or social reform. Much onus has been placed on the need to strengthen cooperation between law enforcement agencies across the Mediterranean. EU governments are criticized for being intent on building the walls of "fortress Europe" higher, rather than reducing tensions by cooperating over the root causes of migratory flows. The French government is berated for keeping migrant issues separate from security policy, rather than harnessing the presence of Muslims in France as a potential instrument of understanding and stability. Southern European states are judged to have attached the highest priority to gaining north European financial support for new border control systems (Miggiano, 1988).

Furthermore, this development proceeded well past the first decade of the XXith Century, showcasing a remarkably solid strategic thought for a Country famed for being unreliable. Likewise, Italy was also active in the diplomatic framework of the European Union. Through the Euro-Mediterranean Partnership (EMP) established in 1995, the EU established a framework for developing a "zone of peace and stability" encompassing southern Mediterranean states (including Morocco, Algeria, Tunisia, Egypt, Israel, the Palestinian Authority, Syria, Lebanon, and Turkey). The philosophy upon which this strategy was predicated constituted a notable evolution in security policy, in so far as the EU committed itself to a comprehensive and proactive reshaping of the underlying social, economic, and political context prevailing in the Mediterranean. The detailed substance of European initiatives does show some signs of a more proactive approach towards security in the Mediterranean region. The EU has certainly added important political, social, and economic dimensions to the still more defensive perspective enshrined in NATO's Mediterranean Initiative and has developed aspects of a more comprehensive strategy than the US. To dismiss EU policy as concerned uniquely with short-term imperatives and offering, in the words, of one prominent expert, only superficial "sedatives" to Mediterranean challenges⁴² captures only part of the picture and thus unfairly caricatures European perspectives. European policy over the last eight years has been far from bereft of the kind of forward-looking efforts to shape political, economic, and social values that the EU is still ritually

admonished for neglecting. Many efforts have been more positively aimed at resolving the underlying causes of the security challenges emanating from the southern Mediterranean, and the essential elements for the construction of a pluralistic security community are at least partially in evidence. EU policy-makers have increasingly acknowledged that traditional approaches have not served European commercial or strategic interests well. The fact that non-security policy communities have gained dominant protagonist in the development of EU Mediterranean policy has compounded this evolution in thinking (Miggiano, 1988)

The Importance of Fincantieri: A Case Study

In the last twenty years Italy has been keeping its defence budget around 1,7% of GDP, with a maximum of 1,96% in 2000, and a minimum of 1,38% in 2015. In the last five years, with the economy recovering slowly but consistently, Italy's GDP grew 1,5% in 2017 but still lagging the European average GDP growth of a full percentage point. The arms industry has a strategic role for Italy, being the ninth country in the world for arms exports according to a SIPRI report by Wezeman, et al., (2018). Italy is responsible for about 2,5% of the global arms exports, with an increase in market share of 13% in 2017 versus prior year (2018). Italy share of arms imported is a lower 1,5% (2018) which means Italy balance of trade in the defence compartment is positive. SIPRI estimates the overall value of the defence transfers to be \$91,2 billion in 2015 (or €79 billion at the current exchange), leading to a net positive balance of €1 billion (Vitali, 2018). The second massive renewal of the Italian Navy saw an expansion of the same fleet that had been bolstered between with the Garibaldi, after the launch of the Cavour CV and the production of the FREMM line. The third and final renewal of the Italian has been at the forefront of the Italian Strategic Document released for the 2020-2022 frame (PDD, 2020).

In 2014, the Italian Parliament approved the “Naval Law”, a prime asset to the rearmament of the Italian Navy. The process launched in 2014 on Minister Pinotti's impetus represents an important and demanding innovation for the Armed Forces. These are in need of rationalization to continue to carry out the tasks set by the political authorities with the limited and decreasing resources at their disposal. Indeed, spending for the “defence function” that amounted to 14.077 billion euro – 0.87 percent of GDP – in 2014, against a NATO commitment equal to 2 percent, will undergo a further reduction to 13.360 billion in 2016.¹The law ratified a massive construction of capital

and escort alike, bolstering what is already one of the strongest navies of the Mediterranean with 3 LHDs (which cover the role of an aircraft carrier), and 8 high-seas patrol boats (which can cover the role of a frigate). These eleven warships are the newest addition to the Italian Navy, but they were not alone. The FREMM line and the Cavour, launched just a decade earlier, represented another strong bolster to the modernizing Marina Militare. Sole 24 Ore estimated the cost of a single FREMM to amount to circa 2 billion euro, the price sale with which Egypt would acquire two ships of this line. However, it is possible for a single FREMM to be worth even more (Sole 24 Ore, 2020).

Italy's involvement in the American-led multinational F-35 multirole fighter aircraft development and production program has been a topic of intense political debate in 2014. Despite budgetary constraints, the government has remained committed to the program, albeit at a reduced acquisition rate. Italy plans to purchase approximately 27 to 30 F-35s, assembled at the Cameri plant, by 2020, with a long-term goal of acquiring 90 aircraft to replace the aging fleet of 253 Air Force and Navy fighters (AMX, Tornado, and Av-8B) over the next 15 years. While the program's cancellation or suspension is highly unlikely, its completion timeframe will likely continue to be influenced by defence budget limitations (MDIF, 2020). The new entrepreneurship of the Italian government not only boosted the numbers of the Navy; the export sales of Italian Fincantieri enjoyed a widely positive receipt in the world arena. The partnerships the Italian industry shared with many NATO and non-NATO members notably included the US and India, two of the richest and most populated States in the world.

The deals struck between Fincantieri and US meant that now Italy would lend its know-how not only to the most advanced military in NATO, but also, to the most populous and rising State of Asia. The diplomatic possibilities of such an implication are enormous. Italy has recently struck a strategic partnership with Italy, following the 75th anniversary of the bilateral relationships between the countries. A strategic partnership has been struck. Military equipment sharing and selling revolves not only around the capabilities of a State to build the means of hard power: equally, simple military sharing can become an important soft power tool to leverage relationships and build friendships.

In a significant development, Fincantieri, one of the world's largest shipbuilding groups, has recently signed a Memorandum of Understanding (MoU) with

Cochin Shipyard Limited (CSL), India's leading shipbuilder. This strategic agreement further strengthens Fincantieri's presence in India and cements its longstanding partnership with CSL, which boasts shipbuilding facilities on both the East and West coasts of the country (Fincantieri, 2022). Fincantieri has been actively involved in the renewal and expansion program of the Indian Navy's fleet, considering the Indian market as a key strategic area. Past collaborations with CSL have resulted in noteworthy contracts, including the design and integration of the engine system for the aircraft carrier Vikrant, a prestigious project awarded by the Indian Navy. Additionally, Fincantieri has successfully delivered two fleet tankers, "Deepak" and "Shakti," and a research vessel named "Sagar Nidhi," commissioned for the National Institute of Ocean Technology (NIOT). These endeavours reflect Fincantieri's commitment to bolstering India's maritime capabilities and furthering its maritime cooperation with the country (ibidem).

Italy's committed to implementing the Atlantic Alliance's Readiness Action Plan (RAP) agreed to at the 2014 Newport summit, aimed at ensuring NATO forces' readiness, especially along its Eastern flank, to deter Russia and reassure Eastern European members, not least in response to the Ukraine crisis. Italy, in particular, has taken the role of "framework nation" for 2018 tasked with leading the Very Rapid Joint Task Force (VJTF), which forms the spearhead of the allied rapid response forces. The VJTF, under annual rotating member country leadership, is capable of deploying 5,000 troops in the span of a few days in the case of crisis or imminent threat. In the first four months of 2015, Italy also deployed four Air Force Eurofighters to carry on Air Policing over the Baltic Republics. It is a NATO regular operation to defend the airspace of countries lacking in the necessary capabilities to do Air Policing on their own. Yet it has become considerably more important and riskier in the wake of Moscow's intensification of unannounced reconnaissance flights by their fighter aircraft along the fringes of Baltic airspace. At mission end, upon the request of the Baltic Republics and NATO, Italy extended its Air Policing for an additional four months in a concrete show of support for the collective defence of the Alliance's Eastern flank (DPP, 2020). Moreover, Italy was one of the three host nations of the NATO Trident Juncture Exercise held in October 2015, its largest since 2002, in which 30 allied and partner nations participated with a total of 36,000 personnel, 140 aircraft and 60 ships. Thanks also to such Italy's contribution, for the first time an Italian General – Salvatore Farina – has been appointed Commander of the Joint Force

Command of Brunssum, one of NATO's top military posts. On the other hand, Franco Frattini was unsuccessful in his bid for NATO Secretary General in 2014, a position that has not been filled by an Italian since 1971 (ibidem).

The ties and propositions of the Italian industry of Defence helped secure Italy's new prominence in the Mediterranean Sea. The Mare Nostrum mission managed by Italy between October 2013 and October 2014 was the greatest single example of inter-ministerial coordination along the fine line between external and internal security. Its tasks were multiple: controlling Italian territorial waters and contiguous zones, countering organized crime trafficking in illegal immigrants, and Search and Rescue (SAR) operations. Over its 12-month duration, the mission – one of the largest rescue operations in the history of the Mediterranean – saved approximately 156,000 migrants and arrested more than 360 people traffickers. The Italian Navy participated with a stable contingent of 920 military personnel and a fleet of five ships.

The Mare Nostrum mission, led by Italy from October 2013 to October 2014, stood as a remarkable example of inter-ministerial coordination, delicately balancing external and internal security concerns. Its multifaceted responsibilities encompassed controlling Italian territorial waters and contiguous zones, combatting organized crime involved in illegal immigration, and conducting Search and Rescue (SAR) operations. Over the course of 12 months, this operation, one of the most extensive rescue endeavours in the Mediterranean's history, successfully saved approximately 156,000 migrants and apprehended over 360 human traffickers. The Italian Navy's participation involved a stable contingent of 920 military personnel and a fleet of five ships (PDD; 2020).

Since 2014, the Italian government has been actively pursuing a broader immigration policy that seeks increased involvement from the EU in migration management, particularly in SAR operations. This effort has yielded two notable results. Firstly, the enhancement of the Frontex agency's Mediterranean operations through the Triton mission, engaging naval and air assets from eight other European countries and coordinated by Italy. Secondly, the initiation of EUNAVFOR MED on 22 June 2015, later renamed Sophia, operating under the EU's Common Security and Defence Policy (CSDP). This mission is specifically designed to combat criminal networks organizing migrant trafficking in the Mediterranean while adhering to international law. Italy assumes command of the mission through the Joint Operations Headquarters, led by Admiral Enrico Credendino. The mission transitioned to "phase

2" on 7 October 2015, enabling the interception, inspection, seizure, and rerouting of vessels suspected of being involved in human trafficking on the high seas. Currently, a total of 25 European countries contribute financially and with military assets and personnel to the operation. The EU has allocated 12 million euros to cover mission costs until July 2016, with the mandate later extended until July 2017. Additional tasks were added, involving the training of Libyan coastguards and navy, and contributing to the implementation of the UN arms embargo off the coast of Libya. As of October 2016, the operation resulted in the arrest of 96 suspected smugglers and traffickers, the disposal of 337 boats, and the rescue of over 29,300 lives at sea. Italy's contribution comprises approximately 620 military personnel, with the Cavour aircraft carrier serving as the flagship, alongside five ships and six air assets, including aircraft and helicopters. In light of recent developments, the mission's next phase will likely depend on the consolidation of the Libyan national accord government, although an extension of Sophia's mandate to Libya's territorial waters is currently pending explicit approval from the Libyan government (EU, 2019).

Within the naval sector, the DDP 2020-2022 encompasses both upcoming initiatives and those on the cusp of being initiated or contracted. The Italian DDX program, as part of this scope, plans to initiate de-risking studies for the two next-generation destroyers, aiming to replace the Navy's two ADMIRAL class units by 2028, subject to sufficient funding availability. Early design concepts indicate an 11,000-ton platform with a combat system provided by Leonardo, including air and ballistic missile defence capabilities, and MBDA's TESEO Mk2/E anti-ship/land-attack munition. Furthermore, consideration is being given to a future deep-strike weapon system (PDD, 2020). Last July, OCCAR awarded Naviris the feasibility study for the HORIZON destroyers' mid-life update program on behalf of Italy and France, aimed at extending their service life and enhancing combat capabilities to include ballistic missile defence (BMD). After selling the last two platforms to Egypt, the Italian Navy will continue to maintain a fleet of 10 FREMM class frigates, with Fincantieri scheduled to commence construction of the two new frigates in 2021 (ibidem).

In December, the Italian MoD's Naval Armaments Directorate expressed intentions to procure the first two U212 Near Future Submarines (NFS) through OCCAR, with options for two additional boats, along with in-service technical and logistic support and a training centre. The contract for the new submarines was

anticipated to be awarded before mid-year, featuring propulsion and combat systems with new national industrial content. The Italian MoD was also exploring the possibility of a future deep-strike missile capability for both surface and underwater platforms. The DDP 2020-2022 allocates funds for a second VULCANO-class logistic support ship, scheduled for delivery in the first quarter of 2021. Additionally, plans are underway for a new Special and Diving Operations Submarine Rescue Ship (SDO-SuRS) to replace the ageing ANTEO, and a national team comprising Saipem and Drass has been awarded a contract from the Naval Armament Directorate for the new generation deployable submarine rescue system for use by the SDO-SuRS vessel. The DDP 2020-22 also outlines a multi-year procurement program beginning in 2021 for the New Oceanographic Vessel (NIOM) and two coastal Hydro-Oceanographic Vessels (NIOC), intended to replace the Navy's MAGNAGHI and NINFE class vessels from the Hydrographic Institute. Additionally, initial studies are set to be launched for a new mine countermeasure platform and equipment (ibidem).

Furthermore, the DDP 2020-22 includes initial funding for the replacement of the aging naval bases support vessels fleet, and the Italian Navy's Chief of Staff has disclosed the initiation of initial studies for a proposed multi-ministry program for a hospital ship, drawing lessons from the pandemic and humanitarian operations. Moreover, the document confirms funding for the development phase of the new TESEO Mk2/E Long-Range Anti-Ship/Littoral Attack Missile procurement program, with the contract awarded in the previous year. It also includes additional funding for the joint Army/Navy ASTER 30 Block 1NT development and procurement program, life-extension of the ASTER 15/30 in-service munitions, and the development and procurement of new generation radars from Leonardo within the scope of Italian Navy and Army programs. Lastly, the Parliament is on the verge of approving funding for the full-rate production and procurement of the fully-certified 127 mm VULCANO munitions, currently the only family of long-range naval guided ammunition capable of engaging both sea and land targets (MDIF, 2020).

The expansion of the Italian Navy continues. In 2019, the Marina Militare (hereby referred as MM) published its Linee Di Indirizzo Strategico 2019-2034, referring to the expansion of the fleet to be carried out. By 2034, the prospecting MM will possess the capabilities to deploy four aircraft carriers, supporting the rise of prominence of Italy in the NATO framework. Fincantieri, one of the world's leading shipbuilding groups and a prominent player in military naval engineering, along with

Finmeccanica, Italy's primary industrial group specializing in high technology, will construct and equip the units envisioned in the Italian Navy's fleet renewal plan (Fincantieri, 2022).

As part of this plan, OCCAR (Organisation Conjointe de Cooperation sur l'Armement, the international organization for armament cooperation) has signed an order for contractual execution with the Temporary Business Group (RTI), consisting of Fincantieri as the lead partner and Finmeccanica, through Selex ES, as the principal participant. The agreement involves the construction of six patrol vessels, with an option for an additional four (PPA - Multifunctional Offshore Patrol Vessels), as well as a logistic support ship (LSS). The total value of the contracts for the seven units amounts to approximately 3.5 billion euros, with Fincantieri's share being around 2.3 billion euros and Finmeccanica's approximately 1.2 billion euros (Fincantieri, 2022).

The contracts are set to go through different activation phases, with OCCAR having initiated Phase 1 for the preparatory activities of the first PPA and the logistic support ship, amounting to 372 million euros, of which Fincantieri's share is 220 million euros and Finmeccanica's is 152 million euros. The activation of subsequent phases for the other units is expected in the coming months.

The logistic support ship is scheduled for delivery in 2019, while the first patrol vessel is expected in 2021. The following patrol vessels are set for delivery in 2022, 2023, 2024 (two units), and 2025. Overall, the multi-year program for the renewal of the Italian Navy's fleet, known as the "Legge Navale," (from total funding of 5.4 billion euros and includes the construction of the units mentioned above, in addition to a landing helicopter dock (LHD) through a public contract with the Italian Ministry of Defence, currently being finalized. Specifically: one logistic support ship (LSS), six patrol vessels (PPA) with an option for an additional four, and one landing helicopter dock (LHD) (PDD, 2020).

The key feature shared by all three classes of ships is their high level of innovation, providing exceptional flexibility for various applications and a high degree of efficiency. These vessels can serve both typical military roles and civil protection and sea rescue operations, showcasing a dual-use capability. Additionally, they boast a low environmental impact, incorporating advanced low-emission auxiliary propulsion systems (electric motors) and biological effluent control. The Temporary Business Group (RTI) was formed according to the collaboration agreement in the military shipbuilding sector between Fincantieri and Finmeccanica signed in October 2014.

Under this arrangement, Fincantieri acts as the single interface with the customer, while also leveraging Finmeccanica's naval product offerings.

Apart from constructing the units at its shipyards, Fincantieri will provide lifecycle support for the first ten years, including logistics activities (training, spare parts, technical documentation) during the unit construction and In-Service Support (maintenance activities) throughout the post-delivery phase. Additionally, Fincantieri's subsidiary, Seastema S.p.A., will supply various naval components and machinery, such as propulsion lines, steering systems, manoeuvring propellers, stabilizing fins, and automation systems, including special equipment for the PPA (Fincantieri Board's, 2022). Finmeccanica, through Selex ES, will act as the prime contractor for the combat system of all the new naval units. It will supply various sensors, including new multifunctional radars, and will also be responsible for all subsystems, including those provided by Oto Melara, WASS, MBDA, and Elettronica. Furthermore, Selex ES and Fincantieri will jointly develop the innovative "Cockpit" system, allowing integrated management of both ship operations and combat systems, with a reduced number of operators thanks to augmented reality techniques (ibidem).

Fincantieri's CEO, Giuseppe Bono, remarked, "This program, in addition to its significant geopolitical implications for Italy's repositioning in the Mediterranean, holds profound industrial importance. It will not only increase employment levels and technological research development for our group but also benefit all the companies within the industry. It is worth noting, as demonstrated by a Censis study, that the naval-mechanical industry generates an economic impact on the industry nearly four times the original investment, with employment impact reaching nine times the direct employees at Fincantieri. Additionally, the development of new high-tech products will reinvigorate our Systems and Components Directorate." Bono concluded, "As always, Fincantieri is committed to providing high-quality products to our Navy, developed using the most advanced technologies, within the expected timelines and costs". Fincantieri holds a dominant position in the cruise industry, commanding over 40% of the market share and boasting a remarkable track record of constructing 120 cruise ships since 1990, representing more than a third of the global fleet. Presently, the Group's portfolio consists of 28 ships, with deliveries scheduled up to 2028, and it proudly serves renowned shipowners worldwide (ibidem). As the cruise industry looks forward to its next industrial cycle, two major drivers are set to shape its trajectory. Firstly, the revival of tourism post-pandemic, with a clear preference for cruises

exceeding 2019 levels, and the entrance of new luxury niche operators into the market. Secondly, digitalization and green transition will play a pivotal role, with growing demand for ships equipped with cutting-edge technological features and next-generation engines.

Beyond its accomplishments in the cruise sector, Fincantieri has a strong presence in the defence industry, having delivered over 130 defence units since 1990. Of these, approximately 50 were delivered to Italy, another 50 to the USA, and around 30 vessels to foreign navies. The Group enjoys a strategic partnership with the Italian Navy, recognized as one of the most advanced globally. It also holds a leading position in constructing highly technological surface vessels, expanding its production of new generation submarines, and adeptly catering to the demands of both national and international clients (*ibidem*). With an anticipated rise in global defence budgets, particularly in Western European and Asia Pacific countries, Fincantieri, leveraging its role as a system integrator and existing programs, aims to bolster its standing among globally recognized navies by undertaking new projects in foreign accessible markets, such as Asia and the Middle East (Fincantieri, 2022).

Moreover, Fincantieri has been actively engaged in the construction of support vessels for the wind offshore sector, possessing ten Construction Service Operations Vessels (CSOV) - Service Operation Vessels (SOV) in its portfolio, in addition to two cable laying vessels. The Group remains dedicated to the development of cutting-edge offshore units, incorporating green propulsion and remote-control solutions, to support future offshore operations. Notably, Fincantieri boasts 14 marine robotic vessels, designed to utilize green ammonia as a propeller. As the world moves towards decarbonization and increased investments in renewable energy, the demand for specialized vessels for deployment in offshore wind farms will surge. Drawing upon its expertise and leadership in constructing SOVs, Fincantieri is well-positioned to seize the numerous opportunities that will arise from the expected rise in total installed capacity by 2030 and the subsequent need for additional vessel in wind farms. The Management Team plans to provide further insights into the Business Plan during the FY22 results presentation. The expected revenues of 2025 and 2027 predict an estimate of 8.8 billion euros and 9.8 billion euro with respectively, with an EBITDA margin of 7% and 8% respectively (Fincantieri, 2022). The drag effects Fincantieri can have on the Italian industry (not only military) are evident. The firm remains an important Italian asset, and its strategic importance for Italy cannot be undervalued.

Conclusion

This thesis has dealt with several different issues related to the field of the Italian defence. The historical approach to the research question has showcased the impact the Italian defence industry has had on the Kingdom of Italy first, and then over the Republic founded after World War II. The analysis of the amount of military equipment produced during the two World Wars showcases all the limitations and qualities of the defence industry: usually limited in its output quantity, high levels of manufacturing qualities, and traditionally tied to the concept of naval power. Similarly, the combined analysis of the GDP and weapon production illustrates the ties between the frail Italian economy and its defence industry. The natural relation between the economy and the military production revealed all the limitations Italy suffered during the world conflicts, especially while fighting alongside its Axis Allies. The tremendous power of the US has been a lesson for the new type of industrial war. The undeniable tie between industry and military power was reflected in the world of R&D after the war. The increasingly higher costs of weapon production (and relative weapon developments) reflected in the difficulty and slow process through which nations were called to develop the weapons of the new age: most notably, the aircraft carrier, the fighter jet, and the atomic bomb.

The lack of meaningful national production that Italy faced in the aftermath of the Second World War reflected the deep diplomatic, political, and military effects of the conflict. Italy was a beaten State and enjoyed the dubious honour of being considered an Enemy State to the United Nations. The intense diplomatic work of the immediate five years that followed 1945 resulted in Italy being able to join the nascent NATO, mostly thanks to the strenuous efforts of De Gasperi to anchor Italy in the Western bloc. Still, the immense costs needed to manufacture new military equipment, coupled with the diplomatic situation, meant that Italy would purchase most of its equipment directly from the US, especially regarding armoured warfare and aerial supremacy. Italy would purchase the same tanks and jets the US would come to use in Korea and Vietnam.

The cooperation showcased in the excellent efforts that led to the creation of ECSC, which saw the rebuilding of European States ally together in a comprehensive way for the first time in history, would eventually lead to renewed cooperation in military development. Still, it would take time for Italy to be truly accepted in the NATO system and sport autonomous military equipment development, as much of the

public diplomacy of Italy was to export the idea of a peace-loving country. For example, MM Giuseppe Garibaldi, the first Italian missile cruiser, was a modernized straggler from World War II. It would take twenty-four years after 1945 for Italy to join the Panavia consortium. The "Economic Miracle" had been the engine through which Italy had been able to finally develop a strong economy, on par with the other advanced nations it had always trailed behind. The purposed research of the thesis has found a number of reliable and important sources that confirmed the importance of the Italian defence industry both as a mean of projection of soft power and as an important part of the Italian economy. The economic might of Italy was now capable of producing new military equipment; still, the enormous cost of R&D of the new weapons meant that Italy would not be able to develop a fighter jet alone. Furthermore, the political will that had united the European States in the ECSC (and later, in the EU) was still lingering in the commitment to share the costs and benefits of the Tornado project. The Tornado project was an important stepping stone for Italy. It was not a national project, but it was one of the few important projects of shared military R&D Italy had been able to participate in.

The economic crisis of the 70s saw the Republic expand the sector of military exports, showcasing an excellent quality that had gained from the lessons of the Panavia consortium. The growing military industry of Italy now faced an international community reeling from the petrol shock. The Italian arms export became an important means of economic sustenance, as referenced in its growing importance. Likewise, the export of weapons became an important means through which Italy was able to maintain an economic foothold in the MENA region. The shock of the crisis and the dire need for alternative economic sustenance had been enough to sway public opinion regarding weapon sales. Italy expanded the industry defence for the first time since 1945, mainly owing to a favourable international perception. Becoming one of the main exporters in the MENA region, Italy was able to capitalize on its weapon sales using its traditional diplomatic stance. The tighter control the parliament would later implement showcases an excellent system of weapons control, without renouncing the important diplomatic ties that had been established. The capability of Italy to sell military equipment to non-NATO Countries allowed the Republic to serve as an important partner for many strategic partners, most notably Libya and Egypt.

Italy now faces the threat of a polarizing world. However, this thesis has found that the Italian strategic thought had already changed perceptions, accosting hard power

and sea power to the more traditional role played by its important diplomacy. The evolution of the MENA region has introduced several non-state actors, with the most famous being ISIL. The collaboration already shared in the Mediterranean must be reinforced. The lack of the Mediterranean Union has been an enormous blow to the stability of the region, and the inability of the EU to anchor the MENA region has been one of its most hindering mistakes in recent history. The first policy proposal would be the draft of a comprehensive, coral approach to the Mediterranean to be completed by the entirety of the EU. It is becoming increasingly clear that Italy alone cannot operate in the polarized world that will see the rise of mega states. For that, Italy needs the EU to act as a polity with the interests of the entire union.

For that, the role of the industry of defence in such an international panorama cannot be undervalued. The steady expansion of the Italian Navy promises to be one of the most important instruments of Italian projection in the Mediterranean Sea. This enlargement has to be maintained, considering the current situation in the Mediterranean Sea. It is undeniable that Italy possesses the economic resources of a medium power, and for that, its economy cannot maintain the expenditure a superpower like the US would be capable of. Nonetheless, the changing scenarios of the Mediterranean include several strategic interests for Italy, especially regarding the need to maintain stable energy sources. Furthermore, the cooling relationships with Egypt and Turkey (a NATO ally that is slowly drifting into an autonomous approach) in the Mediterranean Sea are leaving Italy with reduced diplomatic options and allies that do not share similar strategic thoughts.

Diplomacy, especially with Libya, Algeria, and Morocco remains the prime means of resolution of controversy; likewise, Greece and France remain important strategic allies of Italy for the control of Eastern and Western Mediterranean. Nonetheless, the expansion of the fleet will protect the important economic interests and partners Italy possesses. In a world that is increasingly resorting to the logic of hard power while renouncing the rule of law, Italy has to reinforce both of its ties to the EU to retain a strong, cohesive diplomatic voice while developing a capable navy. To this extent, the costs of naval development are hideous. Italy has to consider a comprehensive approach to the Mediterranean Sea and collaborate with its allies with a single, coherent approach, lest be reduced to a nation unable to respond to critical challenges.

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Ministero Della Difesa **SEGRETARIATO GENERALE DELLA DIFESA E DIREZIONE NAZIONALE DEGLI ARMAMENTI DIREZIONE DEGLI ARMAMENTI NAVALI 3° REPARTO -SISTEMA DI COMBATTIMENTO 83 DIVISIONE -Sistemi ed Armi di Superficie**, 2013.

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Executive Summary

This final work has been divided in four chapters. Each one of these chapters draws from different sources, but some cross-references from important publications have been maintained. The first chapter serves as the introduction for the main objective of the entire thesis. The historical analysis draws mainly from the book of Paul Kennedy, *The rise and fall of great powers*. The chapter first briefly analyses the economic standing of the fledging Kingdom of Italy, showcasing the gap the Kingdom was suffering compared to its peers. The main point of the chapter remains the industrial output of Italy right before and during the Second World War. The comparison with the most prominent belligerents (friends and foes alike) showcases an economy that desperately lagged behind the production of its contemporaries. Steel, coal, and industrial production reflected in the military output as well. Italy was left to fend for itself with its weak and collapsing economy, whereas the mighty powers of US and USSR prove how the difference of magnitude in production influenced the entire conflict. Richer and bigger economies were able to produce extraordinarily high amount of military equipment, such as tanks and ships. The tactical victories gained by the Axis proved to be strategic defeats, as the impervious industrial might of the Allies was able to replenish losses at a rate that could not be defeated. Furthermore, the chapter briefly deals with the doctrinal backwardness of Italy, explaining how the Fascist regime was lagging behind not on The end of the war brought an entire new deal for Italy. Now weak and defeated, Italy was forced to navigate the insidious diplomatic landscape that was the nascent Cold War. The leadership of De Gasperi proved fundamental for anchoring Italy in the Western alliance, allowing the fledging Republic to receive the important economic bonus that was the Marshall Plan. Now strengthened by external capitals, Italy experienced a momentous growth. FIAT was at the forefront of the Italian exports, reprising a very fortunate tradition that had already started before the conflict. Finally, the chapter deals with the diplomatic efforts of De Gasperi, who strived to join both NATO and the nascent ECSC. Both of these organizations would prove incredibly helpful to Italy, bolstering its beleaguered GDP and providing the nation a common market where goods could be more easily traded. The second chapter reprises the end of the of the first one, showcasing the membership of Italy to NATO and ECSC. This chapter deals with the organizations mentioned in the last paragraph of the first chapter, analysing the complicated situation Italy was left off after becoming one of the Enemy Nations. This chapter briefly compares the Italian experience to Japan and Germany, showcasing how a number of different factors helped Italy to maintain a relationship with Washington. Similarly, this chapter deals with the economic traction that resulted in the industrial conglomerates, providing an important stepping stone for Italy. The chapter also deals with exports, industrial production, and food security. The “Economic Miracle” of Italy enabled the Country to finally fill the structural gap it had always suffered when

compared to the other European Nations. The “Golden Age” of Europe reflected in the Italian economy, which boasted incredible rates of growth.

The important steps Italy was able to attain in its diplomatic stance showcase how the changing situation of the Cold War turned the Republic into an important ally to the US. Likewise, after a short decade in which Italy was unable to develop weapon system, the chapter deals about how the nascent OTO-Melara consortium was finally able to produce important weapon systems for NATO, giving a much-needed traction to both the civilian sector (mainly in regards to avionic systems) and in the military one (mainly with the production of naval equipment). The changing Cold War background had turned Italy and Germany to important allies after being enemies to the US. Italy would eventually join the EEC, becoming not only a founding member to NATO and ECSC but also establishing itself as a peace-loving State, which actively engaged in diplomacy. This new activism of cooperation was also shared among the various European countries at a military level, enabling a shared diffusion of military know-how, objectives, and goals. The third chapter is entirely devoted to the case study of the Panavia Tornado. Focusing on a narrow study, this chapter deals with the incredibly laborious process that was the inception of the Tornado. Starting with the first Anglo-French entente to develop jointly a fighter that would be able to satisfy both armed forces, the chapter delves extensively within the setbacks that enveloped such a task. The herculean efforts of UK, Germany, and Italy managed to produce an incredibly advanced machine, of which cost was to be estimated between 5 to 10 billion dollars (circa 55 at the present day), depending on the producer. The tortuous process of trial and error is showcased extensively, producing the general idea of how long and laborious such an endeavour was. Likewise, the chapter deals with the different tractions of the various members of the Consortium, shedding light over what could be perceived as a tug of war to gain more prestige. The immensely high costs and the lessons learned with the Panavia Tornado showcased how the Cold War R&D was far different from the national paradigm that had been followed up until 1945. The high costs of a fighter were now unable to be burdened by a single country, reinforcing the need for cooperation and shared knowledge. Eventually, many of the ideas that surrounded the Panavia Tornado were to be reprised in the next joint project, the Eurofighter Typhoon. This chapter also serves as a call for increased cooperation, noting the immensely high costs UK, Germany and Italy faced to produce such a craft. The chapter deals with the military lessons learned and the aborted tentative to set-up a shared base for joint exercise. This cooperation attempt was doomed from the start, revealing the different objectives of the various militaries. However, a part of this lesson has been absorbed in the European background. The Tornado project has remained important to this day. The model has been extensively upgraded, remaining a stable workhorse in the different militaries of the EU. Finally, the fourth chapter deals with the changing transformation of

Italy foreign's policy, especially in the MENA region and with Libya, a prime partner. It will end with the case study of the importance of Fincantieri. Libya's early relations with the Soviet Union primarily centered on commercial activities and the acquisition of Soviet weaponry. The first delivery of Soviet military equipment occurred in July 1970, showcased during a parade commemorating the Revolution's first anniversary. Throughout the 1970s, Libya continued to make substantial purchases of Soviet military hardware, including a monumental deal in 1974-75 valued at around \$1 billion, constituting Libya's largest arms agreement.

Soviet arms deliveries were accompanied by the presence of Soviet military advisers, although Libya aimed to keep their numbers limited. To achieve this goal, Libya sought guidance from other foreign advisers, including Cubans, Pakistanis, and even Americans. As the acquisition of Soviet weapons expanded, Libya maintained a degree of independence by diversifying its sources of arms. This approach initially succeeded, exemplified by the procurement of 110 French Mirage fighters in early 1970. However, as the decade progressed, Libya's policy of seeking arms from multiple suppliers clashed with Western concerns about regional military balance. Libya's strident anti-colonial and anti-imperial stance, its strong condemnation of Israel, and its links to terrorist activities further strained relations with the United States and Western Europe. This combination of factors, including an aggressive foreign policy, led to Libya's increasing isolation from the West, becoming a primary driver for growing Soviet-Libyan relations.

In the 1980s and 1990s, Italy remained Libya's principal Western partner, strengthening its role in the Libyan economy. Italian companies undertook infrastructure projects and supplied goods to the Libyan population, securing important contracts thanks to Libya's substantial financial resources. In 2008, several favorable conditions allowed Italy and Libya to resolve their political dispute over the colonial past through the Treaty of Friendship. This agreement marked a turning point in bilateral relations, bolstered by Libya's reintegration into the international community after the lifting of UN and US sanctions and the reestablishment of US-Libyan diplomatic ties. The Treaty of Friendship, signed by Prime Minister Silvio Berlusconi and Libyan leader Muammar Qadhafi in August 2008, paved the way for increased cooperation between the two nations, particularly in areas such as immigration. However, the treaty also sparked international controversy, with debates in British, US, and French media focusing on the close ties between Berlusconi and Qadhafi. These discussions highlighted the complexity of Italy's relations with Libya, shaped by national interests and international concerns. Italy's approach to its relations with Libya aligns with its broader foreign policy, where even contentious bilateral ties are justified in multilateral settings as "bridges" between Italy's memberships in various institutions and its allies. Throughout this history, Italy sought to preserve the stability of the Libyan regime, considering it a vital partner. Notably, Italian arms sales

to Libya experienced a significant surge during the 1979-1981 period, with sales doubling in just over a year from 1980 to 1981.

In 2013-2014, Italy led the Mare Nostrum mission, showcasing remarkable inter-ministerial coordination. This operation balanced security concerns, including territorial control, combatting organized crime tied to illegal immigration, and conducting Search and Rescue (SAR) operations. It saved 156,000 migrants and apprehended 360 traffickers. From 2014, Italy pursued a broader immigration policy involving EU cooperation in SAR operations, resulting in the Triton mission enhancing Frontex's Mediterranean operations and the EUNAVFOR MED mission (Sophia) combatting migrant trafficking. Sophia transitioned to "phase 2" in 2015, with 25 European countries contributing. Italy's naval sector, part of the DDP 2020-2022, includes plans to replace destroyers, update Horizon destroyers, procure U212 Near Future Submarines, and construct logistic support ships and rescue vessels. The document outlines multi-year procurement programs and explores new capabilities.

Fincantieri, a leading shipbuilder, plays a pivotal role in these initiatives. They partner with Finmeccanica and contribute to the construction of patrol vessels, logistic support ships, and potentially aircraft carriers. These vessels are innovative, environmentally friendly, and serve dual military and civilian purposes. Fincantieri's CEO highlights the industrial significance of these programs, generating economic impact and employment opportunities. The company's expertise extends to the cruise industry, where it dominates the market and anticipates growth post-pandemic. Furthermore, Fincantieri excels in the defence industry, delivering over 130 defence units worldwide. They plan to expand their presence in accessible foreign markets, particularly in Asia and the Middle East, aligning with rising global defence budgets. Additionally, Fincantieri is active in constructing support vessels for the offshore wind sector, capitalizing on the growing demand for renewable energy. Their green propulsion and remote-control solutions position them well for future offshore projects. In conclusion, Fincantieri's strategic importance to Italy extends beyond the military realm. They drive economic growth, technological research, and employment, making them a key national asset.