

THE INTERNATIONAL RELATIONS OF ALLIANCE POLITICS: ITALY CONTRIBUTIONS TO NATO SPACE CENTRE MISSION

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ABSTRACT

Italy has been developing space development since the era of the Cold War in which space-race competition among countries was so intense, and back then Italy became the third country that did successful satellite launch to outer space and brought good reputation. As a member of NATO, Italy has become an important member of NATO due to its contribution to security cooperation. With NATO announcing the existence of NATO Space Centre mission and space as one main domain for NATO, the opportunities for Italy's contribution in NATO Alliance politics are possible, due to the same common goals and interests in space sector technologies for a long time. This journal study will analyze how Italy's space sector advantages will be beneficial for this program, and the explanation on how it will increase the Alliance politics of Italy as a member of NATO and can be related to their space program mission.

Keywords: *The North Atlantic Treaty Organization (NATO)/ Italy/ NATO Space Centre/ Space Program/ Alliance Politics*

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ABSTRAK

Italia telah mengembangkan pengembangan luar angkasa sejak era Perang Dingin di mana persaingan antar negara begitu ketat, dan saat itu Italia menjadi negara ketiga yang berhasil meluncurkan satelit ke luar angkasa dan membawa reputasi yang baik. Sebagai anggota NATO, Italia menjadi anggota penting NATO karena kontribusinya dalam kerjasama keamanan. Dengan NATO mengumumkan keberadaan misi NATO Space Center dan ruang angkasa sebagai salah satu domain utama NATO, peluang kontribusi Italia dalam politik Aliansi NATO dimungkinkan, karena kesamaan tujuan dan kepentingan dalam teknologi sektor luar angkasa untuk waktu yang lama. Studi jurnal ini akan menganalisis bagaimana keunggulan sektor luar angkasa Italia akan bermanfaat bagi program ini, dan penjelasan tentang bagaimana hal itu akan meningkatkan politik Aliansi Italia sebagai anggota NATO dan dapat dikaitkan dengan misi program luar angkasa mereka.

Kata Kunci: *The North Atlantic Treaty Organization (NATO)/ Italia/ Pusat Antariksa NATO/ Program Luar Angkasa/ Politik Aliansi*

INTRODUCTION

Italy has become one of the primary allies of NATO amongst twenty-nine other countries, the entity of which Italy is a founding member of NATO (Haglund, 2021). Due to its domain in Mediterranean geography and military, Italy is taken into consideration as an important actor of the NATO alliance. Italy also currently has numerous diverse multinational forces and has tremendous troops deployed internationally across the world for peacekeeping missions, and for preventing any organized crime consisting of illegal drug trades, any potential of terrorism attacks, human trafficking, hijacking threats in security and communication as their primary state mission (Marrone, 2020).

As a way for Italy to do desirable synergy with NATO amongst in the essential binding of the stable transatlantic relationship for keeping alliance politics among their members. Italy's role is needed to support the alliance's vision of strategic autonomy that can complete each other and be beneficial with the transatlantic alliance necessity. Both in security and strategic cooperation or as an accommodator (Cristiani, 2021).

In order to obtain for this longer-term purpose, Italy also can promote more cooperation with their transatlantic alliance with NATO in defence and security. Furtherance of the primary actors of the corresponding members to contribute can benefit reinforcing concurrently strategic sovereignty and the transatlantic relationship at the same time also can additionally support their financial spending sustainability and their national goals in peacekeeping and security (Molenaar, 2021).

In 2019 December, NATO Secretary General announced that "outer space" formally has become the alliance's "fifth domain" of operations, along navy power, the air force, land military forces, and cyberspace in digital technology. The NATO Space Centre will aid NATO necessity exercises, missions and operational campaigns with purpose growth NATO Space domain recognition through the coordination of services and space sector technologies' products to give more opportunities for NATO's allies for further future facilities as their program (U.S Europe World Affairs, 2021). This

program is concerned to conduct NATO's advance to the space sector, and assuring the right assistance to the Alliance's operations and missions, which includes the necessary intelligent information, communications, navigation and data. Through the application of satellites, Italy and NATO can respond to pressures with greater pace, effectiveness, and accuracy in gaining information and better communication service.

NATO Space Centre is part of the NATO alliance's collective security aims to assure its competitiveness and ambitious advantage in the space sector development. The NATO Space Centre directs existing facilities and aid support at Allied Air Command and would originally be operating with a particular collection of experts to be able to serve at the directive NATO necessity (NATO Space Centre, n.d.).

Outer space can be categorized as a primary resource to the Alliance's security and defense. The mission of NATO multinational partners in supporting the space program of NATO Space Centre is to assist coordinate Allied Space program motions and help protect Allied Space systems by sharing information about possible warnings (NATO Space Centre, 2021). The Centre operates tightly with the Allies' national Space companies, industries, and the NATO Command Structure to collect data, goods, and assistance provided by allies, such as earlier strategies, navigation, and early warning threat.

Italy has always represented and indicated its interest worldwide in the outer space sector and technologies. It will give Italy a perk of advantages for their space sector development for the NATO Space Centre mission as an opportunity to increase their Alliance politics. Italian space development is ranked 7th globally and has become part of the Europe top three in the space sector lead (Davoli, 2019) Historically, since the 1960s' Italy was a leading role in the space sector, Italy also became the third leading country in records, after the two primary rival competitor in a space-race at that time which is the United States of America, which got their success on the moon landing and their opponent Soviet Union, which succeed with their achievement being the first country to had successful satellite launch. On the other hand, Italy also did another successful launch of a satellite named Italian Telespazio antennas into space from the Malindi base in Fucino. These achievements of Italy made Europe manage to see the first moon landing in 1969 (Yoshi, 2005) Even though the United States of

America managed to land on the moon first, Italy did it twice in 1969. This shows the ambition of the Italian focus in their technology sector on space has already got a lot of achievements.

Countries in the modern era are establishing national space agencies and commercial space activities continuing to expand, enhance, and develop their space economy and make it beneficial for their own country. In conjunction with the growing quantity of space exploration activities and more international actors within the country take part in space sector development. It does have worth financial interest and technological support that could be used to provide such a foundation's progress, and by focusing on expanding the space sector it is possible to grants on appropriating space technologies for their communications necessity, security, investments, international market, and political matters (Scatteia, 2020, p. 6).

RESEARCH QUESTION

- How does Italy leverage its advantage in space development to contribute to the NATO space program for its alliance politics?.

RESEARCH METHOD

The objectives of this journal study are to analyze the contributions Italy's leverage can offer from their space sector development for the NATO space program to strengthen their alliance politics. The author will use qualitative method by explaining why the space program is important for NATO, how they are related to each other between alliance politics and the space program for Italy and NATO relations, why Contributing to the NATO Space program will be beneficial for Italy? In order to understand how the NATO Space Centre Mission program's existence will bring Italy into an advantageous position in NATO Alliance politics. and how Italy leverages its space sector development in contributing NATO space missions? The author will be using the theory of alliance politics, and why the space program could be a good opportunity for Italy to be involved in their transatlantic alliance politics as a diplomatic tool to contribute to the NATO space program.

LITERATURE REVIEW

2.1 The Impact of Alliances Politic on Space Program

Alliances do matter in bilateral relationship, especially when there have been plenty of numbers of steady goals and missions for being a part of countries to deepen their cooperation with their political alliance, especially for the space mission program to represent the advantages of technology from the ground to the various represent the critical infrastructure for war strategists and the alliance without a state border. By stating the same interest on the alliance in the protection of and access to space could help the alliances involved countries work on solidifying unity. The establishment of space security means preparing for peace (Dr. Saadia M. Pekkanen, 2018, p. 4). Meaning when the alliance stating their same interest and goals in the same program the political alliance is there especially in the space program, it will involve their military and security matters like aerospace technologies.

Having common interests and goals with the same alliance member will give benefits for the alliance together. According to White's journal on alliance politics, to define characteristics of an alliance as an important aspect for their fundamental components are pre-current such as alliance kind of organization. An alliance is an association of collective operations that are able to enhance and contribute to the formation of the alliance. Relying on the quantity concerned, the relations between allies can be in the shape of bilateral or multilateral. However, the alliance members have to come together in the pack as collectives which can be beneficial for the same goal (White, 2018).

There are two types of alliance politics according to Daniel Weinstock journal. The first one is "*Those that treat political alliance as intrinsically desirable*", and the second one is "*Those that treat it as instrumentally useful.*" The first statement are motives for the alliance participation that have to be kept regardless of whether or not it serves electoral achievement or different measures of partisan success as non-consequentialist motives that rest at the concept that the alliance members at the query can keep their common goals together. The second statement comprises motives that are most effective to the quantity that is given during the occasions they develop to the

party's motive. (Weinstock, 2013). In this journal topic, the section examines the former first category because the NATO alliance itself is already essential and if there are programs that can make the alliance deepen relations it will support their alliance politics which in this journal space mission that is also categorized as part of the long-term permanent mission.

The Alliance among the alliance contributors is intrinsically important as it complements the political interests of each other. With "*No party has a monopoly on knowledge*" is the presentiment. Which assumes it is better sensible after they cooperate in a bigger formation. At this point of perspective, association like this may let in the achievement of a better-enlightened view. Through those terms, the alternative relations that form alliance politics could be marked as a development at the main purposes of each alliance member could be taken one at the time (White, 2018).

As representative countries in intergovernmental alliances whose motives are to attach each country's pursuits in their military necessity, decision making, or connections. In the alliance's system, each country has its own unique capabilities that can connect to a specific set, and viewpoints to represent a better chance of influencing their politics. (Stewart, 2016) to summarize each country does have something that makes them worthwhile and different to offer in such an alliance.

In which there are two or more actors that have a "programmatic" approach and interest in common, the most suitable way to serve this kind of same goal program alliance is to advance these into cooperation (White, 2018). The proposition is shown as a result of this journal topic, for example, where two or more actors share the common motives of space exploration and security mission. Through cooperation decided on a method, be it organized in the way of majority approval due to their qualities, invitation due to their identity and reputation or campaigning, by sharing their supports to space science research, technologies, science and development especially in aerospace military to be able to support the program and capable enough to improve and contribute in this alliance's aim.

The value connected to this cooperation is contributory rather than necessary, there may be no prospect that in addition should be managed. It is definitely dependent on operating in the same program collectively to improve the boundaries on which they

occur to agree collectively. That is the opportunity for an actor such as Italy in this case of a NATO space program to join up effortlessly in alliance politics whilst they are running at the equal program and goals.

2.2 The Space Program as a Tool for Alliance Politic

As a diplomacy tool in international relations, the exclusively on independent states, nations, in addition to international agencies, are aware of the truth that it is no longer possible to be a dominant country outwardly. The competencies of international cooperation in the stage of technology can be the measurement of technology as a tool of diplomacy. (SFIC Africa Task Force Strategic Report, 2020, p. 4). Therefore, cooperation with new capabilities in science and technology will be very helpful in achieving power for the country. Especially if the country is focusing on space exploration technologies that are known for their limitless innovation.

With any technological program, space mission, and systems that are related to the exploration of outer space activities with a particular long-term aim, both the commercial and military domains can be categorized as space programs (Maria Antonietta Viscio, 2015, p. 79). The space program can be used as a negotiation for actor's related interests because the space program can be worked as a space diplomacy tool, which has a lot of meaning depending on which scientific ideas and focus their space diplomacy could refer to the integration of collaboration or cooperation in knowledge, technology, and legislation involved in science diplomacy with the expanded exploration out of space that is not located on the earth land and sea. (Gavrilovic, 2018). To sum up, space diplomacy is a form of negotiation. Space

programs are missions for outer space exploration or science development with a long-term aim. Focus can be used as a tool of negotiations and political interest when related actors are having the same common interest and used as a diplomacy tool.

Director General of The United Nations Office for Outer Space Affairs Director, Simonetta Di Pippo recalling the unprecedented level of interest in space, with record levels of "political and economic" capital being invested that lead to the strong growth of the so-called space sector economy said; *"We have started to understand that access*

to space is really important for developing countries to be part of this space community and to get more and more benefits from being part of this process.” (Pippo, 2017). Means being part of the space community or program can give benefits for political and economic interest for joining such a space program with other countries especially for developing their countries' matters.

The Italian Permanent Representative, the Woomera Manual addressed the virtual event on the space economy and diplomacy on 26th May 2021. *“If you accept that there could be conflict in space, you are giving countries a license to conduct war in space.”* stated by Mariangela Zappia (OnuItalia, 2021) Meaning any nation could compete in the space sector, and this also could be a good opportunity for nations that specialize in the space sector to take part in space programs because it will benefit both the developed and developing cooperation among countries in equal terms of science and security.

According to Larson's analysis of stakeholders, the essential factor to be reckoned for whilst outlining the space program as a mission is the dependency on the needs of the primary motives from the actors. Determined by their very own position, all of the contributors can be classified as accommodators, supervisors, developers, or clients. In particular, sponsors should be classified in order to set the space program mission statement, target timeline, and the establishment of the products' presence.

Sponsors' position is a matter to attain the initial pact's contract among ideas and technological specifications. The sponsor itself can be in the shape of primary funding, contributions, alliance cooperation, trades, and any other forms that can be acceptable by each other in need (Larson, 2007). To support this journal idea of how the space program related in alliance politics between Italy and NATO in their NATO Space Centre mission. To summarize, any kind of sponsorship or support that can be beneficial for each actor in the space mission program, and any acceptable forms of sponsorship are flexible depending on the actor's interest which includes politics involved and alliance politics.

THEORETICAL FRAMEWORK

3.1 Alliance Politics Theory

The alignment is usually already established by mutual interest and aid programs that merely could strengthen their client with or without political bonds in the alliance formation theory. If mutual interest does not exist in the first place, the cooperation can't count as an alignment as the price of aid because they credibly threaten to withdraw aid due to no reason to keep the aid without having the same common goal, but the possibility of the recipient can threaten the alignment to shift for aid. (Stephen M. Walt, 1985, pp. 27-30) Just similar case like aid and any kind of programs can significantly affect the recipient's alignment by increasing both their dependence and the expectations of more direct support and beneficial and that's why the same common goals are matter (Robert E. Osgood, 1968, pp. 91-99). Because Italy and NATO do have the same common interest for their alliance politics, either cooperation in military or security. With the same common interest in space development, it could give the opportunity for Italy to do cooperation with NATO and also focusing on the new domain interest in space development which support each other.

In alliance formation theory, Skyler J. Cranmer proposes a network-based theory. The primary nation and organization associate already settled inside the agreements, the progression of the alliance community from any particular factor in time is essentially decided by means of their form. It is approximately cooperation with more than two actors in the alliance network wherein the nation is allied with any other country and is allied by another country it may produce synergy outcomes wherein which the state-tier application is better than the interaction components and that's what is called an alliance of more than two states (Cranmer, 2012, p. 295).

This concept may be equalized to describe the state's political alliance with an international organization where there are more than two states involved when considered along with factors that make the alliance that requires plenty number of members involved the better production, which includes army power and political agreement, and implies that the community will develop in the direction of a country of numerous linked groups of countries as a mediator stage. To indicate that network

structure can be involved in a better position within the cooperation of alliances by way of introducing why their alliance goals matter (Cranmer, 2012, pp. 295-296). With this idea, it does support the alliance politics between Italy and NATO members to make synergies effects not just state with one state but also does work with another state in NATO members such as the United States, Germany, and Spain who also focus on the space sector developments, which the synergies among the states could be involved well, along with making new network alliances each other that can be united in one common interest in the space program.

For Glenn H. Snyder's Theory of the "Allies, Adversaries and Systems". Alliances are a means to security against their specific adversaries. Therefore, they cannot be apart from other security policies, nor apart from the enmities and rivalries to which they respond. It is methodically valuable to assume private alliance and adversary strategies, therefore each of these alliances and adversaries is performed on three coverage tiers which includes ordnance, tactics, and declaration. The ordnance tier in the adversary-alliance strategy performance is "military arms or technologies competition" which is also called "burden sharing in alliance." The action level between adversaries involves simply deciding whether or not to engage or defend (Snyder, 2016). Security and any prevention from data lost and hijacking is needed for communication in the NATO alliance. The existence of the space program can convince the alliances to take their political strategy in space development competition with their adversaries Russia and China who are also working on the same kind of interest. The project itself can become the burden sharing alliance to introduce them into new competition in military arms and space technologies are needed. Italy who worked on their space development since the early space race between the United States and Uni Soviet could have an advantage in sharing their space sector products for better cooperation with their alliance and also get support from other NATO members to develop their same common interest in space technologies.

Arrangements to act cannot be completely classified by either the alliance or adversary supposing others are reasonable to have expected outcomes or to be motivated by goals in both positions. This is why the arrangement to support and defend another state that is under attack or threaten in the form of terrorism, hijacking, competition race in military and technologies could be used as motivated in alliance to

prevent the enemies from using their power that will harm the nation or alliance. The pact between alliances is basically a collective notification, a common agreement to operate in a particularized approach in particularized future probabilities for long-term aim under the same common goal banner. For the accommodative alliance according to Snyder which also signaling “concession or capitulation”. Accommodative declarations with alliances generally occur in the context of negotiation, political matters and the result may be an agreement in which both or more related actors promise to take some action or any responsibility in the future that will implement the agreement (Snyder, 2016). With the NATO Space Centre mission as their space program was invented, it could become the motivation for alliances to work on their space development in the long term in an accommodative alliance. Especially Italy who already worked as the accommodative role with European NATO members with their aerospace industry and their satellites’ speciality.

Paul W. Schroeder stated, “In international politics, state control has always been fundamentally the same all states are classified by the fundamental imperatives of anarchy self-help and balance of power or must be if they hope to sustain prosper, and states are not functionally adapted within the structure of international politics. Their function structurally determined to survive and remain sovereign through self-help” then adapts the states is actually their position and roles within the system that “characterized” their power relative to an international organization.

"Each by hierarchy and heteronomy enforcements upon its group in order to sustain international cooperation structured by sovereignty and anarchy required." (Schroeder, 1991, p. 2). Paul W. Schroeder theory also stated that according, any kind of alliances countries does can be counted as political concessions or support prestige, and the protection policies for the nations to carried out and maintained the form of military alliances and diplomacy intended made to preserve against potential risks with the absolute understanding that if something more serious become a threat to have such support in security and protection would be helpful for a nation to have (Schroeder, 1991, p. 3). To sum up this idea, Italy has their own speciality in their fast working on space sector technologies. In order to have such a power to survive and either be prospering by joining such an alliance it does count as political concession and prestige support for their country.

In analyzing the concept of Italian strategy as the medians that a country necessitates attaining its purposes, and intentions in desired results in particular of its "areas of power" capacities because Italian goals are to achieve world peace in promoting non-violence and inclusive society, economic prosperity, end any forms of discrimination, fund and promoting sustainable on innovation or research in modern technologies.

States can use such an alliance as a mechanism for cooperation. One of the primary reasons for states' desire to set up or cooperate as members of international organizations is linked to the point that they choose authority in objects that demand expertise, information, data, the target, and supplies that are not available at any conditions. Which Italy as a state can get from being a part of an international alliance with NATO (Maharani, n.d.). Liberalists consider that *"such actors can have substantial influence and contributions in specific agendas"* (UKEssays, 2020). NATO could become the network mechanism for Italy to introduce its power in the space program. Not just by introducing their development in space technologies, But Italy could be an important key member for space program influence that can also give the opportunity guarantee for NATO to establish a new program that can give the same common interest for their space domain sector.

3.2 Space Program as Diplomacy Tool Theory

Space can be acknowledged as a valuable natural resource. In multiple perspectives, resource limitations do exist, and if such an actor could manage to get more resources from space development it can become such a prestigious benefit for the actor itself. (Koudelka, Otto, 2011, pp. 92-95) With private and investment from international actors should recognize the potential of space sector, innovation and technology development in outer space exploration, progressively gaining more and more access to the international stage, through controlling and adjusting geopolitical domain arrangements (Moltz, 2019, p. 15). With the securitization of space policy acts as a major issue like trojan horse or space security programs for the expansion of national military and economic interests as outer space is becoming even more "securitized" where great and middle state powers are gradually framing it as a crucial

component of their national security within the military, economic and societal dimensions (People, 2010, pp. 205-208). The set of related space sector activity and specific missions in long term aim can be called the space program. For the space program itself, it's not just all about space exploration in any aspects, but also can be aerospace technologies, communication, and also any accommodations that can be used for political matters with NATO ally members. Even though NATO is a military cooperation, developing security and space sector support are also important for economic interest and security matters to prevent any potential future threats.

Any technological program, space mission and systems that are related to exploration of outer space activities with a particular long-term aim, both the commercial and military domains can be categorized as space programs (Maria Antonietta Viscio, 2015, p. 79) It also became a supportive statement for McDougall's idea in space activity. The space program can also be used as a sponsorship offer for countries and their alliance politics and interest in technology and space sector development. The space program can be categorized as a diplomacy tool because of its capability to become an attraction for the others to use it as a negotiation to increase the relationship between actors or benefit. The Italy-NATO Space Centre mission could become the motive offer for their alliance politics to achieve their long-term common interest in the space sector program.

DISCUSSION

4.1 Why This Space Program is Important for NATO?

The space program was made due to the reason of NATO adversaries' threats existence, Secretary-General Jens Stoltenberg stated; "*The NATO alliance is to build a headquarters for space operations at its air base in Ramstein in Germany, to counter a rising Russian and Chinese threat in space competitive* " (Agence France- Presse, 2020) According to the NATO Defense Ministers' decision to admit the presence of a space center for their space program in the year 2020, the space program itself is expected to serve and assist as a position point to support NATO operations and purposes, in helping them for having the better information-sharing capability and improve their cooperation for the Allies' efforts (Jennings, 2021).

The space program gives out to nationwide space objects to ensure that NATO allies have a path to fill their necessary need on space data and settings. The contribution to provide requests for space goods through an individual object can increase NATO's responsiveness and assistance arrangement for the necessity can be made more step ahead.

Facility contribution for NATO is important. *"Space is of great importance for what we can do on the earth: communications, navigation, cell phones, military communications, the transmission of data. And, and a lot of activities on the earth at sea and on land dependent on capabilities in space, not least satellites,"* Stoltenberg stated, along with the program authorized by NATO allies to unite against terrorism in a difference sectors, including political discussions and information distribution, civil-emergency devising, force preparation, air-defense, and airspace authority, either in space, border control, arms power, and practices related to the terrorism threat. (Oana Lungescu, 2020)

Due to the fact that every country could participate in space sector development, the existence of competition in the space program is there. What can NATO do with its space domain while being in competition with its adversaries is also becoming wider and advanced? Space exploration and the technology sectors are also growing more crowded and competitive because satellites are risky to intervene. Some countries, such as Russia and China who are visibly threatening NATO satellites on earth's orbit, but also competing with NATO in space development programs which require them to form and inquire about a wide spectrum of counter-space technologies such as anti-hijack technologies and aerospace missiles.

4.2 Why Contributing in NATO Space Program will Beneficial for Italy?

Italy owned a consecutive influence on NATO and participated in many various forms, including in the hosting of management, sciences and experimentation supplies for collective security. Italy's contribution can be a privileged position in the Mediterranean region and their space sector development's quality made it an important strategic ally member that could benefit in solid defense and support with NATO in as

an accommodator for space sector technologies such as their aerospace's engineering, missiles, and satellites for communications (JFCNP, 2021).

NATO targets include the prevention of any threats of mass destruction weapons, cyber-attacks, and terrorism. NATO declared that the transatlantic alliance wanted *"to maintain peaceful and non-adversarial relations with the countries in the Southern Mediterranean and Middle East"*. The security guarantee and harmonious peace of the countries that are in charge in the south of Europe like Italy, Spain, France, and Turkey are important for the welfare of the alliance. This is important because there are a lot of threat form such as the production of the military power of hardware technologies that can harm harmonious peace, hijacks that can steal important data from countries and bring potential data lost, weapons that can deal mass destruction, missiles that able attack the territory other states of the Alliance (Behnke, 2000).

For Italy's interest, the main reason for Italy to extend association with NATO for their alliance politics is that the alliance gives a more stable guarantee of support than the Italian would ever be capable to afford individually (Alcaro, 2010, p. 3). Another reason is for being a part of NATO space programs might signify the standardization for Italy's constant incentive for upgrading its country's power balance. (Pinotti, 2015, p. 44). Because standardization is also necessary for supporting the competitiveness of Italian security and space technology products in allied exchanges both for their armed forces or also for their other power like space sector science. For NATO, Italy could benefit from the alliance and space program because of their quality reputation and contribution; involvement for NATO could help their space program be capable to compete with their adversaries' threats, and other upcoming threats for alliance's security.

As an Italian governmental agency, the Italian Space Agency (Agenzia Spaziale Italiana) and aerospace defence companies such as Finmeccanica (Italian multinational companies) are oversized with regard to the resources the state devoted to defence. (Alcaro, 2010, p. 3). Along with Italian reputation in space development, this leads to the conclusion that Italy with their space sector development can have the opportunity for their contribution in the NATO Space Centre mission because their capabilities in space science developments already exist and are also important for NATO. That's why

to advance their capabilities, Italy needs to access much more prominent markets and partnerships which they can get from being in alliance with NATO either from direct state cooperation or with their space industries.

Building synergy among NATO alliance members is important for Italy because that holds the potency to decrease, at least partially, the burden on its development in the military budget due to their Covid-19 pandemic wave in 2020 (Morcos, 2020). The challenges for the Italian ministry are questionable to increase the security funds. On the contrary, military investments or space development investments are forced to come down sharply as the government embraces severity measures in order to accommodate the impacts of the financial crisis on its concerned public finances due to the pandemic.

However, Italy still focusing on their space science development which could help Italy in maintaining their alliance politics support and contribution for NATO threats such as conflicts, potential terrorism, communications support, accommodations, space hijacks, and etc. (Alcaro, 2010, p. 4). With the competition between NATO space domain and Russia-China space domain being in heat since 2020 (Posaner, 2020), due to the Covid-19 case happening in the exact same year, many countries prefer to use their funds for their country's people's health recovery. The advantage point for Italy is they didn't limit their space development spending to pandemic spending. This can be used as the opportunity for Italy to aid and contribute to the NATO Space Centre without limitation because when Italy and NATO have the same common interests that can synergize well for their adversary's competition, the role of Italy in this space program support is needed since they are not limited by their financial spending due to their earlier development in space development and pandemic spending won't bother them contributing in this space program.

4.3 How Italy Leverages their Space Sector Development in Contributing NATO Space Mission?

The Italian space sector was known for their success since the 1960's. Italy was working on the same kind of program that NATO announced that "*space*" as the one of the five main domain focuses for their Alliance. Which in turn means they will not have to worry about spending their money all over again for a new domain for being a part of

the Space Centre mission because it's something they're working on since the Cold War was when the space race tensions, competition between two Cold War adversaries in order to secure satisfactory standards to achieve better domination in spaceflight power.

In the Italian viewpoint on adapting NATO for Joint Air Operations in "Joint Air & Space Power Conference 2016" with the broad perception of the possibilities' threat postured through it is abstract utterly clear, by reason of the capacity to continue Air Operations as proposed can be settled, due to fact Italy space technologies are able to reach the standard and them having a same common aim to prevent any harm threat would support each Italy and NATO for better cooperation in a program that related to the space (Vincenti, 2016).

Currently, there are only 5 countries among 30 that could represent their experts toward this space program due to the fact this program was announced and operating along with the COVID-19 pandemic time in 2020, those experts are from Germany as the space centre headquarter, the United States of America as the main key member of this program, Spain, the United Kingdom, and the Netherlands are assigned as early members to the Space Centre program (NATO Space Centre, 2021). Most of the allied countries of NATO that cannot take part by sending their experts on this mission earlier is not because they are incapable, or not fulfilling standards, but there are other focuses going on in their own country, such as COVID-19 pandemic, economic crisis, and the program. It is anticipated the space program centre will acquire additional personnel from several other allies as it grows through the years, making sure the standard specified potential throughout NATO and wherein the present-day focus of scientists is put in operating on pandemic prevention. However, the application for space program assistance is not restricted to allies with space competencies like Italy. Instead, any ally countries can offer information, data, services and products, which may be merged right into a single NATO space program's product.

As a member of NATO, Italy also cooperates well with the United States in space technology cooperation. Italy also for sure took the earlier pace on joining NASA's Artemis mission with the primary all in NATO the United States of America, which intent is to deliver the mankind and its community back again on the moon by the year 2024, and so that can build a permanent station for future space exploration mission,

including on Mars by not only between Italy and the United States but also with other countries such as Spain and German (Lanzavecchia, 2020)

Satellite systems are very important for this space program development. The unavailability of a Satellite system would, of course, bring negative impression and result for many specific capability sectors such as strategic communication, C2 (Command and Control), military association, space exploration control, linked with a depravity of the electromagnetic spectrum and in the cyberspace in digital technology control. The following numerous conversions in specific sector quality will potentially be concerning the cause of the collapse of standard 'assumptions' about utilization of "Air Power" and aerospace related weapons (Vincenti, 2016). That's why the development of space technologies is needed to prevent any future potential threat. The support of intergovernmental military alliances such as NATO, Italy's position leverage for contributing in this program is important. On the other hand, space science technologies are on the perk of advantages. By following the applications and needs for space products through this space program, Italy could enhance the pace, performance, and potency of being important personnel in the NATO Space Centre mission. Because Italy's intention is to contribute their support not only to the program base, but Italy can be the important key unit to aid and accommodate this space program for NATO's necessity.

This shared space domain motives can be shared among the alliance. NATO is an important alliance for Italy as an ally to portion and exchange information records, data, and coordinate operations. Although, the alliance is not directed to advance space sector capabilities of its own and the operation will keep proceeding to reckon on collective space development benefit. As long as NATO's advance to the space program would reside fully in involvement with international law (NATO Space Centre, n.d.).

For the security and defence viewpoint, space has important potential for the NATO transatlantic alliance, which includes the following operations of tactical strategy, navigation, and better communication. This enables such clarity strikes, pursuing or searching, and any forms of contributions on rescue operations, and warning notification of the early potential threats. For Italy this benefits their position for this space program mission to guarantee any force security and contribution's

support on valuable information like upcoming projectile threat, monitoring, mission planning, and secure satellite communications.

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CONCLUSION

In conclusion, Italy's leverage is important for the NATO Space Centre Mission and also beneficial for Italy. The development of the Italian space sector has had a good reputation historically and its development is very well prepared and reliable. In this foundation, Italy may push on making the benefits of this alliance politics cooperation more clear and easier for their flexibility in developing this space sector technologies which in turn is Italy may save their financial spending and preserve desirable standards by becoming a member of the NATO space program to compete and be ready for upcoming threats from their adversaries by contributing as support position and accommodator with their satellite's technologies advantage.

The perk advantage of Italy is not limited by financial spending, because they already spend it for their space development earlier and current pandemic's challenge won't affect Italy spending. Italy and NATO can recognize the importance of each other in their intergovernmental transatlantic alliance's cooperation and having the same common interests in the space program. This may deliver the idea that the alliance is able to run collectively with different nations, With Italy's capability in space sector development can take the lead of several components of a project. This cooperation allows NATO to develop their specialties and expertise that make the overall their space program's mission and task collaborative successes for a long-term program.

This could benefit the NATO space program in exploration and security by being able to give their alliance cooperation in the space sector to become the alliance between countries without land borders to prepare for upcoming future threats for the alliance. Italy could bring the idea of global peace and space development partnership to increase their relationship with other countries in their political alliance cooperation. Especially with communities that have the same interest in developing the space sector and technologies.

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