

# Development of State-Owned Enterprises Subject to Private Law in the Aeronautical Maintenance Sector in the Peruvian Navy

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## ABSTRACT

The investigation consisted of demonstrating methodologically that it is possible to develop the aeronautical maintenance industry within the Peruvian Navy (MGP) by means of a novel undertaking in the field of business management within the MGP, that is to say, the design of a state-owned enterprise (SOE) subject to private law that allows the growth of the aeronautical sector within a legal framework that helps achieve a balance between efficiency and effectiveness. The analysis of the current situation of aeronautical maintenance in the MGP identified that it is not taking advantage of potentialities in human and certified materials (capability). Therefore, the application of administrative theories will make it possible to optimize the management process, generating greater competitiveness and profitability. The correlational descriptive method was used through the application of surveys and its results validated the proposal, as well as its viability as a decentralized and specialized agency of SIMA Peru. This scenario would contribute to meeting the aeronautical needs of the MGP in maintenance management practices, organizational culture, TMA capability, profitability, commercial agility, technology and quality assurance, which have a significant relationship with operational performance, that also impacts the development of aeronautical technology in the country.

**Keywords:** aeronautical maintenance; profitability; competitiveness; capability.

## INTRODUCTION

Competitiveness represents a constant business challenge in the search for effectiveness and efficiency, which is why governmental and private entities need to restructure themselves administratively and financially so they do not lose momentum. This is the case of the Aeronaval Maintenance Service of the Marina de Guerra del Perú<sup>5</sup> (MGP), certified by the Dirección General de Aeronáutica Civil<sup>6</sup> (DGAC) as “Organización de Mantenimiento Aprobada (OMA-013): Servicio de Mantenimiento Aeronaval”<sup>7</sup>, which operates commercially, propelled by the capacity installed, certified and financed with the funds contributed by MGP according to their availability, which has not been sufficient neither to achieve its technical-administrative self-sustainability, much less fulfill its mission of maintaining the Naval Aviation Force fleet. Therefore, this study proposes the development of an innovative state-owned business management within the framework of private law that will contribute to the fulfillment of the mission and aeronautical development of the MGP.

OMA-013 is the technical, repair and maintenance body of the highest aeronautical level in the MGP, whose objective is to execute manufacturer scheduled maintenance (second level) and component repairs (third level) to the aircraft assigned to the Naval Aviation Force and to aircraft and accessories authorized in commercial aviation. This aeronautical maintenance organization has been working with budgetary restrictions for three decades and with some non-constant and almost null representative investments over the last five years, which has produced negative effects within the maintenance process, worsened further by the lack of an adequate administrative management.

The optimal functioning of OMA-013 is currently being affected by the increasing updating of international aeronautical requirements by the DGAC, which decreases its competitiveness due to the decreasing certified technical capacity of its human and ma-

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<sup>7</sup> Approved Maintenance Organization (OMA-013): Aeronaval Maintenance Service.

terial resources (capability) of its aeronautical maintenance workshops (TMA). This unexploited technological space is detrimental to the development of the aeronautical sector in the MGP, which has national repercussions, since this activity has not yet found a significant commercial development. On the contrary, the majority (more than 80%) of the current and important repairs are made outside the country in foreign entities dedicated to aeronautical engineering activity, which are not yet fully established in the country.

The manifest problem of OMA-013 is in an increasingly critical situation, where the necessary administrative theories and management tools cannot be applied, which gives rise to the following question: How to develop a competitive state-owned enterprise subject to private law in the area of aeronautical maintenance service in the MGP within Peru?

In response to this question, this research analyzes holistically the following characteristics of the organization: infrastructure and human resources (DGAC capability), profitability and legal framework. It also analyzes the management theories that can be applied in order to contribute to make OMA-013 more competitive in aeronautical maintenance service.

In order to identify the real conditions of OMA-013 and to formulate improvement plans, it is necessary to consider the contribution of several authors regarding the phenomena that affect organizations.

### Theoretical Framework

Hamel et al. (2006) state that knowledge is fundamental for the economic progress of a country since it improves the performance of its organizations. Entrepreneurship internalizes concepts of information societies, knowledge societies, knowledge workers and information systems with the purpose of generating explicit and tacit knowledge. In addition, they emphasize human capital as a concept, which they recognize as the most valuable resource for an organization or company.

Porter (2006) states that "*El campo competitivo es vital para la ventaja competitiva ya que configura la estructura de la cadena de valor, la forma en que se realizan las actividades y la posibilidad de que esas actividades sean compartidas por las unidades de la empresa*" [the competitive field is vital for competitive advantage since it configures the structure of the value chain, the way in which activities are performed and the possibility that these activities are shared by the business units] (p.44). He adds:

*La Estrategia Tecnológica representa entonces para una empresa la política en la que esta decide su desarrollo, mediante el empleo positivo de la tecnología y el poder que tiene el cambio tecnológico para con la estructura del sector industrial en general y aeronáutico en particular, asegurando su ventaja competitiva* [For a company, the Technological Strategy represents the policy in which it decides its development, through the positive use of technology and the power that technological change has for the structure of the industrial sector in general and the aeronautical in particular, ensuring its competitive advantage]. (p.133)

Organizational culture generates union and direction among workers; therefore, teamwork ensures the success of any company or organization:

*El trabajo en equipo es la capacidad de funcionar con éxito en un entorno de equipo, se está trasladando rápidamente a la primera línea de las habilidades empresariales necesarias (...) La gente que trabaja en grupos operativos, equipos de resolución de problemas, equipos de desarrollo de productos y comités aportan una visión colectiva que multiplica de forma importante su capacidad de innovar* [Teamwork is the ability to function successfully in a team environment, which is rapidly moving to the front line of the necessary business skills (...) People working in operational groups, troubleshooting teams, product development teams and committees bring a collective vision that significantly multiplies their ability to innovate]. (Blanchard et al., 2006, pp. 70-71)

The work of Vogtlande et al. (2017) analyzes new techniques in the field of aeronautical engineering and evaluates combined cost, market value and eco-cost analyses, which are the basis for eco-efficient value creation in remanufacturing. These authors argue that aeronautical remanufacturing processes will improve the sales of aircraft previously defined as successful by users in addition to generating added value, new useful life and new technologies.

Remanufacturing is the process of refurbishing a successful product by the manufacturer to bring it up to the level of a new product. This technology could be exploited by the aeronautical maintenance workshops of the MGP as it represents low costs in skilled labor compared to developed countries. In addition, it could represent a leap in the

modernization of aeronautical technology in Peru, strengthen the installed capacity of the MGP and provide an opportunity for self-financing.

Davenport (2006) observes and analyzes human capital and its influence on competitive strategy. He points out that workers represent the differentiation of the company and its value in the market in more than 60% of its value, which highlights the intangibility of human capital, which is much more difficult to find than financial capital.

According to Crespo (2007), the maintenance management process conditions effectiveness and efficiency in management. The theory reviewed suggests that the effectiveness of business activities is framed in terms of capability, profitability, commercial agility, technology and service quality from the customer perspective. Efficiency, always followed by effectiveness, ensures the production with no waste of resources, which minimizes direct maintenance costs, and maintenance, in turn, becomes more competitive.

Amendola et al. (2015) published in an open source their conclusions on asset management. They state that the competitiveness of companies is characterized by their constant budget cuts; by the efficiency of their goods or services in accordance to high quality standards; by the alignment to their strategic plan; by the total expenditure (TOTEX); by theories of capital expenditure (CAPEX), which is used according to the management of physical assets in the actual operational activity of the company; and, finally, by their management of operational expenditure (OPEX), which defines the costs associated with the exploitation of these physical assets.

Hamel et al. (2006) point out that it is necessary to develop a "strategic control" in the center of power and its respective areas of influence (subsidiaries). They consider that some typical strategic decisions are technology, market definition of products, emphasis on the different product lines, expansion and diversification of operations, and the desire to participate in a global network of product flows between the areas of influence or subsidiaries. In that sense, the headquarters should not only be interested in controlling and influencing all strategic decisions, but also in monitoring their progress towards the fulfillment of strategic expectations.

### Legal Framework

The legal framework of this research was based on national regulations that are the formalization and legal foundation proposed in this article.

Regarding the business activity in Peru, Law No. 24948 (1988, December 2) determines that state-owned enterprises, state-owned enterprises subject to private law, mixed economy companies and the State's stockholders are public sector entities, in accordance with the provisions of article 60 of the Political Constitution of Peru (1993) which recognizes economic pluralism based on the coexistence of different forms of enterprise and ownership. In article 1, this law regulates the business activities of the State in terms of its scope; objective; organization; operation; labor, administrative, economic and financial regime; and evaluation and interaction at the different levels of government. Likewise, article 5 establishes that the State generates business activity in different forms, among which, for the purposes of this work, the following form of business, explained in article 7, is highlighted:

- **State-owned enterprises subject to private law:** These are *las constituidas originalmente o reorganizadas como sociedad anónima de acuerdo a ley, cuyo capital pertenece totalmente al Estado* [those originally created or reorganized as a corporation according to law, whose capital belongs entirely to the State] (Act No. 24948, 1988).

Additionally, Legislative Decree No. 1031 promotes the efficiency of the business activity of the State by stating that it is required to implement *nuevas herramientas de gestión y estructuras legales que prioricen los principios de eficiencia, transparencia y gobierno corporativo, entre otros, así como un sistema de control adecuado en un contexto de transparencia* [new management tools and legal structures that prioritize the principles of efficiency, transparency and corporate governance, among others, as well as an adequate control system in a context of transparency] (Decreto Legislativo No. 1031, 2018).

The National Fund for the Financing of the Public Sector Companies (FONAFE) is the entity in charge of regulating the business activity of the State, ensuring that these companies are managed in a modern manner and according to recognized quality standards for their products (goods and/or services) so they generate economic value in favor of society and respect for the environment to achieve the sustained development of Peru, based on innovation and integration as specific corporate values.

According to the preceding paragraphs, it can be appreciated that the Peruvian State has the power to exercise business activity, directly or indirectly, under the same conditions as a private company,

although with special characteristics based on its rules and regulations, in which a state-owned enterprise (SOE) subject to private law can do everything that is not legally prohibited in order to optimize its management processes, as suggested by Mateo (2015), whose doctoral thesis had as general objective to define maintenance management processes and the causes that affect success in development models.

### Servicios Industriales de la Marina, SIMA

SIMA is a state-owned enterprise (SOE) subject to private law of FONAFE Corporation, set up as a joint stock company in 1999, created with the objective of *promover y desarrollar la industria naval, industrias complementarias y conexas* [promoting and developing the naval industry, complementary and related industries], prioritizing the repair and construction of MGP ships (SIMA, 2000). It currently has the potential to propel the activity in the aeronaval field as a business line with the integration of the capability developed by OMA-013.

According to the SIMA portal (2020), the business activity of the State is regulated by Law No. 24948 (1988), which states in Article 6 that *Son empresas de derecho público las que se crean por ley y gozan de atributos propios de la administración pública* [State-owned enterprises are those created by law and enjoy the attributes of public administration], and in Article 7 states that *Son empresas de Derecho Privado las constituidas originalmente o reorganizadas como sociedad anónima de acuerdo a ley, cuyo capital pertenece totalmente al Estado* [State-owned enterprises subject to private law are those originally constituted or reorganized as a corporation according to law, whose capital belongs entirely to the State].

In that sense, the legal framework has been favorable for the development of SIMA and made it possible to have three operation centers located in Callao and its subsidiaries in Chimbote and Iquitos, the following being its three main lines of business:

- Preventive and corrective maintenance to ships, called **naval repair**.
- Construction of ships, called **naval construction**.
- Production of metallic structures (bridges, towers, hydroelectric gates, etc.), called **metalmechanics**.

In his doctoral thesis, Villalón (2015) concludes that it is necessary to develop and apply a large variety of quantitative and qualitative methods

in the effective search to know the management competencies and bonding schemes that allow building a model that results in high performance. In this regard, it can be stated that SIMA is a company that specializes in naval engineering, hosts naval aeronautical activity in its naval platforms, participates in diverse and important technological activities, has excellent competencies for technical and business management, and has high levels of performance, unique in the nation, thus contributing to the development of the country.

For this reason, when analyzing the legal framework of the theory presented in this investigation, SOE subject to private law turns out to be a business management model characterized by long-term objectives, satisfaction and positive impact on the development of the country. This management model provides modern management tools that add reputation and value to any company before its stakeholders and incorporates them into management processes from a systemic perspective, which would be reflected in the generation of public and private value. This represents an enormous opportunity for business development in the aeronautical maintenance service in the search for social, technological, business, and internal and external defense development of the nation.

According to the theories presented in this study and the experience of the MGP in the aeronautical development of the country, this research proposes that the Aeronaval Maintenance Service OMA-13 would be successful as a SOE subject to private law if based on the legal framework of SIMA, as a subsidiary of the development of the technical capacity of the aeronaval environment, under its legal responsibility, without the need to create another entity to be managed as a SOE subject to private law. This would promote the development of technology in the country, since there is no such specialized and particular technological development in the naval or aeronaval field.

### SWOT analysis of the variables according to their validated dimensions and their statistical results

In his illustration about strategic analysis and planning, Riquelme (2016) explains that the term SWOT is an acronym of:

- Strengths: positive critical factors that are available;
- Weaknesses: negative critical factors that must be eliminated or reduced;

- Opportunities: positive aspects that can be leveraged using the strengths; and
- Threats: external negative aspects that could hinder the achievement of our objectives.

The SWOT analysis is highly recommended since it is the stage prior to decision making. This simple and effective method is used to determine the real condition of a company regarding its environment, so a forward-looking strategy can be planned.

In order to develop a competitive SOE subject to private law for the benefit of the MGP and the country in the aeronautical sector, an analysis of strengths, weaknesses, opportunities and threats (SWOT) was carried out in accordance with the theory presented, which determined qualitatively and according to quantitative weights the strategies to be chosen according to strategic objectives to be fulfilled (strategic decision). Based on field work and the experience in the management of this maintenance organization, it is relevant to mention that this analysis presented the real situation of OMA-013, which was said to be stuck in an “area of vulnerability”.

The SWOT analysis showed an OMA-013 incapable of self-sustainability, fundamentally as it is not competitive in the aeronautical sector, with the main weakness being the time it takes to get client aircraft on the flight line and operational; the latter happens due to the rules of the public administration in which

it operates, which is aggravated by the repercussions of the financial resource available to achieve the capability standards required and regulated by the DGAC.

Table 1 shows a SWOT matrix for OMA-013. This approach will provide management with very important elements to build a strategy for the future that will allow the development of concrete actions focused on improving competitiveness and market position.

Based on this reality, the management direction of OMA-013 was proposed as a SOE subject to private law through long-term strategies, taking into consideration the verification of the survey proposed in the research, which determined the strategies to be implemented in the Aeronaval Maintenance Service according to the values obtained and based on the objectives described in Table 2.

The internal and external analysis of the environment in which the activities of OMA-013 develop concludes that strategies are required to redefine its activity as a SOE subject to private law in order to obtain greater competitiveness in the national market and to ensure that OMA-013 stops being in an area of vulnerability in that it is unable neither to fulfill its main mission nor to achieve financial self-sustainability requirements of the MGP and the nation in the aeronautical sector.

**Table 1.** SWOT Matrix for OMA-013.

INTERNAL FACTORS	EXTERNAL FACTORS
<p><b>STRENGTHS</b></p> <ul style="list-style-type: none"> <li>• Certified HR in the service.</li> <li>• Contract renewal of certified HR.</li> <li>• Increase of medium and large customers.</li> <li>• Differentiated installed capacity.</li> <li>• Certainty of increasing demand.</li> </ul>	<p><b>OPPORTUNITIES</b></p> <ul style="list-style-type: none"> <li>• Increase of service orders and associated budget.</li> <li>• Lack of aeronautical maintenance workshops in the market.</li> <li>• Increase of TMA capabilities (more service orders).</li> <li>• Reliable logistics providers.</li> </ul>
<p><b>WEAKNESSES</b></p> <ul style="list-style-type: none"> <li>• HR and technological upgrade costs.</li> <li>• Continuous investment in capability.</li> <li>• Medium capacity to retain the HR.</li> <li>• Low marketing aggressiveness.</li> <li>• Lack of incentives for initial HR.</li> </ul>	<p><b>THREATS</b></p> <ul style="list-style-type: none"> <li>• Appearance of more competition.</li> <li>• Strengthening of other TMAs of similar function.</li> <li>• Unreliable logistics providers.</li> <li>• Retention capacity of initial HR-CG<sup>5</sup>.</li> </ul>

Source: Prepared by the author.

<sup>5</sup> General Command: The generic specialty that the human resource starts with in the MGP.

**Table 2.** *Strategies and objectives proposed on the research.*

Variables	Objective/Strategy
Independent: Development of the Capability of OMA-13	Maintenance management (UNE-EN 15341)
	Organizational culture
	TMA capability
Dependent: Competitiveness	Profitability
	Commercial agility
	Quality assurance
	Technology

Source: Prepared by the author.

**METHODOLOGY**

This was a mixed descriptive correlational research of cross-sectional observational type, which seeks to determine the degree of relationship existing between the variables.

According to the field research carried out in the aeronautical maintenance workshops of the Aeronautical Maintenance Service (OMA-013) of the Peruvian Navy, the following methodological aspects were considered: research design, variables, population, instruments, data collection tools and data analysis.

In that sense, the research was corroborated by qualitative data, which was the product of a Likert scale survey, so that the inference could be measurable according to the variables established in the study. This analysis is related to inductive methods that obtain narrative records of the phenomena studied through direct observation techniques, interviews, field notes and surveys to the population of interest.

The sample size covers 104 people dedicated to the technical and administrative management of 10 aeronautical maintenance workshops certified by the MGP before the General Directorate of Civil Aviation. Due to the constant military rotation, the number of people was higher than the minimum determined in the sample, so that any eventuality that would alter the study could be covered, that is, in order to obtain enough information to apply statistical-descriptive techniques to the people who manage the OMA-013. The minimum number of people to be surveyed was established at 95% reliability.

**RESULTS AND DISCUSSION**

**Statistical results of the Aeronaval Maintenance Service OMA-013**

The measurement instrument used was the questionnaire, which was applied to the sample control

group, constituted by managers, chief officers, junior officers and workshop chiefs of OMA-013. After obtaining the results and their validation, the corresponding analysis was carried out to determine the dimensions in which the dependent and independent variables are developed; the results are presented below.

**Statistical Contrast of the Main Hypothesis (H<sub>p</sub>)**

In order to analyze and present the statistical contrast of the main hypothesis (H<sub>p</sub>), "Developing OMA-013 as a SOE subject to private law in the Peruvian Navy (MGP) will make it competitive in the aeronautical maintenance service in Peru", the confidence interval and the significant differences between the variances of the means to be contrasted (pretest and posttest) were calculated by ANOVA. Then the differences of the values of the calculated means were statistically compared, according to the main hypothesis and its secondary hypotheses (H<sub>s</sub>) in the 2 moments, pretest and posttest, to which they correspond. The result of the field work process was the conviction of the importance of the specialized human resource of OMA-013, with which the independent variables were worked, resulting in a positive difference in the dependent variables in the posttest.

The H<sub>p</sub> shows an independent variable characterized by three dimensions: maintenance management, organizational culture and capability of the aeronautical maintenance workshops. By improving their management as SOE subject to private law, those dimensions influence the competitiveness of the OMA-013 in the aeronautical sector. The dependent variable is characterized in four dimensions: profitability, commercial agility, quality assurance and technology.

The pre-test and post-test surveys made it possible to obtain important information on how staff perceives the performance of OMA-013 and, based on

that, to propose alternatives to enhance installed capacity.

In that sense, the weights obtained from the pre-test (Table 3) and post-test (Table 4) surveys were evaluated, paying special attention to the degree of significance at 95% for this research ( $p < 0.05$ ) in order to prove true the main hypothesis ( $H_p/H_1$ ).

**Significance by magnitude of the difference between means**

The comparison of means of the dependent variable is shown in Figure 1 where a clear difference can be seen between the first stage of the study and the second one. The increase in the post-test moment is due to the OMA-013 population group to which was applied the validated measurement instrument. The variables for maintenance management (profitability, business agility, quality assurance and technology) within an adequate legal framework (SOE

subject to private law) were fully identified as a propelling determinant of the business success of this MGP Maintenance Organization.

The difference of means between pre-test and post-test shows typical standard deviations due to their differences. In the sample  $t$  analysis appears the most important statistical data to corroborate the hypothesis and its variables, that is, the degree of significance ( $p < 0.05$ ), by which it is concluded that the characteristics of the SOE subject to private law used for the development of the OMA-013 will result in greater competitiveness in the aeronautical sector and, in consequence, capacity of self-sustainability and profitability after finding in the post-test a positive increase in the weighting versus the values that were reached in the pre-test, which can be seen in Figure 2.

According to the results of the SWOT analysis and the statistical analysis carried out in the investigation,

**Table 3.** Dependent variable “Competitiveness”: Pre-test average data.

Dependent V.	N	Mean	Std. Dev.	Q1	Median	Q3
Competitiveness	104	3.1524	0.602	2.8148	3.0926	3.4074

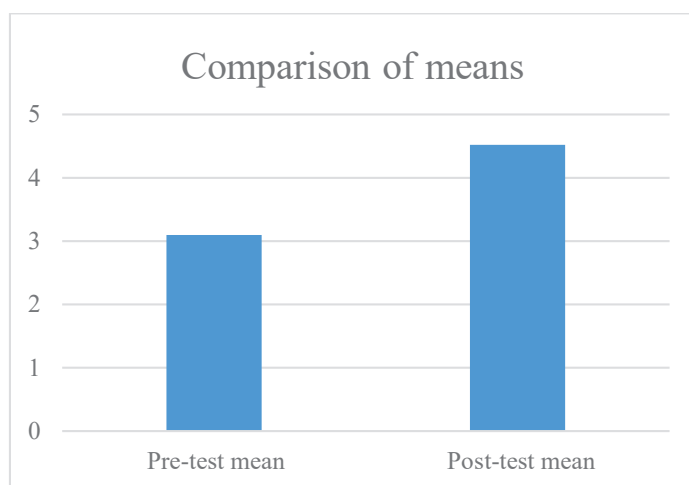
N: Sample size.

Source: Prepared by the author.

**Table 4.** Dependent variable “Competitiveness”: Post-test average data.

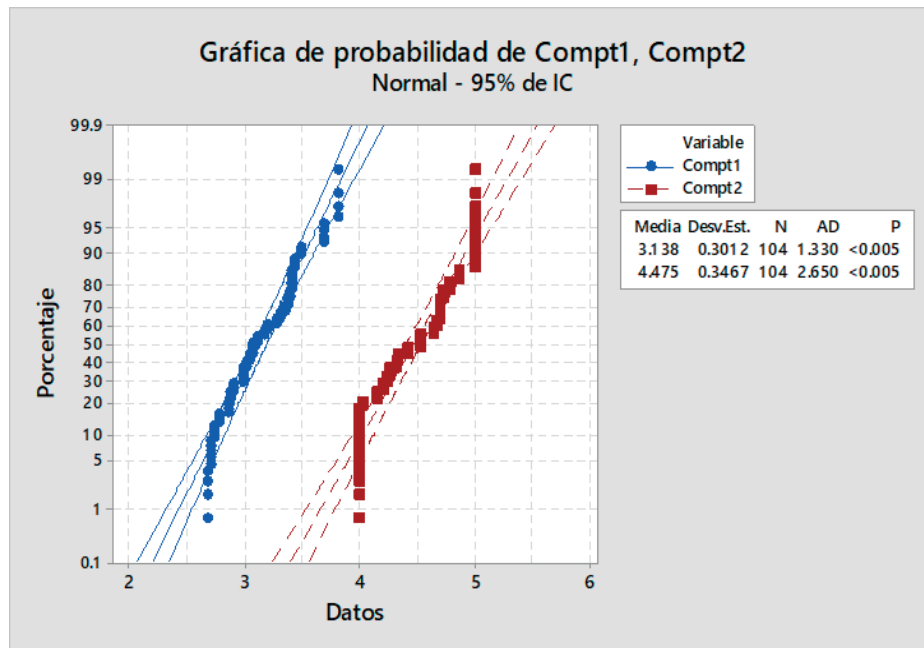
Dependent V.	N	Mean	Std. Dev.	Q1	Median	Q3
Competitiveness	104	4.5196	0.0062	4.5185	4.5185	4.5185

Source: Prepared by the author.



**Figure 1.** Comparison of means of the dependent variable.

Source: Prepared by the author.



**Figure 2.** Comparison of Probability of Competitiveness Variable.  
Source: Prepared by the author.

the hypotheses proposed as guides of the investigation have been supported by a methodologically demonstrated truth, which makes possible the determination of strategic objectives in a management plan that influences positively in improving the reality of the aeronautical sector in Peru. The hypotheses proposed in the research received empirical evidence, which were weighted according to the evaluated phenomenon, showing statistical information in favor of these hypotheses. The strategic objective of developing OMA-013 of the MGP as a SOE subject to private law aims to make it competitive in the aeronautical maintenance service in Peru for the benefit of the State and the nation as a whole.

As a result of the contrast, positive evidence was found for the so-called alternative hypothesis ( $H_1$ ), which, when statistically supported, shows a significant improvement in the expectations of the specialized human resources of OMA-013 in relation to the statement of the main hypothesis ( $H_0$ ); thus, the null hypothesis ( $H_0$ ) is rejected ( $p < 0.05$ ) due to the higher mean obtained in the post-test evaluation in relation to the pre-test, according to the results of the measurement instrument validated in the research.

Table 5 presents the conclusion of the correlation identified by the statistical analysis applied to each specific hypothesis and the impact on their respective dependent variables, so that their respective

null hypotheses ( $H_0$ ) are rejected by the degree of significance ( $p < 0.05$ ) that resulted between each correlation performed in both events: 1. pre-test evaluation and 2. post-test evaluation.

**Proposal for the solution of the problem**

After being proposed and evaluated the problem of the competitiveness of OMA-013 in an unfavorable legal framework, the solution to the problem is presented as a competitive and self-sustainable OMA, which benefits and satisfies the aeronaval needs of the MGP based on and according to a strategic plan with clearly determined strategic objectives that will allow:

- Developing a SOE subject to private law in the MGP in order to be more competitive.
- Implementing and training the capability compliant with DGAC requirements to generate greater competitiveness.
- Achieving, based on the OMA-013 capability, the financial self-sustainability, for the benefit of the aeronautical sector in the MGP and the country.
- Generating profitable activities based on the knowledge of the initial limitations of the current budget allocated for the operation of the installed capacity of OMA-013.



**Table 5.** Correlation of the variables of OMA-13 and the hypotheses of the research.

HYPOTHESES		Independent Variable			Dependent Variable			
		Dimensions			Dimensions			
		Maintenance Management	Organizational Culture	TMA Capability	Profitability	Commercial Agility	Quality Assurance	Technology
H <sub>p</sub>	Independent: P0. OMA013 development: Xp Dependent: P0. Competitiveness: f(x) Intervening: P0. HR and MR assigned							
H <sub>s1</sub>	Independent: 1. OMA013 Capability: Xp1 Dependent: 1. Better competitiveness: f(x1) Intervening: 1. HR and MR assigned							
H <sub>s2</sub>	Independent:2. Prior OMA013 Capability: Xp2 Dependent: 2. Financial Statements: f(x2) Intervening: 1. HR and MR assigned							
H <sub>s3</sub>	Independent: 3. OMA013 Facilities: Xp3 Dependent: 3. Planning: f(x3) Intervening:1. HR and MR assigned							
H <sub>s4</sub>	Independent: 4. OMA013 Legal framework: Xp4 Dependent: 4. Competitive Strategy: f(x) Intervening: 1. HR and MR assigned							

Source: Prepared by the author.

- Leveraging the influence and legal framework generated by SIMA Peru for the competitiveness strategies developed by OMA-013 capability.

**CONCLUSIONS AND RECOMMENDATIONS**

The human resources of an aeronautical maintenance organization certified by the General Directorate for Civil Aviation (DGAC) are essential in the process of aircraft maintenance, so OMA-013 must be scrupulous with the certification of personnel that have taken courses from the manufacturer (OEM - Original Equipment Manufacturer) or equivalent.

OMA-013 must certify the TMAs of 1st, 2nd and 3rd level, as the case may be, required by the MGP, leveraging its installed capacity, certified specialist personnel and strategic location by providing these maintenance services to those activities and entities with higher commercial demand, so as to generate adequate funding that will allow it to solve the administrative problem of its organization, and be-

come a profitable and self-sustainable organization in the medium/long term.

Based on the four pillars for the maintenance management of an OMA, the OMA-013 should certify the TMAs with the highest commercial demand required by the MGP, according to its market study and the statistics of its experience in the sector and its strategic vision in the design of its hangars, which can generate financial resources to solve the technical problem of the certifications of its TMAs and as a consequence, allow the OMA-013 to manage itself efficiently and achieve profitability and self-sustainability.

The Aeronaval Maintenance Service must use administrative and financial tools to manage and take advantage of its infrastructure, human resources and strategic location in order to prepare the adequate environment that will allow it to process, before the Admiralty of the MGP, the authorization for OMA-013 to operate as a state-owned enterprise subject to private law and to carry out all the necessary steps that

will allow such operation, bearing in mind the focus on achieving profitability and self-sustainability.

OMA-013 must make the necessary arrangements to become a SOE subject to private law in the short term, taking advantage of the legal framework within which SIMA Callao carries out its activities, so that OMA-13 can perform another business activity of this naval arsenal based in Lima, Peru while maintaining the current organizational culture of OMA-013 as an aeronautical organization, regulated by the General Directorate of Civil Aviation in Peru (DGCA) and by the rules and customs of the world aeronautical activity that influences Peru. The aeronautical sector requires special care due to the risk environment in which it operates, which makes it particular and specific in terms of procedures and traceability.

The strategic plan proposed must be put into practice, comprehending and internalizing all the strategies and objectives formulated, which will have to be pragmatically evaluated before their execution and control during management. The plan must start by the items that generate the greatest profitability and are quickly achievable in the short term in order to improve the current situation and to meet the medium and long term objectives, according to the mission and vision of the organization, changing and expanding strategies and tactics that allow it to maintain the implementation of improvements that are aligned with its mission and objectives.

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