

ENHANCING THE VALUE OF MILITARY PERSONNEL. RESERVE MILITARY PERSONNEL¹

A VALORIZAÇÃO DA CONDIÇÃO MILITAR. O MILITAR NA SITUAÇÃO DE RESERVA

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Abstract

This study aims to discover how to make the best possible use of the Army's career officers in the reserves so that the Army can capitalise on and enhance the value of its human resources. The investigation used an inductive approach, which involves understanding specific aspects to make general inferences. To solve the proposed problem, the answers to two questionnaires were analysed and compared against the Human Capital Valuation model by Delgado (2015). Each questionnaire served a different purpose: the first ascertained the Army's requirements in terms of these resources, and the second determined how to enhance their value. The surveys were delivered to respondents from the six bodies in the Army's Command Structure that encompass all the Units, Establishments and Corps that make up the Portuguese Army. The findings revealed that: one body does not employ any reserve officers and two bodies would not increase these HR; all bodies recognise the value of these officers' experience and technical expertise. Although the valuation model used in this study was not specifically tailored to the military context, it provides a basis for a future model. The study concluded that, in order to enhance the value of these officers, the Army must intervene on the variables *financial well-being*, *entrepreneurial spirit*, *proactive work performance* and *level of qualification*.

Keywords: Career Officers, Reserves, Valuation.

Resumo

O objetivo deste estudo é contribuir para a rentabilização dos Oficiais dos Quadros Permanentes do Exército na situação de reserva, com o intuito de otimizar recursos e, simultaneamente, valorizar a condição militar. A investigação foi desenvolvida recorrendo ao raciocínio indutivo, partindo de uma compreensão do particular para induzir o geral. Atendendo ao problema proposto, procurou-se analisar as respostas a questionários e intercetá-las com o modelo de valorização do Capital Humano de Delgado (2015). Para tal, foram aplicados dois questionários: um para estudar a necessidade do Exército em termos destes recursos, e outro com o intuito de entender a sua valorização. Foi indagada a Estrutura Superior de Comando do Exército, através de seis entidades que enquadram todas as Unidades, Estabelecimentos e Órgãos, e que no conjunto formam o Exército Português. Os resultados obtidos identificam que: uma entidade não possui e duas entidades não necessitam de um aumento destes militares; mas que todas as entidades respondentes identificam a experiência e o conhecimento técnico como mais-valias à sua utilização. No que diz respeito à valorização, pese embora a matriz utilizada não ser exclusiva para o contexto militar, permite uma aproximação a um futuro modelo. Conclui-se que a melhoria da valorização passa pela atuação nas variáveis bem-estar económico, espírito empreendedor, proatividade no desempenho das funções e nível de qualificação.

Palavras-chave: Oficiais Quadros Permanentes, Reserva, Valorização.

Introduction

Although the Portuguese Army is a centuries-old institution, it remains a modern, competent and interoperable organization, one that has always strived to be a model of efficiency and effectiveness by making the best possible use of the resources at its disposal and valuing its Human Resources (HR) (General Staff of the Army, 2017, p. 1).

An organization can be defined as a group of people working towards the same goals (Cunha et al., 2014, p. 18); therefore, an organization is its “people”, who are its main source of value (Delgado, 2015, pp. 58). Furthermore, in the absence of wars and / or other calamities (including natural disasters), the world of business is influenced by demography; the reduction in birth rates and the fact that the younger generations cannot support or provide for the needs of the general population (which is becoming increasingly older and less active, leading to the successive increase of the retirement age) are some of the reasons scholars give to explain the relevance of demography (Drucker, 1999, p. 9).

As the current decline in recruitment makes it difficult for the Army to maintain a stable workforce (General Staff of the Army, 2017, p. 7), it is crucial to find ways to optimise the Army’s HR. Moreover, the pressing need for personnel is a critical problem for the Army, making this study particularly relevant because it addresses the organization’s need to capitalise on its human resources and free up personnel to perform other tasks; furthermore, it reflects the concerns of recent HR management studies, which have focused on valuing Human Capital.

This study is framed within the broader field of Human Behaviour and Healthcare in Military Contexts, more specifically the topic of Human Resource Management (HRM) in Military Contexts, and its focus is on enhancing the value of military reserve personnel.

To narrow the focus of this admittedly broad topic, the study was delimited in terms of space, content and time, as advised by Santos and Lima (2016). Thus, with regard to space, the study will focus on the Portuguese Army; as for content, since the sample under analysis is broad and new members are admitted every year, the study will focus on reserve officers in the Army’s Career Staff (CS), who are also the object of study. Although there are three modalities of reserve duty, the study will only focus on military personnel with inactive reserve status. The time-horizon of the study covers the period from 2015 to the present day, as that was the year the Statute applicable to Military Personnel (EMFAR), which defines the status of military reserve personnel, was amended by Decree-Law No. 90/2015 of 29 May.

The general objective of this study is to determine how the Army can capitalise on its reserve officers by having them perform duties in the Army’s Units, Establishments and Corps (U/E/C) in order to optimise and enhance the value of these officers; to that end, the following specific objectives (SO) were defined:

- SO1: To analyse the Army’s requirements in terms of career reserve officers by functional area.
- SO2: To determine how the army can enhance the value of its career reserve officers.

The study will attempt to answer the following Research Question: How can the Army capitalise on its career reserve officers?

The research problem will be solved by analysing the answers to two questionnaires and

comparing them against the Human Capital valuation model proposed by Delgado (2015) to identify strategies for optimising the use of the Army's reserve officers. These strategies should lead to improvements in terms of personnel management practices (benefitting the organization) and valuation (benefitting military personnel).

To describe the study's methodology and findings in a succinct and coherent way, the study was divided into five chapters: (1) the introduction, (2) the theoretical and conceptual framework, which contains the main concepts addressed in the study, (3) the choice of methodology and methods, which determined how the research was carried out, (4) the data and findings, and, finally, (5) the conclusions.

1. Theoretical and conceptual framework

This section provides the conceptual framework, explains the main concepts addressed in the study and presents the analysis model.

1.1. Literature review

1.1.1. The Military Status

Article (Art.) 2 of the Law governing the General Bases of the Statute applicable to Military Personnel describes the military status as: subordination to national interests; permanent availability for duty, even if it goes against their own interests; a conduct that reflects the military ethos and that honours the prestige and moral value of the Armed Forces (AAFF) (Law No. 11/89, p. 2096).

1.1.2. Military Career

Pursuant to Art. 27 of the EMFAR, military careers consist of a hierarchy of ranks that unfold into categories, which are occupied by specialised staff and correspond to specific positions and functions that must be performed (Decree-Law No. 90/2015, p. 3205).

A position is the "set of duties, tasks and procedures inherent to the functions assigned to an individual, which correspond to roles in the organizational structure of the AAFF" (General Staff of the Army, 2002, part 3, p. I-6). On the other hand, a function is the set of tasks inherent to work posts located in different work units, which are similar in terms of skills, requirements and responsibilities, although the means by which they are performed and other general, environmental or organizational requirements may vary (Peretti, 1998).

Art. 33 of the EMFAR states that military positions are predefined roles in the organizational structure of the AAFF, which correspond to legally defined functions, as well as roles in state agencies or in international military organizations. These positions are filled when someone is appointed to them, suspended when the person holding the position is temporarily removed, and terminated when they are discharged (Decree-Law No. 90/2015, p. 3206).

Moreover, Art. 34 of the EMFAR defines military functions as any function where the duties assigned by law to the military are performed. Military functions are classified as follows: (1) Command, (2) Direction or oversight, (3) General Staff, (4) Technical oversight, and (5) Execution (Decree-Law No. 90/2015, p. 3206).

1.1.3. Reserves

The reserve status is defined in Art. 141(1) of the EMFAR as the status to which active duty personnel transfer when they meet the requirements defined in the statute while remaining available for duty at all times, one of the conditions of the military status (Decree-Law No. 90/2015, p. 3222).

Law No. 174/99 of 21 September – the Law on Military Service (LSM) -, and the EMFAR state that national citizens may serve in the military as reservists in one of three ways:

- Pursuant to Art. 45(1) of the EMFAR, career personnel may transfer to the reserve forces with inactive reserve status or with active duty reserve status (Decree-Law No. 90/2015, p. 3207);

- As described in Art. 4 of the LSM, the availability reserves consist of the “[...] Portuguese citizens who separated from the military before the cut-off age for military service” (35 years of age) (Law no. 174/99, p. 6541);

- As described in Art. 5 of the LSM, the recruitment reserves consist of the “[...] Portuguese citizens between the ages of 18 and 35 who have never served in the military but may be recruited under exceptional circumstances” (Law No. 174/99, pp. 6541-6542).

Art. 153 of the EMFAR describes the conditions under which active duty career personnel may transfer to the reserves: when they reach the age limit for their rank; when they reach the maximum length of stay in their rank; at the age of 55, if they have completed 40 years of active duty, service members may notify the military in writing that they wish to resign their commission; any additional exceptions defined in the law (Decree-Law No. 90/2015, p. 3223). For example, Art. 119 (4) of the EMFAR states that:

[...] military personnel who transfer to the reserves under Art. 153 (1) (a) and Art. 155, and have not completed 40 years of active duty for reasons that cannot be attributed to them, can serve the remaining years in the active duty reserves, even if they exceed the numbers authorised by law. (Decree-Law No. 90/2015, p. 3219)

Pursuant to Art. 156 (9) of the EMFAR, military personnel who transfer to the reserves can only reenlist back into active-duty service after one year (Decree-Law No. 90/2015, p. 3224). According to (3) of the same Art., reserve personnel not on active duty may be called up for active-duty service, assigned to positions, or called upon to perform functions in the public interest missions of the AAFP, under the terms of the law.

Reserve personnel may remain in the inactive reserves for up to five years, either consecutively or at intervals, after which they automatically transition to retired status, as described in Art. 161 (1) (b) of the EMFAR (Decree-Law No. 90/2015, p. 3225).

Table 1 shows the number of career officer transfers to the reserves over the last four years. Some of these officers are currently on active-duty service in the Army, both within and outside the AAFP.

Table 1 – Number of career officer transfers to the reserves over the last four years.

Year	Reason							Total
	Request		Notice	Compulsory				
	20 or more years of MST ²	Special leave to stand for election	36/40 years of MST or/and 55 years of age	Age limit	Not selected for promotion	Max. time in Rank	Discharge	
2015	45	-	16	14	3	-	-	78
2016	95	-	28	23	4	7	1	158
2017	-	-	21	18	5	3	-	47
2018	-	-	13	22	3	3	-	41

Source: Data obtained from the Department of Inactive Reserve Personnel, Directorate of Administration and Human Resources (2019).

Art. 156 (1) of the EMFAR states that reserve military personnel can return to active duty to fill positions or perform functions in the organizational structure of the AAFP and the Ministry of Defence (MDN), in agencies under the MDN, or in other State agencies, and that their duties shall be consistent with their rank and physical and mental state (Decree-Law No. 90/2015, p. 3224).

Art. 156(2) of the EMFAR states that, depending on their category, military personnel who perform functions in the organizational structure of the AAFP and the MDN cannot generally be appointed to command, direction or technical oversight functions (Decree-Law No. 90/2015, p. 3224).

Reserve personnel can be called up for active-duty service (Art. 156 (7) of the EMFAR): (1) by order of the Chief of General Staff (CEM) of their branch, (2) by being called up by the CEM of their branch to participate in training or exercises, (3) by submitting a request duly authorised by the CEM of their branch (Decree-Law no. 90/2015, p. 3224).

Art. 44 (1) (b) of the EMFAR defines the maximum number of active-duty career reservists for each branch and category, both within and outside the organizational structure of the AAFP (Decree-Law no. 90/2015, p. 3207). A Decree-Law is issued every year detailing all circumstances in which military personnel is authorised to serve within and outside the AAFP. As Table 2 shows, the number of active-duty reservists serving within and outside the AAFP has not changed significantly over the last four years.

² Military Service Time

Table 2 – Career reserve officers on active duty-service.

Rank	31dec15	31dec16	31dec17	31dec18
Lieutenant-general	2	3	3	2
Major-general	11	14	13	14
Colonel	38	34	42	46
Lieutenant-colonel	56	54	59	60
Major	21	19	22	19
Captain	5	3	3	2
Total	133	127	142	143

Source: Data obtained from the Department of Reserve Personnel of the DAHR³ (2019).

1.1.4. Capitalising on Human Resources

Managing people can be a humanistic endeavour that acknowledges how people contribute to a company’s business goals and add value to the organization. Therefore, since a company is an open system that interacts with the environment in which it operates, its success depends on the dynamic balance between the changes in the external environment and the organization’s internal ability to adjust with the necessary flexibility and speed of reaction (Camara, Guerra, & Rodrigues, 2003, p. 29).

As mentioned earlier in this Art., the Army must find ways to make the best possible use of its HR, which remain its most important and valuable asset (General Staff of the Army, 2017, p. 6).

If an organization wishes to optimise its HR, it must make Strategic Plans, that is, it must analyse how to achieve its organizational objectives while promoting and supporting the individual objectives of its employees (Chiavenato, 1999, p. 58).

As such, one of the Army’s Strategic Objectives is to improve its recruitment and management practices, since HR are its “centre of gravity” and the asset that most contributes to organizational and operational success, allowing the Army to accomplish its Mission and fulfil its various commitments (General Staff of the Army, 2017, p. 11).

Therefore, to optimise the use of its HR, the Army may have to call up its career reserve officers (which are the focus of this study) to perform functions in the Army.

In the context of this work, capitalising on the Army’s career reserve officers does not mean to make them economically profitable; however, this is the term that best describes the double objective of optimising (organizational perspective) and valuing (personal perspective) these HR.

Career reserve officers can participate in Army life by performing activities and tasks, or functions and positions, or even by providing services on a temporary or permanent basis.

³ Directorate of Administration and Human Resources.

1.2. Analysis model

Information about HR is important not only for management practices but also for the environment outside the organization. The first studies that conceptualised and measured the economic value of Human Capital were carried out in the early 1970s (Jaggi & Lau, 1974). Because individuals play a key role in developing a successful organization through creativity and innovation (vital elements for survival in the face of a volatile, competitive and hostile environment) – by providing expertise, skills, or qualifications that add value to the organization –, they must be regarded as valuable assets (Martins & Ferreira, 2015). Some studies have confirmed that Human-capital-enhancing HRM⁴ fully mediates CEO transformational leadership and stakeholder perceptions of organizational outcomes (Zhu, Chewb, & Spangler, 2005). Current concerns for businesses include ensuring employee well-being and providing a good work environment, the ability to acquire expertise, improve techniques, and develop skills or abilities that increase employee potential (Delgado, Vale, & Silva, 2015).

Human Capital valuation has unique benefits in terms of knowledge, performance and learning, and it can help organizations turn their Human Capital into a competitive advantage (Martins & Ferreira, 2015). It is also the conceptual basis for engagement, which requires involved, energetic, dedicated and focused workers (Schaufeli & Salanova, 2008). Current scholarship views human assets as enabling business processes (investment) rather than as a resource that comes at a cost (Martins & Ferreira, 2015).

From the perspective of Social Capital, valuation is associated with an organization's culture, values, mission, management style and leadership (Fitas & Santos, 2014); from the perspective of Human Capital valuation, it is associated with six components and corresponding variables (Table 2), all of which enhance valuation – the less variables a component has, the lower its importance (Delgado, 2015).

The analysis carried out for this study involved comparing the questionnaire responses against the matrix in Table 3 to ascertain if (and how) the suggested measures enhance valuation.

⁴ The concept of “Human-capital-enhancing human resource management” involves considering individuals’ self-realization and growth needs, as well as human resource management practices such as training, performance appraisals, and a rewards systems to motivate and empower employees (Zhu, Chewb, & Spangler, 2005).

Table 3 – Human Capital valuation components and corresponding variables.

Human Capital Components	Variables	Number of variables
Well-being and training	Financial well-being Number of training hours per worker Financial incentives Physical condition Satisfaction with the benefits provided by the organization Relationship with co-workers	6
Professionalism and expertise	Honesty towards the customer Knowledge-sharing Professional ethics	3
Personal and technical characteristics	Innovative and creative spirit Entrepreneurial spirit Organizational commitment Teamwork High employee turnover	5
Performance	Rigorous work performance Responsible work performance Quality of the service provided Proactive work performance	4
Qualifications and Experience	Level of qualification Experience	2
Leadership and Decision making	Leadership Decision making	2

Source: Adapted from Delgado (2015).

Based on the research question and on the specific objectives defined above, the following subsidiary questions (SQ) were elaborated:

- SQ1: What are the Army’s requirements in terms of career reserve officers and what are the functional areas where they can perform functions?
- SQ2: What measures can be taken to enhance the value of career reserve officers?

2. Methodology and methods

This chapter describes the methodology and methods used in the study, as they were deemed the most appropriate to the object of study, the study sample and the desired results

2.1. Methodology

This study used the “research onion” methodology defined by Saunders et al. (2009), which consists of a layer system whose contents are analysed from the outermost to the innermost layer: Approach, Strategy, Design, Time Horizon, Data Collection and Data Analysis (Santos & Lima, 2016, p. 35).

The approach used in this study begins by examining specific aspects to make general inferences, that is, an inductive approach.

Strategy refers to the method by which the information is collected. This study used questionnaire answers to carry out a quantitative analysis (as the answers provide metrics that can be assessed) with some qualitative elements.

As for the research design, the study attempted to solve the research problem by analysing the answers to the questionnaire delivered during the exploratory phase and comparing them against the Human Capital Valuation model by Delgado (2015) to identify strategies to optimise the use of the Army's reserve officers, which are expected improve RH management practices (benefitting the organization) and enhance HR valuation (benefitting military personnel). Figure 1 shows an outline of the study's methodological design.

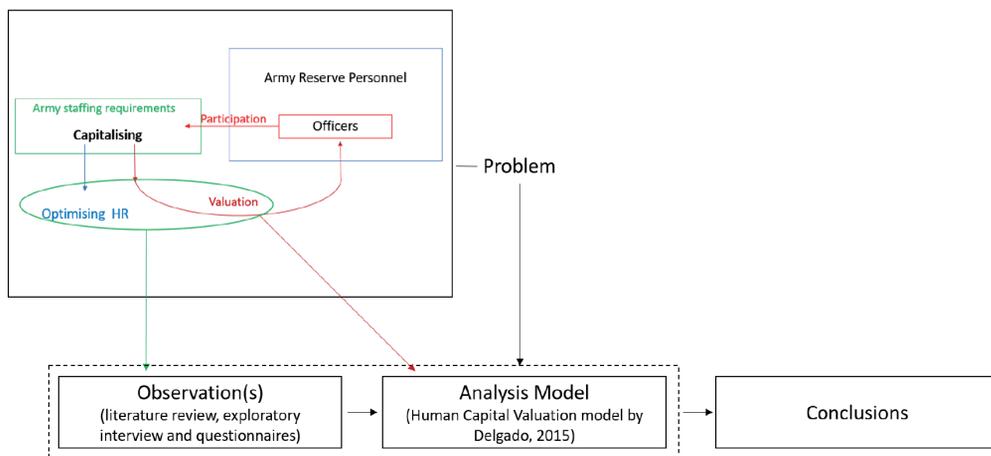


Figure 1 – Methodological outline of the study.

The Time Horizon of this study, which determines the time-frame during which the observations are collected, is a cross-sectional design that covers a fixed period from 2015 to the present day.

The next subchapter describes the choice of participants, the data collection instruments and data processing techniques, that is, the Data Collection and Data Analysis procedures.

2.2. Method

This section describes the participants, the procedure, the data collection instruments, and the data processing techniques used in the study.

2.2.1. Participants and procedures

Participants. The study participants consisted of officers from the bodies that comprise the Army's Command Structure, that is, the Office of the Chief of Staff of the Army (GabCEME), the Office of the Vice-Chief of Staff of the Army (GabVCEME), the Ground Force Command (CFT), the Personnel Command (CmdPess), the Logistics Command (CmdLog) and the Directorate of Finance (DFin). The study interviewed officers from these six bodies so that the answers would represent not only the structure as a whole but also the individual units under their command.

Procedure. Two questionnaires were sent at two different times to the Heads of the Offices of each of body of the Army's Command Structure. The first questionnaire was delivered from 5 to 12 November 2018 and the second questionnaire was delivered at a later time, from 27 November to 7 December 2018. Both questionnaires were sent to the Heads of the various bodies by e-mail, via google® forms, accompanied by an explanation of the contents.

2.2.2. Data collection instruments and data processing techniques

Due to the characteristics of the object of study and the answers that the study aimed to obtain, two different questionnaires were delivered at two different times during the investigation.

The first questionnaire aimed to understand how career officers in the active-duty reserves are distributed, and, if the study reveals that they add value to the organization, how they will be needed in the future; the questionnaire contained six close-ended questions (to determine the number of these officers and the functional areas to which they are assigned) and an open-ended question that focuses on how they benefit the organization.

The second questionnaire aimed to ascertain whether respondents agree that performing functions as reservists enhances the value of career reserve officers; the questionnaire contains seven closed-ended questions based on the components corresponding variables of Delgado's Human Capital model (2015).

After the questionnaire answers were received, the data were transferred to Excel® sheets (using the functionality provided by the forms used to deliver the questionnaire) so that they could be used to elaborate explanatory tables and charts.

3. Data and findings

As described in the previous chapter, the questionnaires were sent by e-mail to the Army's Command Structure, which comprises six bodies.

The section below lists the numbers of reserve personnel authorised for active duty by decree-law since 2015; the next section will present the data obtained in the questionnaires, first separately and afterwards combining the result of both questionnaires.

An analysis of the decree-laws issued annually from 2015 up to and including 2018, which define all situations in which military personnel can serve in the AAFB and the number of military personnel authorised for active-duty service, revealed that:

- In 2015, the maximum number of reserve personnel that could be called up for active-duty service in the organizational structure of the AAFB was 67, and the maximum number of reserve officers in the EMGFA was 12 (Decree-Law No. 31/2015, p. 1307). That year, there were 56 reserve officers on active-duty service in the Army and ten in the EMGFA structure;
- In 2016, the maximum number of reserve personnel authorised for active-duty service in the organizational structure of the AAFB was again 67, and the maximum number of officers authorised to serve in the EMGFA structure remained 12 (Decree-Law No. 241/2015, p. 8981). That year, there were 50 reserve officers on active-duty service in the Army and nine in the EMGFA structure;

– In 2017, the maximum number of reserve personnel authorised for active-duty service in the organizational structure of the AAFP was 117, while the maximum number of officers authorised to serve in the EMGFA structure remained 12 (Decree-Law No. 84/2016, p. 4773). That year, there were 60 reserve officers on active-duty service in the Army and nine in the EMGFA structure;

– In 2018, the number of reserve personnel authorised for active duty service in the organizational structure of the AAFP was 110, while the maximum number of officers authorised to serve in the EMGFA structure increased to 15 (Decree-Law No. 07/2018, p. 900). That year, there were 64 reserve officers on active-duty service in the Army and 14 in the EMGFA structure;

Therefore, in the years analysed, the following vacancies remained unfilled: 1 vacancy in 2015; 8 in 2016; 48 in 2017; 32 in 2018.

This analysis of the Organization's Staff Numbers (QOP) reveals that there are 51 vacancies for reserve officers (43 for the ranks of Major, Lieutenant-colonel and Colonel and 8 for the General Officers subcategory). Furthermore, for the time horizon under study, the authorised number of reserve personnel is higher than the total sum of the QOP, therefore, some personnel must have been assigned to positions not covered in the QOP. The data for 2018 shows that 13 reserve officers were appointed to positions not defined in the QOP, and that 32 vacancies remained unfilled.

3.1. Questionnaire 1

The first questionnaire aimed to understand how career reserve officers are distributed throughout the organization, as well as to ascertain if there is a need to increase the number of career reserve officers on active duty and determine the areas where these resources can most benefit the organization.

3.1.1. Number of reserve personnel on active-duty service

Table 4 shows the number of career reserve officers by rank and how they are distributed by the various bodies according to the total number of personnel and functional area⁵.

⁵ Advisory (Adv), Technical (Tec) and Direction (Dir).

Table 4 – Distribution of career reserve officers by functional area.

Body	Employs reservists	Major	Lieutenant-colonel	Colonel	Brigadier-general	Major-general
DFin	No	-	-	-	-	-
CmdLog	Yes	-	-	1 (GS)	-	-
CmdPess	Yes	2 (Dir)	4 or more (Dir and Tec)	4 or more (Dir and Adv)	-	-
GabVCEME	Yes	2 (Adv and Tec)	3 (Dir and Adv)	4 or more (Dir and Adv)	-	1 (Dir)
GabCEME	Yes	-	-	-	-	4 or more (Tec and Adv)
CFT	Yes	-	-	2 (Adv)	-	-

The data shows that, while the DFin acknowledges their usefulness, it does not employ any career reserve officers; the CmdLog only has one officer with the rank of Colonel; the CmdPess and the GabVCEME have more than ten Senior Officers, while the GabVCEME also employs a Major-general; the GabCEME has more than four officers, all with the rank of Major-general; finally, the CFT has two Colonels, both on advisory duties. As for functional areas, the General Staff function was only mentioned once (the Colonel who performs functions in the CmdLog), and all remaining officers perform Direction, Advisory and Technical functions.

3.1.2. Staffing requirements

Table 5 shows the staffing requirements of each body should the decision be made to increase the number of career reserve officers on active-duty service. In addition to rank, the table also shows the areas where these officers would perform functions.

Table 5 – Staffing requirements in terms of career reserve officers by functional area.

Body	Requires reservists	Major	Lieutenant-colonel	Colonel	Brigadier-general	Major-general	Lieutenant-general	General
DFin	Yes	Dir	Dir	-	-	-	-	-
CmdLog	Yes	Adv and Tec	Adv and Tec	Adv and Tec	-	-	-	-
CmdPess	No	-	-	-	-	-	-	-
GabVCEME	Yes	Adv and Tec	Adv	Dir and Adv	-	-	-	-
GabCEME	Yes	-	Adv and Tec	Adv and Tec	Adv and Tec	Adv and Tec	-	-
CFT	No	-	-	-	-	-	-	-

As for the usefulness and / or benefits of increasing the number of career reserve officers, although the CmdPess and the CFT acknowledge that they bring value to the organization, both bodies state that they would not increase their number; the DFin would increase the number of reserve officers with the rank of Major and Lieutenant-colonel in the Direction area; the CmdLog would increase the number of Senior Officer positions for reserve officers in the Assistance and Technical areas; the GabVCEME would increase the number of officers with the rank of Major in the Assistance and Technical areas, of officers with the rank of Lieutenant-colonel in the Assistance area, and of officers with the rank of Colonel in the Direction and Assistance areas; the GabCEME would not increase the number of officers with the rank of Major but would increase the vacancies for officers with the rank of Lieutenant-colonel, Colonel, Brigadier-general and Major-general in the Assistance and Technical areas.

Four (of the six) bodies stated that they would increase the number of these officers by approximately 66.66% in the Advisory and Technical areas; and only one body (the DFin) would increase the number of career reserve officers in the Direction area.

In terms of subcategories, the GabCEME is the only body that stated that it would increase the number of General Officers; all other bodies would only increase the number of Senior Officers.

3.1.3. Organizational benefits

Table 6 shows the benefits of having CS reserve officers perform functions, in the opinion of respondents.

Table 6 – Organizational benefits according to each body.

Body	Benefits
DFin	“The professional experience that these officers acquired throughout their careers and their technical and professional qualifications for certain critical functions and projects, such as public accounting (Accounting Standardisation System), taxation, auditing, and projects under the Integrated System for National Defence Management (SIGDN)”.
CmdLog	“The Staff Numbers are at 75% due to lack of Human Resources; technical expertise; operational experience”.
CmdPess	“The most important benefit that these officers bring is their accumulated experience, and the fact that their relative distance to the daily life of the Career Staff may make their decisions more impartial.”
GabVCEME	“Due to their usually greater professional experience.”
GabCEME	“Experience, technical expertise and General Staff”.
CFT	“It would free up active duty officers to perform functions other than administration and oversight, such as Command, Direction and General Staff. If they have specialised technical skills, they may perform functions as personal advisors”.

The benefits of employing these officers that were mentioned by all respondents referred to their experience and technical skills / expertise. Additionally, the DFin identified the need for specialised / technically qualified personnel; the CmdLog indicated that they lack staff; the CmdPess referred their distance from the daily routine of active duty and how this could lead them to make more impartial decisions; the GabVCEME did not refer to any other advantages; the GabCEME only added "General Staff"; and the CFT stated that officers with specialised technical skills may be used as personal advisors.

3.1.4. Integration and discussion of the findings of questionnaire 1

The data showed that there are no reserve officers performing functions in the DFin, although this body states that this would bring benefits associated with the experience these officers acquired throughout their career.

The CmdLog employs one reserve officer, however, due to staffing needs, it would increase the number of reserve officers as they can provide technical expertise and operational experience.

The CmdPess employs nine or more reserve officers. Although this body acknowledges that the experience of the career officers makes them an important resource, it would not increase their number, as the ones they already employ are sufficient.

The GabVEMEM and the GabCEME employ fourteen or more officers. The GabCEME has four or more and the GabVEMEM has nine or more. These bodies would increase the number of reserve officers in their staff because they recognise the value of their professional experience.

The CFT, which employs two reserve officers, mentioned the fact that they free up other active duty officers for functions other than administration or oversight; however, this body does not plan to increase the number of its reserve officers.

The data obtained and discussed so far provided the answer to SQ1.

3.2. Questionnaire 2

The second questionnaire aimed to ascertain the opinions of respondents regarding the valuation variables defined in the Human Capital model. The data were organized according to component and variables, as advised by Delgado (2015). Although general and integrated calculations were carried out to obtain a comprehensive view of the valuation model, the data were not analysed for each respondent body as this would not provide answers of interest to the study.

3.2.1. Analysis by Human Capital components

The data presented in Table 7 shows the minimum, maximum, and average frequencies of the number of variables identified by the respondents for each Human Capital component. These data were used to produce Chart 1.

Table 7 – Combined frequencies of the number of variables identified for each component.

Human Capital Components	No. var	No. of identified variables							Min	Max	Average
		0	1	2	3	4	5	6			
Well-being and training	6	0	3	2	1	0	0	0	1.00	3.00	1.66
Professionalism and expertise	3	0	2	3	1	-	-	-	1.00	3.00	1.83
Personal and technical characteristics	5	0	2	2	2	0	0	-	1.00	3.00	2.00
Performance	4	0	2	2	1	1	-	-	1.00	4.00	2.16
Qualifications and Experience	2	1	4	1	-	-	-	-	0.00	2.00	1.00
Leadership and Decision making	2	0	4	2	-	-	-	-	1.00	2.00	1.33

With the exception of the Qualifications and Experience component, the minimum score was 1, which reveals that at least one item associated with valuation was marked in each component. Still with regard to Qualifications and Experience, one respondent did not mark any variables; on the other hand, in the same component but regarding Leadership and Decision Making, two respondents and one respondent, respectively, marked all the variables of the valuation components. The symmetry of the maximum and minimum response scores indicate a discrepancy in the respondents' opinions regarding these variables; given that certain variables were marked, this duality suggests that some components do not fit the military context.

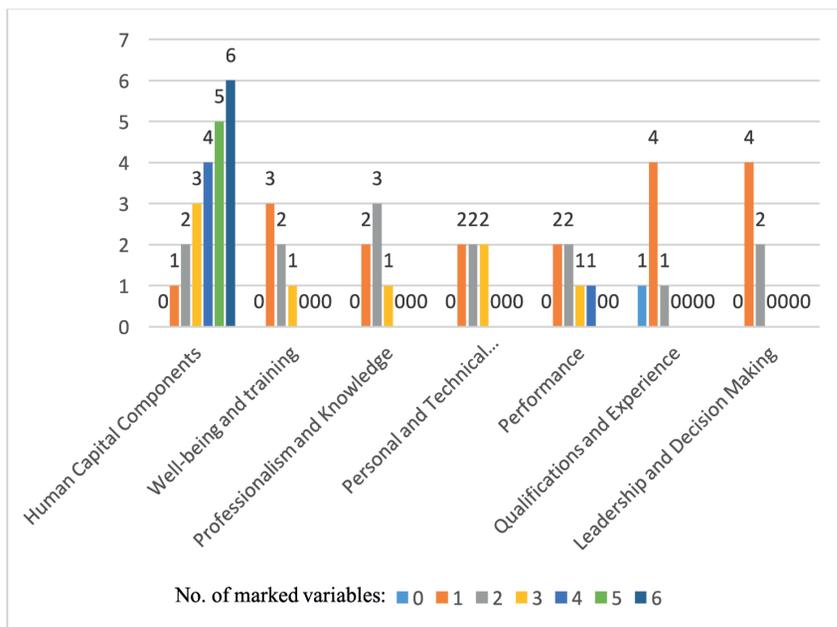


Chart 1 – Distribution of the variables marked by respondents for each component.

3.2.2. Analysis of the variables in each respondent

Once the components were analysed based on the data in Table 8, it was ascertained that there is a discrepancy in the number of variables marked by respondents (marked var), both in each individual component and overall. In this regard, two aspects should be pointed out: (1) some variables were not marked, which suggests that some components do not fit the military context, and (2) some bodies marked more variables than others.

An analysis of the same table in absolute terms reveals that, the more variables a component has, the less it was marked: Well-being and Training, with six variables, obtained a score of 27.77%, while Leadership and Decision Making, with two variables, obtained a score of 66.66%, which correspond to the minimum and maximum percentage scores.

Another relevant fact is that each respondent could mark a total 22 variables, that the average number of variables marked was ten, and that the interval between variables ranged from six (27.27%) to 17 points (77.27%). Overall, the variables were marked 60 times out of a total 132 possible references, which corresponds to a total reference percentage of 45.45%. This confirms the note above regarding the discrepancies in the answers, which suggest that the matrix should be adapted to the context under study.

Table 8 – Combined frequencies of the number of variables marked in each component.

	No. var	CmdLog		DFin		GabVCEME		GabCEME		CmdPress		CFT		Total marked var	Possible references	Reference percentage
		Marked var	%	Marked var	%	Marked var	%	Marked var	%	Marked var	%	Marked var	%			
Human Capital Components	6	3	50.00%	2	33.33%	1	16.67%	1	16.67%	2	33.33%	1	16.67%	10	36	27.77%
Well-being and training	3	3	100.00%	2	66.67%	2	66.66%	2	66.66%	1	33.33%	1	33.33%	11	18	61.11%
Professionalism and expertise	5	3	60.00%	3	60.00%	2	40.00%	2	40.00%	1	20.00%	1	20.00%	12	30	40.00%
Personal and technical characteristics	4	4	100.00%	3	75.00%	2	50.00%	2	50.00%	1	25.00%	1	25.00%	13	24	54.17%
Performance	2	2	100.00%	1	50.00%	0	0.00%	1	50.00%	1	50.00%	1	50.00%	6	12	50.00%
Qualifications and Experience	2	2	100.00%	2	100.00%	1	50.00%	1	50.00%	1	50.00%	1	50.00%	8	12	66.66%
Leadership and Decision making	22	17	77.27%	13	59.09%	8	36.36%	9	40.90%	7	31.18%	6	27.27%	60	132	45.45%

Table 9 contains the scores of the answers to questionnaire 2, which was based on the valuation variables in Delgado's Human Capital model (2015). The table shows the number of times each item was marked (the minimum and maximum scores were 0 and 6, respectively, which correspond to 0.00% and 100.00%). The analysis of the table revealed critical scores of zero, which means that no respondents marked a given variable, and scores of five and six, which indicate that more than 80.00% of respondents marked a given variable as being determinant for valuation.

The variables that obtained a score of zero were *no. of training hours per worker*, *financial incentives and physical condition*, in the Welfare and Training component, and *innovative and creative spirit*, in the Personal and Technical Characteristics component. This shows that no respondents marked these variables as determinant for the valuation of reserve officers (who can be called up for active-duty service in the Army). The truth is these officers will not require training, as they will be called up for the skills they already possess; military personnel are also aware of what is required of them in physical terms, what they will be paid, and what tasks they must perform, therefore innovation and creativity skills are not expected to be relevant.

On the other end of the spectrum, the variables that were marked five or more times are: *relationship between co-workers*, in the Well-being and Training component; *knowledge-sharing* and *professional ethics*, both in the Professionalism and Expertise component; *organizational commitment* and *teamwork*, in the Personal and Technical Characteristics component; *rigorous work performance* and *quality of the service provided*, in the Performance component, and finally; *experience*, in the Qualifications and Experience component. This confirms the analysis of questionnaire 1: these officers have specialised technical, cultural and organizational experience and expertise that will allow them to integrate quickly and seamlessly.

Table 9 – Answers to questionnaire 2.

Human Capital Components	Valuation variables	CmdLog	DFin	GabVCEME	GabCEME	CmdPess	CFT	Counts	%
Well-being and training	Financial well-being	x						1	16.66%
	Number of training hours per worker							0	0.00%
	Financial incentives							0	0.00%
	Physical condition							0	0.00%
	Satisfaction with the benefits provided by the organization	x	x			x		3	50.00%
	Relationship with co-workers	x	x	x	x	x	x	6	100.00%
Professionalism and expertise	Honesty towards the customer	x						1	16.66%
	Knowledge-sharing	x	x	x	x	x		5	83.33%
	Professional ethics	x	x	x	x		x	5	83.33%
	Innovative and creative spirit							0	0.00%
	Entrepreneurial spirit		x					1	16.66%
	Organizational commitment	x	x	x	x	x		5	83.33%
	Teamwork	x	x	x	x		x	5	83.33%
	High employee turnover	x						1	16.66%
	Rigorous work performance	x	x	x	x			4	66.66%
	Responsible work performance	x	x	x				3	50.00%
	Quality of the service provided	x	x		x	x	x	5	83.33%
	Proactive work performance	x						1	16.66%
	Level of qualification	x						1	16.66%
	Experience	x	x		x	x	x	5	83.33%
Leadership	x	x	x			x	4	66.66%	
Decision making	x	x		x	x		4	66.66%	

In order to enhance the value of its HR, the Army should intervene on the variables that were marked less times, especially on those that were only marked once, as shown in Table 10.

Table 10 – Variables marked once in each component.

Human Capital components	Valuation variables
Well-being and training	Financial well-being
Professionalism and expertise	Honesty towards the customer
Personal and technical characteristics	Entrepreneurial spirit
	High employee turnover
Performance	Proactive work performance
Qualifications and experience	Level of qualification

The data suggest that, to increase the value of its career reserve officers, the Army should intervene on the variables *financial well-being*, *entrepreneurial spirit*, *proactive work performance*, and *level of qualification*. The remaining variables that were only marked once, *honesty towards the customer* and *high employee turnover*, are not applicable to the context under study because there are no clients or entrepreneurship in the Army. If the valuation model is adapted to the military context, these two variables will likely be removed.

The findings presented and discussed above provided the answer to subsidiary question 2.

3.3. Brief overview

The data obtained for the time horizon under study revealed one aspect common to all bodies, which is that the Army does not fill all the vacancies authorised for reserve military personnel. It was also shown that the number of reserve personnel authorised for active-duty service is higher than the sum of all the QOP, therefore, the remaining personnel are occupying positions outside the QOP. This suggests that the number of positions available in the QOP do not match the number of authorised staff.

According to the data obtained, of all respondents, only one (DFin) does not employ any career reserve officers. However, the DFin was among the respondents who mentioned the need to increase these resources, unlike the CmdPess and the CFT, which, despite recognising their importance like all other respondents, would not increase the number of these officers.

The qualitative interpretation of the open-ended question in questionnaire 1 revealed that experience and skills / expertise are the most valuable assets provided by these officers, an opinion shared by all respondents.

According to the requirements set by Delgado (2015), none of the respondents (score of 0.00%) found the variables *number of training hours per worker*, *financial incentives*, *physical condition* e *innovative and creative spirit* relevant in terms of enhancing the value of the career reserve officers called up to perform functions in the Army. On the other hand, the variables *relationship with co-workers*, *knowledge-sharing* and *organizational commitment* were marked by all respondents (100%) as factors that enhance the value of the military personnel (career reserve officers) called up to perform functions in the Army. This is based on the fact that these officers already know what the organization requires of them, what their responsibilities are, and what they will be paid, in addition to the fact that they have specialised technical expertise and experience about the Army's functioning

and organizational culture (which is specific to the institution), and will be able to integrate quickly and seamlessly.

Due to the significant differences in the scores obtained by the variables, it was not possible to identify a principal component, which suggests that the model should be adapted to the military context. This may involve eliminating the unmarked variables, as well as reformulating or removing other variables that do not apply to the military context (such as *honesty towards the customer* and *high employee turnover*).

The answer to the Research Question is that, from the perspective of the organization, four (66.66%) of the six bodies surveyed would increase the number of career reserve officers, despite all respondents (100.00%) having recognised their value to the organization, mainly due to their experience and technical expertise. From the perspective of these HR, the Army should intervene on the variables that were only marked once: *financial well-being*, *entrepreneurial spirit*, *proactive work performance* and *level of qualification*. To enhance the value of its HR, the Army should reinforce these items.

Conclusions

The reduction of the recruitment pool makes it difficult for the Army to maintain a stable workforce. As this constitutes a critical and immediate problem for the Army, it is crucial to find ways to optimise the HR at its disposal. This study's relevance stems from the fact that it aims to respond to the organization's need to make the best use of available resources, freeing up personnel for other tasks, while also reflecting the current concerns of HR management studies by focusing on how to enhance the value of the organization's Human Capital.

This following Research Question helped guide the study: How can the Army capitalise on its career reserve officers? Based on this question, an analysis model was elaborated in which questionnaire answers were analysed and compared to the Human Capital valuation model proposed by Delgado (2015). The aim was to find strategies to optimise the use of the Army's career reserve officers that benefit the organization and enhance the value of these officers. To do so, using an inductive approach, which involves understanding the specific to infer the general, two questionnaires were developed, each addressing a different goal. The questionnaires were delivered at different times in the investigation to the bodies that comprise the Army's Command Structure, which encompass all the U/E/C and thus represent the Portuguese Army as a whole.

To achieve the study's general and specific objectives, a research question and corresponding subsidiary questions were elaborated, which the study answered by analysing and interpreting the data obtained from the questionnaires.

Thus, the answer to SQ1, which concerned the need for career reserve officers, was that, except for the CmdPess and the CFT, all respondents stated that they would increase these resources; this group includes the DFin, which does not employ any reserve officers at this time but foresees the need to do so in the future. The activities that may be performed by career reserve officers were divided by functional area. The data revealed that four (of the six) respondent bodies stated that they would increase the number of these officers (by 66.66%) in the Assistance and Technical areas; and that only the DFin would require more career

reserve officers in the Direction area. Additionally, only the GabCEME would increase the positions available for General Officers, specifically for the ranks of Brigadier-general and Major-general. The remaining bodies would only increase the number of Senior Officers.

The data obtained from questionnaire 2, which appraised the relevance of the valuation variables, provided the answer to SQ2, based on a critical score of five or more bodies ($N \geq 5$), that is, at least 83.33%. Thus, the variables that were deemed the most relevant to the valuation of these officers are: *relationship between co-workers, knowledge-sharing, professional ethics, organizational commitment, teamwork, rigorous work performance, quality of the service provided*, and, finally, *experience*.

To better explain the study's the Research Question, it was specified the term *capitalising* contains the double objective of optimising HR (benefitting the organization) and valuing HR (benefitting individuals), therefore, the answer must address these two aspects. Therefore, on the organizational side, the study revealed that four (66.66%) out of six bodies surveyed would increase the number of career reserve officers, despite all respondents (100.00%) having recognised their value to the organization, mainly due to their experience and technical expertise. From an individual perspective, the study found that the Army should intervene on the variables that were only marked once by respondents: *financial well-being, entrepreneurial spirit, proactive work performance* and *level of qualification*.

One of the unique contributions of this study is that it shed some light on the status of career reserve officers and on how to enhance the value of these resources by determining which variables are the most relevant and which do not influence valuation. Although it was found that the model did not fit the context under study, it can now be used as a basis for a future model. Furthermore, as mentioned above, the study revealed some variables on which the Army can intervene to promote valuation; that is, the variables that, if addressed, will enhance the value of the career reserve officers called up to perform functions in the Army.

The limitations of this study are: one of the tools used in the study was not tailored to the military context, which led to some deviations; the fact that the study analysed the organization's perceptions about its career reserve officers, but not the opposite view (that is, it did not ask career reserve officers what the institution offers them).

To address these limitations, future studies could attempt to eliminate them by: (1) elaborating a valuation questionnaire tailored to the military context, which may or may not be adapted from the one proposed by Delgado (2015), and; (2) collecting the perceptions of reserve personnel about what the Army offers them.

As this study only covered the Officers category, future studies could focus on the Sergeants category, which has different characteristics and entails a broader range of functions.

Based on the analysis of the questionnaires, which revealed that the interviewed bodies would increase the number of career reserve officers, and on the Army's need for HR, the study suggests that the QOPs be reviewed and that more General Staff positions be created for active duty or reserve military personnel.

Once this has been achieved, and considering that a number of vacancies are left unfilled

each year, the Army can define requirements such as rank, specialisation and seniority, among others. Therefore, when the Army requires more HR, it will be able to select the military personnel best suited for the job.

Increasing the numbers of military reserve personnel performing functions in the Army would free up active duty personnel for other areas where they are most needed, thus optimising the use of the Army's HR. Increasing these HR can help the Army maintain a more stable workforce as well as enhance the value of its military personnel, justifying their choice for a military career, and therefore their Military Status.

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