Proposal for a Directive on Internal Control in a Public Institution

LIDIA TAPIA^{1,a}, AMADO FERNANDEZ^{1,b}, GUALTER COUTO^{2,c}, PEDRO PIMENTEL², RUI ALEXANDRE CASTANHO^{3, 4,d}

¹Universidad César Vallejo,
Carretera Pimentel Km. 3.5, Chiclayo, Lambayeque,
PERU

²School of Business and Economics and CEEAplA, University of Azores 9500-321 Ponta Delgada, PORTUGAL

³Faculty of Applied Sciences WSB University, 41-300 Dabrowa Górnicza POLAND

⁴College of Business and Economics, University of Johannesburg PO Box 524, Auckland Park SOUTH AFRICA

^aORCiD: https://orcid.org/0000-0001-7167-5986
^bORCiD: https://orcid.org/0000-0001-5560-5101
^dORCiD: https://orcid.org/0000-0003-1882-4801

Abstract: - The main challenge of Internal Control is to give dynamism to Administrative Management to adapt to modern needs. The research aimed to propose an Internal Control directive to strengthen administrative management at the Lambayeque Regional Headquarters with a descriptive study. , non-experimental design, quantitative research, using the survey information collection technique, validated by experts, applying to a sample of 50 workers, the data were processed in the SPSS V27 software, obtaining results that showed that the Regional Headquarters presents weaknesses in the five dimensions of Internal Control and the four of administrative management, the result of 86%, was the highest score that the respondents favorably favored the proposal for the Internal Control directive, followed by 78%. in favor of defining the roles of the officials and servers involved, the corresponding responsibilities, among others, which will allow for better administrative management, as well as the determination of the corresponding responsibilities in the event of non-compliance and the induction or training that is required.

Key-Words: - Internal control, directive, administrative management, governmental control, implementation, computer application.

Received: July 29, 2023. Revised: November 18, 2023. Accepted: December 21, 2023. Published: January 5, 2024.

1 Introduction

1.1 Background of the Study

Internal Control has been considered an accounting tool to verify or examine in the world for decades. Over the years, this has evolved, especially after various financial scandals due to inefficient management of the companies involved. There is

currently a broader understanding and the need for a change of ideas, and the entities of the state, following the policy of Modernization of the State, have better administrative management that benefits the citizenry.

Contextually, regarding subjects, [1] and [2], reveal that Administrative Management leads the actions aimed at achieving the objectives by

E-ISSN: 2224-2899 458 Volume 21, 2024

carrying out the actions in a fulfilled manner of management. Moreover, as argued, [3], and concise Internal Control is essential for an organization with good performance, valuable and timely as a guarantee and protection of your finances, [4]. Also, denotes the mandatory strengthening of control, which will make management optimally transparent, through Internal Control, reliability and guarantee of resources can be achieved spent, is under the responsibility of the entity's owners, who in some or many cases are unaware of its benefits, [5].

Likewise, indicates that it focused on verifying information, primarily as an accounting tool, evolving to be related to finance. However, China expanded the scope of action to more areas, including almost all organizational activities, [6], also in a study in China, emphasizes that Internal Control is essential in governance because it directs resources and promotes responsibility and corporate performance, [7], in Spain, [8] states: Internal Control is privileged due to its presence in all the administrative and financial acts of the organization, which follows the steps of Administrative Management, to verify if the current regulations that govern it are complied with.

Also, at the global level, on fraudulent financial reporting, the United States indicates that it focused on the verification of information, originally an accounting tool, evolving to relate to the financial; however, China expanded the scope of action to more areas, including almost all organizational activities, also in a study in China, emphasizes, that Internal Control is essential in governance because it directs resources and drives accountability and corporate performance, likewise in Spain, states that Internal Control is privileged by its presence in all administrative and financial acts of the organization, which follows the steps of the Administrative Management, to check if they comply with the current rules that govern it.

On the other hand, in Latin America, Panama, [9], raises that Internal Control is forged as a science, as a tool for prevention and correction to confront all fraud actions. Likewise, Ecuador, [10], points out that control is vital for its technical support in the development of processes consistent with the provisions of government regulations, to achieve the objective set for the good of the community, and to have solid administrative management since it allows the activities to be fluid.

In Peru, it was introduced in 2006 through Law No. 28716; in 2016, the General Standards were published, and in 2019 with directive No. 006-2019-CG/INTEG, guidelines are given for mandatory use for state organizations. Nevertheless, this reveals

that there is no progress in strengthening since the entities have weak Internal Control in their investment projects that need to be addressed and carry out unlawful work. They also need to have meritocratic operational capacity, [11]. Another study, [12], considers that despite its mandatory nature, only 3% of all institutions in the national territory complied with carrying out the implementation. On the other hand, emphasize that, for the community, it is crucial to ensure that Internal Control manages to optimize management since it is inherent to every organization, [13].

Similarly, at the regional level, [14], reveals that in the regional institution, the planning and socialization of strategies must be improved to achieve the objectives; for this purpose, it must provide guidelines to achieve exemplary implementation and improve its G.A. by reflecting deficiencies in the implementation of Internal Control.

2 Problem under Study

In this context, at the Lambayeque Regional Headquarters, particularities have been found in the implementation of Internal Control, which has been reflected through the related service reports on the evaluation or follow-up carried out by the Institutional Control Body to the development of the activities, where they make known about the weaknesses, indicating that documents that do not been well support have attached, as as documentation that partially supports, complying with the percentage of maturity, which does not comply with current regulations, this is because The collaborators do not know the procedures, they are not trained and the high turnover of trusted officials and contracted personnel, in addition to the fact that they hire personnel for the location of services to develop said activities, which do not fully comply, which does allow the adequate development administrative procedures. , due to the lack of controls and supervision of the administrative activities of the Organic Units, which are in charge of the implementation of Internal Control, therefore, makes it necessary to propose an internal directive that regulates the actions to be carried out, as well as the responsibilities for the actions of the officials or servers in charge of the implementation, which will allow having an Administrative Management adjusted to current standards with agile and understandable procedures and an improvement in the actions of officials or servers of the entity.

2.1 Objective of the Study

Then, we propose the general objective, that of proposing an Internal Control directive to strengthen Administrative Management at the Lambayeque Regional Headquarters, through which it will achieve its objectives and goals, making transparent the administrative actions it develops, and through the objectives specific, it is intended to: Diagnose compliance with Internal Control, Diagnose the problem in the administrative management of the Lambayeque Regional Headquarters; Propose an internal directive for its application at the Lambayeque Regional Headquarters and validate the internal directive through expert judgment.

2.2 Previous Studies

At the international level, the study developed in Ecuador regarding compliance with and evaluation of the Army's administrative control regulations, [15], with a quantitative and qualitative approach, applying a survey to managers in charge of organic units, with a 100% representative sample with 69 questions linked to the importance of the COSO components and their application, evidencing that the control environment is insufficient, also obtained deficient its risk assessment and control follow-up and monitoring, measuring on a scale of 0 100, having a higher score the control environment that reached 77.07% which is considered adequate, then follows the monitoring and supervision component which has obtained 39.83, being the lowest percentage. However, in the same way, the other activities have qualified insufficiently, obtaining finally in the five components 56.65%, concluding that more is needed for not reaching the minimum of 70%. This shows that control activities are necessary to detect weaknesses and mitigate or correct them, leading to achieving the goals set.

For his part, [16], in Ecuador, in the research Importance and evaluation of control in public management, used qualitative methodology to determine variables that allow the identification of control mechanisms, with an interpretative approach, documentary tracking and analysis of regulations, concluding that control is vital for its technical support in the development of processes consistent with the provisions of government regulations, to achieve the objective set for the good of the community and to have a solid G.A. since it allows the activities to be fluid. This infers the existence of a need to implement the I.C. because it is adequately

necessary for public entities to be technically accompanied in their processes.

Likewise, [17], the research on the panorama of the development of the C.I. in the institutions that are of the public sector in Kosovo - Spain, used the methodology of analysis of annual reports of the operation of the finance system corresponding to the period 2014-2017, for this, he made use of a questionnaire, with five components and analyzed the reports that correspond to the National Audit Office, related to the progress or advances achieved through guidelines and follow-up data of support in improvement of management and guidelines or standards of C.I. in the budgetary areas are after the general legal framework. Likewise, it was referred to the control environment, which has improved, but it is necessary to improve principles; control activities have seen relative improvements in the components of information and communication; the secret is that the availability of documents and supervision are not applicable. The study confirms the importance of this proposed internal control directive, considering the need for more awareness on the subject.

Similarly, [18], in the study on the efficient norm of Internal Control in Serbia, in which a literature review has been carried out, it has been concluded that to have an internal control norm that is optimal and strict, intermediate or manipulable sanctions should be considered, this with the purpose that in the function of the manipulation, discouragement or demoralization could not occur, which will allow the collaborators to have greater well-being and a better attitude towards the activities.

On the other hand, [19], in the study on the impact of the C.I. on the efficiency of the organizations in the district of Jaffna, has used the methodology of data collection, sampling and the respective analysis, in order to diagnose the existence of a relationship between the C.I. and the efficiency of the organizations, applying surveys by positions in the areas of personnel, finance, production, and others, with a total of 244 respondents, and then analyze the components, obtaining the control environment, the highest percentage with 12.46 % and the evaluation of risks obtained a lower percentage of 12.10 %; likewise the components of control activities with 3.15 %, determining the Pearson correlation of 891, giving the value of 0.891, being a significant level of 0.01, concluding that the internal control is reasonable achieving efficiency in the entities, being proven the dimensions of control activities, communication, control environment, risk assessment, and; also procedures should be established to achieve efficiency in the institutional activities. Therefore, this makes us reflect on how internal control is used in organizations and makes them more efficient.

Along these lines, in Panama, [20], in developing his study on the impact of control on financial accounting and auditing, has used a quantitative, transversal, and descriptive methodology, reviewed the I.C. component, for which he collected data using interviews with experts, as well as surveys, using 12 state institutions as population and seven institutions as sample, with six questions for which 63 surveys were given, only 42 answered. The author applied the Likert scale, which allowed him to affirm in his conclusions that control positively impacts the elements of Internal Control and becomes the support of the element of information and communication. So, this positively increases the effectiveness of management, proving that it impacts the component with a statistically significant relationship between the variables. Moreover, the described context affirms that the phenomenon under study is transcendental to develop the I. A efficiently.

On the other hand, at the national level, [21], in their research in a UGEL of Ayacucho, the objective was to determine the relationship between the I.Q. and the hiring of less than 8UIT. The methodology used is correlational of two variables, through a quantitative approach and a cross-sectional correlational research using a non-experimental design. Its sample was made with 48 servers and officials of the UGEL headquarters, using the technique of surveys through a questionnaire, instrument that was analyzed, obtaining the C.I. a score of 1 and as for the hires that are less than 8UIT, there is a significant correlation score with a level of 0.01 bilaterally and with Pearson's r with value 0.565, concluding that there is a confidence of 99% which shows that the relationship of the C.I. is significant in the hires less than 8UIT. It infers a correlation between variables that adjusts to the subject under study.

In the same area, [22], the study in Lima at Provias Nacional on the C.I. and its incidence in the G.A. had the objective of demonstrating the incidence of the C.I. in the G.A., using the quantitative approach of explanatory level, primary research, with a sample of 120 servers, using surveys, obtaining a measure of 923 in the KMO test with a significance of,000 and Bartlett of 935 with a scope of, 000, which indicates the existence of low-level influence of the dependent variable in 28.8%, concluding that the processes, as well as the

controls, will allow having an excellent institutional operation, with officials who lead responsibly, with values and who provide good levels of confidence. In addition, it will allow the development of the collaborators' capacities to obtain improved or efficient management. Contextually, it leads to determining the importance of the I.Q. to improve public management effectively.

Also, [23], the study on the validity of the C.I. and the Management Skills, developed in state institutions of Cusco, used descriptive methodology and inductive method, making use of the technique for the collection, as well as the analysis of the documents, concluding that the five components of the C.I. are efficient when related to the strategies or management maneuvers in public institutions. Thus, this allows us to point out that the study phenomenon is feasible through a proposal.

Then, at the local level, [24], in his research developed in the Lambayeque Region on C.I. for an effective G.A., used basic research, through a quantitative approach with a descriptive-propositive design, using primary research, through a quantitative approach with a descriptive-propositive design, applying a questionnaire to 50 civil servants working in administrative offices, the results of which were compared and determined that 90% of respondents have a low level of knowledge and 6% know the subject, the relevance with a level of reliability of the variables of C.I. of 0.901 and G.A. with 0.988, which highlights the importance of the entity having mechanisms to monitor compliance which allows us to conclude that the C.I. is very important at the Regional Headquarters to identify risk areas.

Similarly, [25], in the study on the importance of the C.I. linked to public works management, using the quantitative, propositional, and non-experimental method developed in an institution of Lambayeque, proposing a model for works management, used a sample of 20 workers, including officials, managers, and servers, applying a questionnaire; obtaining a score of 60%; concluding that it is intended to achieve the effectiveness of the C.I. in the management of works, which will be concretized through a proposal that favors and manages carefully, reaching transparency and efficiency in the G.A.. Thereby, this study has focused on a proposal, that is, the proposal of the study.

On the other hand, [26], the study of the C.I. on the effectiveness of hiring at the Regional Headquarters made use of the quantitative approach, as well as the descriptive design, an essential type study, resorting to the survey technique, collecting DOI: 10.37394/23207.2024.21.39

information through a questionnaire, using 33 workers as a sample, which obtained a 79% of low knowledge of the C.I. This gives us light on how the activities of the C.I. are developed in the Regional Headquarters, being necessary to propose an internal directive.

3 Materials and Methods

The work is concerned with the descriptive, purposeful level, non-experimental design; it has a quantitative approach, using the survey as a technique, collecting information through the instrument consisting of a questionnaire, using the Likert scale, and using intentional or trial sampling. The researcher, through the non-probabilistic sampling technique, addressed several 50 workers who carry out their activities in the organic units/areas that are responsible for identifying, remediating risks, and supervising the prioritized products that have been registered in the computer application for the Implementation of Internal Control, for the application the regional institution using a document authorized its application and before the informed consent document, without mediating coercion, with their free participation, the questionnaire as mentioned above was socialized to the workers who made up the sample, indicating the benefits and importance of the study in the regional institution.

The study was descriptive-propositive and had a quantitative approach to data collection for the variables. To obtain results, the survey technique was used, collecting information through the questionnaire instrument written with the Likert method, with 32 questions, 20 related to the Internal Control variable and 12 to the Administrative Management variable, with three response options: 2) Regular/sometimes and good/always, Bad/Never, its processing was done making use of SPSS version 27 and the interview instrument was directed to experts in governmental control, personnel of the Institutional Control Organ of the mentioned entity, whose processing was done through Atlas Ti, which generated the results.

It should be noted that the questionnaire mentioned above was written with 32 questions, 20 related to the Internal Control dependent variable and 12 to the Administrative Management independent variable, with alternatives to measure on the Likert Scale, validated by three experts, information that after it was collected, the data was processed in Excel, as well as the SPSS V27 software, which is a tool to obtain tables or graphs of complex information and which is commonly used in research, from where tables were obtained in which the numerical data obtained, the variable, the dimensions, the frequency, the percentage, among other data, have been recorded.

Therefore, from the results, the comparison of the reality of the variables, both independent and dependent on the study carried out at the regional institution, was carried out, which was evidenced in the related service reports prepared by the Control Body was taken into account. Institutional of the entity above, in which it was reflected that during the implementation, in the computer application, they do not attach documents that fully support, documentation that partially supports is attached, the degree of maturity is not met, among other activities that they develop, consequently, the subsistence of deficiencies in control was identified. which does not allow full compliance with the activities to comply with current regulations, so it is necessary regulation for internal use of the entity under study.

It should be explained that the reliability of the instruments corresponds to the use of Cronbach's Alpha, in which it has been entered and calculated to measure its reliability, to initially have security in the results obtained in the pilot test with a sample of 25 people, documents that were reviewed and evaluate by three experts, who determined their effectiveness, relevance, and relevance, reliability obtained 0.881 in the independent variable of Internal Control and 0.793 in the dependent variable of Administrative Management.

4 Results

4.1 Results of the Questionnaire Applied to Civil Servants and Public Servants

Using the SPSS version 27 for the processing of the statistics program and its corresponding processing, the tables were generated with information obtained through the questionnaire that was applied to 50 employees of the Regional Headquarters under study. They were part of the organization's population under study they were limited to appointed officials/servants and indeterminate contracts characterized by responsibility and/or dependent on the organic units that prioritize and/or develop prioritized products, assess risks, and remediation measures. Same as under the Likert method, it was written with 32 questions, 20 related to the Internal Control dependent variable and 12 to the

Administrative Management independent variable, having three response options: 1) good/always, 2) Regular/ sometimes and 3) Bad/Never, with which the dependent and independent variables were compared (Table 1, Table 2, Table 3, Table 4, Table 5, Table 6, Table 7, Table 8 and Table 9).

Table 1. Internal Control – Control Environment Dimension

Items	good/always			gular/ etimes	Bad/Never	
	f	%	f	%	f	%
The activities are carried out encouraging the work to be carried out cordially and integration with the servers of the area.	1	2%	43	86%	6	12%
Workers demonstrate responsibility, respect, and commitment in their work. The personnel	26	52%	23	46%	1	2%
that work in the organization carry out activities tending to implement Internal Control.	5	10%	15	30%	30	60%
The Regional Headquarters encourages its workers for the adequate development of their functions.	1	2%	17	34%	32	64%

Results of the control environment dimension, variable dependent on Internal Control, for the first item, 86% perceive as regular at times that activities are carried out promoting cordiality and integration with the area's servers. 52% consider workers' of their functions. responsibility, respect, and commitment to their work as good. 60% find the tasks tending to implement Internal Control as bad or never, and 64% perceive as bad that the Regional Headquarters encourages their workers to adequate development.

From the results in Table 1, we can point out that they are not very favorable because they are mostly leaning towards the average and the bad.

Table 2. Internal Control – Risk Assessment Dimension

Items	good/always			ular/ etimes	Bad/Never	
	f	%	f	%	f	%
There is						
reliability in the						
information						
provided by the	2	4%	11	22%	37	74%
institution to						
implement						
Internal Control.						
It considers that						
an						
identification is						
made about	1	20/	22	4.40/	27	5.40/
the risks that	1	2%	22	44%	27	54%
affect the						
control						
implementation activities.						
It considers that						
an internal						
directive is						
necessary to						
comply with the	43	86%	7	14%	0	0%
activities to						
implement						
Internal Control.						
Do vou think						
that the internal	39	78%	11	22%	0	0%
directive should						
contain the roles						
of the officials						
and servers that						
will perform in						
the						
implementation						
of Internal						
Control?						

From Table 2, we observe the performance in the Risk Assessment dimension. In the first item, 74% perceive the reliability of the information provided by the entity during the development of the action to implement Internal Control as bad. 54% consider identifying risks bad/never, affecting the administrative actions of implementing control. 86% find the need for an internal directive as good to comply with the execution of activities to implement Internal Control. Furthermore, 78% perceive it as good that the internal management lists the roles of both the officials and the servers who will implement Internal Control.

In Table 2, the results are in favor of the need for a control directive, in which the roles of the officers and employees are indicated.

Table 3. Internal Control - Control Activity
Dimension

Items	good/always		vays Regular/		Bad/Never	
items	f	%	f	%	f	%
Has knowledge of the Internal Control tool.	13	26%	37	74%	0	0%
Internal Control activities have been implemented in your work area.	2	4%	20	40%	28	56%
The Internal Control activities carried out in the area of their work are supervised.	5	10%	11	22%	34	68%
In the entity, there is some procedure to measure the performance of the workers.	6	12%	17	34%	27	54%

From this table, it can be seen that in the Control Activity dimension, 74% perceive knowledge about the Internal Control tool or mechanism as regular for the first item. 56% consider the development of actions to implement Internal Control activities as bad. On the other hand, 68% find the supervision of the workers of the activities for Internal Control within their work area could be better. Moreover, 54% perceive the existence of a procedure to measure workers' performance as bad or never.

From Table 3, it can be seen that the majority of the ratings obtained were deficient or poor.

Table 4. Internal Control - Information and Communication Dimension

Items	good/always			ular/ etimes	Bad/Never	
2001125	f	%	f	%	f	%
The information						
is stored in						
computer						
systems and	25	50%	25	50%	0	0%
processed in accordance with	25	50%	25	50%	0	0%
the provisions of the management						
documents.						
The entity						
informs its staff						
about changes it	3	6%	13	26%	34	68%
makes in its						
organization.						
It has						
information						
channels, such	7	14%	28	56%	18	36%
as a website or	,	11/0	20	3070	10	3070
institutional						
email.						
At the Regional						
Headquarters there is an						
there is an information						
channel that						
allows the						
worker to have	6	12%	11	22%	33	66%
timely						
information for						
the development						
of their						
functions.						

Here, we observe the results on the Information and Communication dimension for the first item, where of the participants, 50% perceive it as good, and the other 50% consider that the information is stored in computer systems and processed according to management documents. 68% consider it bad that the entity informs its staff about changes it makes in its organization. 56% find having information channels, such as a website or institutional email, is regular. Furthermore, 66% perceive as bad the existence of an information channel that allows the collaborator to have timely information for the development of their functions.

Table 4 has results that range from fair to poor.

Table 5. Internal Control - Supervision and Monitoring Dimension

Items	good/always			Regular/ sometimes		/Never
	f	%	f	%	f	%
It is estimated that the supervision of those in charge of Internal Control activities has been carried out.	2	4%	7	14%	41	82%
The entity carries out supervision activities to determine non-compliance with the goals or objectives set.	3	6.%	11	22%	36	72%
It considers that the entity takes into account the observations by the OCI, made to the Internal Control activities.	7	14%	20	40%	23	46%
At the Regional Headquarters, there are adequate controls to evaluate the achievements obtained.	3	6%	21	42%	26	52%

The previous table shows results related to the Supervision and Monitoring dimension; for the first item, 82% perceive the supervisory action as bad/never to those in charge of Internal Control activities. 72% consider it bad that the entity carries out supervision activities to determine non-compliance with the goals or objectives set. 46% find that the entity considers the OCI's observations, made through related services, as never before. Also, 52% perceive that the Regional Headquarters needs more controls to evaluate the achievements.

In Table 5, the results are poor, as they are mostly biased towards the bad.

Table 6. Administrative Management – Planning Dimension

Items	good/always		Regular/ sometimes		Bad/Never	
	f	%	f	%	f	%
It has clear information about the vision and mission of the	11	22%	1	2%	38	76%
institution. It considers that the entity carries out a plan focusing its activities to solid control.	3	6%	20	42%	27	52%
In his job position, he participates in the planning of the entity.	7	14%	16	32%	27	54%

From the Table 6, results related to the dimension of Planning - Administrative Management are observed; for the first item, 76% perceive it as bad or that there needs to be more straightforward information about the vision, as well as the mission of the entity. 52% consider the planning carried out by the entity as bad, focusing its activities on something other than solid control. Besides, 54% perceive as never before that from their job position, they have participated in the planning tasks carried out by the entity.

Table 6 shows bad or negative results.

Table 7. Administrative Management - Organization Dimension

Items	goo	good/always Regular/ Bad/New sometimes				/Never
	f	%	f	%	f	%
He considers that he fully knows the functions that fall within his competence.	7	14%	21	42%	22	44%
The entity has current management documents and guidelines that allow it to develop at work.	5	10%	12	24%	33	66%
You belong to or are part of the Internal Control implementation team.	2	4%	9	18%	39	78%

From this table, we can see results linked to the Organization dimension - Administrative Management variable; for the first item, 44% perceive it as bad - they do not fully know the functions within their competence. 66% consider it bad/never that the entity has current management documents and guidelines that allow it to develop at work. Moreover, 78% perceive that they have never belonged to or participated in Internal Control implementation activities.

Table 7 shows the negative results, which are not at all favorable for administrative management.

Table 8. Administrative Management - Management Dimension

Items	good/always		Regular/ sometimes		Bad/Never	
	f	%	f	%	f	%
Do you think that the managers who lead the organic units of the Regional Headquarters carry out and demand compliance with the regulatory framework that governs them?	5	10%	20	40%	25	50%
that the managers who lead the organic units at the Headquarters where you work carry out the supervisory task?	3	6%	4	8%	43	86%
Do you consider that communication in daily management is effective?	3	6%	21	42%	26	52%

From the previous table, we observe results that are associated with the dimension of Management-Variable G.A. For the first item, 50% perceive as bad that the managers of the organic units of the Regional Headquarters carry out or demand compliance with the regulatory framework that the rules. 86% consider it bad/never that the managers who lead the organic units in which they work carry out the supervisory task. Also, 52% perceive communication in daily management as bad/never practical

Table 8 shows the negative results obtained in the study.

Table 9. Administrative Management - Control Dimension

Items	goo	d/always	_	Regular/ sometimes		/Never
	f	%	f	%	f	%
Do you think that the controls carried out in the	2	40/	10	260/	20	600 /
administrative management of the Regional Headquarters are effective? There are controls or supervision	2	4%	18	36%	30	60%
over the activities carried out by workers. The General Management has constant	3	6%	22	44%	25	50%
supervision over the entity's processes.	4	8%	14	28%	32	64%

From the answers obtained, the results associated with the Control dimension - Administrative Management variable, of which 60% corresponding to the first item, perceive as never/bad that the controls are carried out within Administrative Management at Headquarters. Regional. Likewise, 50% consider the controls or supervision of the activities carried out by the workers as bad/never. Likewise, 64% perceive as bad/never that the General Management constantly supervises the entity's processes.

Table 9 also shows negative results in administrative management.

5 Results of the Interview Guide

The instrument consisted of a semi-structured interview, for its application was selected to persons knowledgeable about the subject under study, who are linked to the Comptroller General of the Republic but have held or are holding a managerial position in the OCI of the Regional Headquarters under study, For this purpose, a video recording was made with each person interviewed. The whole procedure of starting, recording, and verification of the recording lasted approximately 30 to 40 minutes.

Subsequently, a transcription was made in Word format and added as a document to Atlas ti. Once the data was organized, the analysis was made, as well as the interpretation of the answers to the interview questions, which were framed by the questions, using Atlas ti, the coding of the interview text was made, each one with a meaning, as shown:

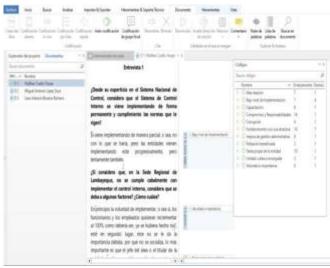


Fig. 1: Coding of the interview guide [27].

The Figure 1 represents the coding phase conducted during the interviews of governmental control experts.

Figure 1 has allowed us to organize and systematize the data collected through the interviews.

The codes have been elaborated due to the interviewees' manifestation and the questions in the interview. For this purpose, we started with dimensions for the analysis that is linked to the phenomenon under study, making the study of the categories defined through coding and obtaining a network, as shown below:

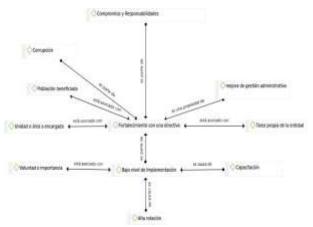


Fig. 2: Network on the application of the interview guide, [27].

The Figure 2 interprets the answers obtained from the analysis of the interviews, in which strengthening with a directive is associated with the other answers.

Figure 2 shows the categorization of the data through the codification into categories, to be finally interpreted.

The codes have been organized through Atlas ti, in relation to each question asked to the interviewees, obtaining the codes for each question, obtaining the most relevant and repetitive codes:

- ♦ Low level of implementation;
- ♦ High Turnover;
- ♦ Training;
- ♦ Commitment and Responsibilities;
- ♦ Corruption;
- ♦ Improvement of administrative management;
- ♦ The entity's own task;
- ♦ Will and importance;
- ♦ Unit or area in charge;
- ♦ Benefited population;
- ♦ Strengthening with a directive;
- ♦ Unit or area in charge.

From the analysis of the information gathered during the interviews conducted, the professionals interviewed responded freely and with a high degree of knowledge of the subject related to implementing internal control in a Regional Headquarters under study, the same professionals who have been involved in the supervision of the aforementioned implementation, who have identified and agreed that there is a low implementation in the Headquarters under study; that there is no commitment and responsibility, that there is no will of their own, that they do not consider that it is a task or responsibility of the entity, that internal control is not understood as an action to be carried out within the entity and that they consider that it is an activity that is the

responsibility of the Comptroller General of the Republic and not of the entity itself, that it is good and that it is necessary to strengthen it through a directive and that what is sought is the improvement of the Administrative Management.

Likewise, they have also pointed out factors that do not allow for accurate implementation, such as high staff turnover, lack of or insufficient employee training, and lack or scarcity of commitment and responsibilities.

6 Discussion

Immediately after capturing the results achieved, proceeding to the pertinent discussion is appropriate. Thus, bearing in mind the reviewed literature on research and studies, it is necessary to mention that the general objective has focused on proposing an Internal Control directive that strengthens Administrative Management in a Regional Headquarters under study.

Likewise, it was possible to determine the subsistence of the relationship of internal control with independent variable. administrative management - dependent variable, which correlates 0.881 and 0.793, respectively, which allows us to point out that the lower the internal control, the less administrative management, therefore, with the purpose of its verification, a questionnaire was used for its socialization among 50 workers (officials and servers), who through their answers have given us insights regarding internal control administrative management, as well as the need to have an internal directive, in addition to this, an interview was applied to officials who work for the entity, have experience who Governmental Control, and who were at the time or are in charge of the evaluations or follow-ups of the implementation of the ICS, who made revelations about the implementation of the I.C. in the Regional Headquarters under study. They agreed that there is low implementation, there is a lack of commitment and responsibility, there is no will, and they believe that it is an activity that should be carried out by the auditing entity and not by the institution itself, being conclusive and agreeing with the results obtained in the tables, that an internal control directive is excellent and necessary to improve the G.A.

From what was found according to the results obtained, we recognize that the C.I., through an internal directive, can influence the G.A. of a regional public entity. The results coincide with what was indicated, by, [16], who concluded that the use of guidelines or standards of internal control

in the areas they are after the legal, framework as is the present case, since there are general regulations that apply to state institutions, and a guideline or directive for internal use is that it will help to improve the activities of the areas in charge of the implementation of Internal Control.

Concerning the general objective of proposing an I.C. directive to strengthen the G.A. at the Lambayeque Regional Headquarters, it has been possible to establish that there is a connection between the I.C. and the G.A. since the latter is the one that develops the activities to strengthen internal control, which is in line with what has been emphasized by the following, [14] in their research carried out at the institution above on I.C. for effective A.M., revealing that it is essential for the institution to have internal control mechanisms to monitor compliance. Also, it is consistent with the internal control directive, a proposing mechanism or procedure to promote institutional conditions or techniques to achieve implementation of the ICS.

Moving forward on this topic, from the results obtained from Internal Control, in the control environment dimension, it was shown that the work is not carried out in a cordial environment, obtaining 86%, which infers that it is not adequate, and as far as the responsibility of the workers, 52% leaned towards the good, that is, they have an excellent concept of what it implies to commit to the entity. However, this is consistent with the percentage obtained from 60% who lean towards the bad / never that they are involved with the activities for the implementation of the control; added to this, 64% of respondents indicate that badly / never the entity encourages its workers to improve, which are factors that demonstrate weakness in the dimension of the work environment control, which is consistent with what was found by, in the study carried out in Ecuador, regarding the evaluation and compliance with the regulations, reveals that they have shown that the control environment is insufficient, concluding that the control environment is not adequate internal control for not reaching the minimum of 70, [15].

Regarding the risk assessment dimension, results were observed with 74% of those surveyed considering the information provided by the administrative management to implement internal control at the Headquarters under study as bad/never reliable. This is supported by the conclusions of the related service reports of the Institutional Control Body; Likewise, 54% consider that risk identification is bad; that is, the risks involved in the implementation of Internal Control activities are not

identified promptly, which is supported by a majority of 86% who consider that an Internal Control directive It is good to implement it, as 78% are inclined to specify the roles of those involved in implementation activities in the directive, this leads us to deduce that although there is a deficient risk assessment dimension. On the other hand, it allows us to deduce that a large percentage looks favorably on the need for an internal directive for the proper implementation of internal control, as well as consigning the roles of the officials/servants who are involved in the implementation of internal control by not having reliable information, nor a suitable identification of risks.

Along the same lines, the results obtained by, [18] in the study on the impact of internal control on the efficiency of the organizations of the district of Jaffna, in which he concluded that internal control helps achieve efficiency in the entities, being verified the risk assessment activities, and procedures must be established to achieve efficiency in institutional activities. This is similar to the study because it agrees that guidelines or guidelines must be established to achieve internal control.

In the control activity of the Internal Control variable, there is a perception of 74% that they considered knowledge of the benefits of internal control to be regular, contradicting the activities carried out in their area for the implementation of Internal Control, since 56% consider it bad/it is never implemented, as well as 68% of those surveyed believe that the activities are not supervised, and 54% of the sample value as scarce or never having a procedure or document that allows them to measure the degree of performance of their activities that they carry out, all this shows us that they only try to comply with the deliverables on dates established in the regulations, which implies little diligence in the development of activities that they carry out in Administrative Management to implement or achieve Control Internal.

What has been indicated is consistent with the study by Melgarejo in his research carried out in Provias Nacional on Internal Control and its incidence in Administrative Management, who concluded that the processes and controls would allow an excellent institutional functioning with officials who lead responsibly, with values and that provide good levels of trust. In addition, it will enable the development of the collaborators' capacities to obtain improved or efficient management, [21]. This makes us the reason that when there is timely control, the activities will also be developed adequately - with opportunity in the implementation of the control and with the

collaboration of officials who properly develop their supervision work, the servers will develop their activities properly, which is in tune with the proposed guidelines through an internal directive.

In the same way, regarding the dimension of information and communication, of the results, the population surveyed in relation to the storage of information, 52% value as regular/sometimes, which indicates that the information is not stored correctly; 68% favor the bad information about the changes that are made, which does not allow collaborators to have immediate information; 56% ponder that the information through the web page is regular, since there are no institutional emails and 66% leaned their response on the bad thing of not having timely information for their activities that they carry out in the development of the Administrative Management, which shows us the existence of weaknesses in the information and communication dimension, this is due to the fact that although the computer systems exist, however the documentation is not adequately processed, it is not communicated adequately, it is not related to the unit of the single file, which causes the information to be biased and the communication is not as expected, affecting the attention to the citizen and the implementation activities.

This aspect is similar to what has been stated, [24] in the study of the I.C. from the perspective of the COSO approach, in which it is concluded that the enhancement of the internal control system is vital as a starting point to guide the components to be improved, being necessary to invest in this tool to achieve and obtain results permanently. This approach coincides with the proposal to improve communication by applying the proposed internal control directive of the G.A. at the Regional Headquarters since we have a weakened component that does not allow us to implement the I.C.

Once they closed the Internal Control with the Supervision and Monitoring dimension, which obtained 82% and 72%, respectively, concerning supervision activities, as well as activities to implement Internal Control and the determination of non-compliance with the goals proposals. In the same way, 46% consider that corrections are not made to the observations made by the OCI, followed by 52% who consider that the Regional institution does not have controls to evaluate the achievements they have obtained, so this dimension presents weaknesses by not having an unfavorable percentage. In this same sense, [17], conclude that the use of guidelines or norms in the areas is after the general legal framework. So, this leads us to understand that officials do not carry out constant review, supervision, control, or surveillance of the activities carried out by the servers in charge of the activities, which is one reason why the implementation of internal control and the body are not achieved inspector in his work in his related service reports reflects these weaknesses.

Finally, the Internal Control with the dimension of Supervision and Monitoring has obtained 82% and 72%, respectively, about the supervision activities, as well as the work of implementing the I.C., and the determination of non-compliance with the proposed goals. Similarly, 46% consider that no corrections are made to the observations made by the OCI, followed by 52% who consider that the regional institution does not have controls to evaluate the achievements they have obtained. Hence, this dimension shows weaknesses by not having a favorable percentage. In the same sense, it concludes that guidelines or norms are used in the areas after the general legal framework. Thereby, this leads us to understand that officials do not carry out review, supervision, control, or constant monitoring of the activities carried out by the employees in charge of the activities, which is one of the reasons why the implementation of the I.Q. is not achieved and the OCI in its supervisory work in its service reports related to these weaknesses.

About Administrative Management - dimension of planning, 76% have inadequate knowledge about the mission, as well as the vision of their entity; 52% evaluate that it is bad because they do not focus the development of their activities towards control, and 54% have been inclined towards how bad the entity's planning is carried out, by not focusing their activities on implementing adequate control, which It makes us infer that administrative management in its planning dimension presents weaknesses that do not allow compliance with the regulatory framework, so it is necessary to establish the guidelines or procedures through a directive. This result is aligned with what Piscoya & Montenegro, in their research, carried out at the same regional institution, on internal control for an effective administrative management, they have determined they have a low level of knowledge and highlight the importance of the entity having mechanisms to monitor compliance, [13]. Which allows us to reason about the existing weakness in planning of activities aimed implementation of Internal Control.

Regarding the Organization dimension of the administrative management variable, 44% of the population indicated that they do not know their functions. Regardless, that same group favors 66% of the fact that the entity does not have current

management documents or guidelines that help them carry out their tasks as collaborators. The majority, 78% of respondents, indicate that it could be better / they have never belonged or are part of the internal control team, which frames a new weakness of administrative management. This goes contrary to what Estrada points out in the study on the efficiency of the internal control and the Management Strategies developed in public entities of Cusco, in which it concludes that the five components of the internal control It is efficient as it are related to management strategies or maneuvers in public institutions, [21], contradicting the results obtained in that the Headquarters under study present weaknesses, however, what is intended is that with the proposal of the internal control, achieves directive that the administrative management improves the strategies to relate to Internal Control, which enables us to indicate that the existence of guidelines is necessary for the deployment of activities of the collaborators, which would allow improved administrative management and aimed at the efficiency to implement internal control.

In the same way, from the Management dimension of the results, it is found that 50% lean towards the bad/managers never demand compliance with the regulations; 86% of those surveyed evaluated their response on how inadequate the supervision on the part of the headquarters is when they do not comply with the work above and 52% consider that there is no good communication on a day-to-day basis, which is a deficiency of the administrative management that will not allow it to fully comply with the activities deployed by the Internal Control System through the organic units, which is a weakness of the management dimension -Administrative Management, by not allowing the path to improving it to be enabled and achieve effectiveness or efficiency, whose beneficiary will be the citizenry. This result aligns with, point out. The study on efficient rules of internal control concludes that, in order to have strict and optimal regulations, intermediate sanctions or those that can be manipulated must be taken into account in order not to cause discouragement or demoralization, [16], which will allow employees to have greater wellbeing and a better attitude towards activities.

Likewise, from the Management dimension, the results show that 50% of the respondents leaned towards the bad/never the managers make demands for compliance with the regulations; 86% of those surveyed evaluated their response on how inadequate the supervision by the managers is when

they do not comply with the work above and 52% consider that there is no good communication daily, which is a deficiency of the administrative management that will not allow it to fully comply with activities to implement the Internal Control System through the organic units, which is a weakness of the management dimension Administrative Management, by not allowing the way to improve it and achieve effectiveness or efficiency, whose beneficiary will be the citizenship. This result is in line with what is pointed out by the study on efficient internal control standards, in which it concludes that, in order to have strict and optimal standards, intermediate sanctions sanctions that can be manipulated should be taken into account, with the purpose of not producing discouragement or demoralization, which will allow the collaborators to have greater well-being and a better attitude towards the activities.

Finally, in the control dimension, it is found that valued the controls carried Administrative Management as bad/never effective: 50% responded as bad/never that there is any timely supervision of the activities of the collaborators, which would allow these activities to have a degree of efficiency and 64% favored the lack of diligence of the Regional General Management - maximum authority administration in developing supervision activities, which makes us perceive that the lack of control is the rule, understanding the reasons why the administrative management is not enough to improve because they do not diligently fulfill the functions and activities of the administrative system, which It allows to argue that it is a weakness of the control dimension, demonstrating that the lack of supervision means that the collaborators do not assume the development of activities responsibly and that there are weak controls in the mentioned dimension. Contextually, the lack of supervision is related to, [25], who argues that Internal Control is all the procedures or guidelines that managers put into operation to ensure that the operations of the institution are protected and all other activities are carried out in an orderly manner and accordance with current regulations.

The instrument, consisting of a semi-structured interview that was applied to officials with expertise in Governmental Control, was transcribed into Word format and then inserted as an interview transcription document through the Atlas ti software through which the analysis, arrangement, and understanding of the information of the instrument was performed, results were obtained with relevant information provided by the interviewees, proceeding to perform the respective coding.

From the coding, positions were established in which the experts have an impact when giving their answers from the point of view of Governmental Control and which have been evidenced through the coding network obtained, which are recurrent in the interviewees, such the low as implementation in which the administrative management incurs, the high rotation of officials who, being temporarily maintained, generate the delay of the activities, the lack of training, the lack of commitment and responsibilities of those involved in the implementation tasks, as well as the lack of improvement of the administrative management, which is not considered an entity's own task and instead it is believed that the activity is responsibility ofthe Administrative Management, lack of commitment responsibilities of those involved in the implementation tasks, as well as the lack of improvement of the administrative management, which is not considered a task of the entity and somewhat it is believed that the activity corresponds to the CGR, lack of will and importance and they agree that it is necessary to strengthen it with a directive, that there should be a unit or area in charge, that these tasks achieve a benefited population.

This result is in line with the authors, [10], who argue that control is essential for its technical support in the processes by governmental standards, that the use of guidelines or norms of I.C. in the budgetary areas are after the general legal framework, and, in order to have an optimal and strict internal control regulation, intermediate or manipulable sanctions should be considered, without reaching demoralization, allowing employees to have greater well-being and a better attitude towards the activities, [16].

Also, along the same lines, [20], concluded that the processes and controls would allow for good institutional functioning, with officials who lead responsibly, with values, and who provide good levels of trust. In addition, the entity needs to have mechanisms in place to monitor its compliance and to ensure that the I.C. is made effective in management, which will be achieved through a proposal that favors and manages carefully, leading to transparency and efficiency in the G.A., [22], and finally, [23], in the institution mentioned above under study, the result was 79% of low knowledge of the I.C.

Contextually, this has shown us that there is a negative view of the actions being taken by the administrative management to implement internal control, which has weaknesses, thus reinforcing the proposal consisting of the internal control directive, in which the roles of officials and employees who perform the prioritization of products for the implementation of Internal Control are included so that they can be identified, as well as the induction or training for officials or employees who are incorporated to execute all the activities they develop to implement the C.I. at the Regional Headquarters, because taking into account the existing high rotation, most of them arrive to work without knowledge of these activities, which would avoid the delay in the presentation of deliverables and, in addition, the delay in the implementation of Internal Control.

7 Conclusion

The proposal of an internal control directive that will strengthen the A.M. in the regional institution is in harmony with the results obtained from the application of instruments, which allude to 86% and 78%, which is a high percentage of acceptance, which is about the percentages of bad/never of the dimensions of the variables. Therefore, the mentioned proposal will effectively strengthen the Administrative Management of the Regional Headquarters of Lambayeque.

A proposal for an internal control directive has been drafted, which will promote a more efficient, transparent, and effective administrative management by developing its activities more appropriately, which must be applied by the employees and collaborators involved.

A diagnosis has been made of compliance with the I.C. at Headquarters, which has shown that it is not adequately implemented since the general internal control standards do not carry out the procedures.

A diagnosis has been made of the problems existing in the G.A. of the Regional Headquarters, noting that the procedures are being carried out which present weaknesses that have been noted and communicated in the control service reports. So, a proposal for an internal control directive has been prepared, which includes the following structure: objective, purpose, scope, legal basis, general provisions, specific provisions, and complementary provisions, which is feasible for its implementation.

The Office of Organization and Information Technology (OFOTI) is responsible for issuing the corresponding technical report. Then, following a favorable legal report, the Regional Government will proceed with its approval using a Regional Decree.

The proposed internal control directive was validated by three experts who reviewed it and ruled on its relevance.

Acknowledgement:

This paper is financed by Portuguese national funds through FCT—Fundação para a Ciência e a Tecnologia, I.P., project number UIDB/00685/2020. Moreover, the project is funded under the program of the Minister of Science and Higher Education titled "Regional Initiative of Excellence" in 2019-2022, project number 018/RID/2018/19, the amount of funding PLN 10 788 423,16".

References:

- [1] Mat M, Nawawi A, Puteh A. Application of COSO framework in whistle-blowing activities of public higher-learning institutions. *International Journal of Law and* Management Vol. 6. No 2, 2020.
- [2] Mendoza A. Importance of administrative management for innovation in medium-sized commercial enterprises in the city of Manta *Dominio de la Ciencia*. Vol.3. No.2. 2017.pp. 947-964.
- [3] Aranibar A, Flores E. A look at administrative management and labor conflicts in Latin America. *Specialusis Ugdymas/Special Education*.Vol.1. No.43. pp.4843-4849.
- [4] Kemisola F, Magret O. Internal Control System, And Financial Accountability: An Investigation Of Nigerian South-Western Public Sector. Acta Universitatis Danubius. Vol.15.No.1.2019. pp. 134-150.
- [5] Morillo J. The internal control system in Peruvian public university management Case: National University of Cajamarca periods:2015- 2016. *Cajamarca National*. 2019 pp.1-168.
- [6] Guo Y, Guo Y, Lai Lan Mo P, Zhang X. Partner- Level internal control opinion shopping and its economic consequences: Evidence from "SOX 404" in an emerging market. *Journal of Accounting and Public Policy*. No.1. 2023. pp. 1-22.
- [7] Yang L, Qin H, Gan Q, Su J. Internal control quality, enterprise environmental protection investment and finance performance: An empirical study of China's a-share heavy pollution industry. *International Journal of Environmental Research and Public Health*. Vol.17. No.17. 2020. pp.1-15.

- [8] Serrano J. The development of public management through internal control: comparative reading Mexico-Spain. *Ars Iuris Salmaticensis*. Vol.7. No.2 .pp.121-146.
- [9] García J, Carrizo R, Mena T. Internal control as a tool for fraud prevention. *Faeco Sapiens*.Vol.2. No2. pp11-117
- [10] Chafla J, Solís V, Sánchez M, Carrillo E, Sánchez R. La aplicación del control interno en las organizaciones de sector no financiero de la economía popular y solidaria del Ecuador. *Ciencia Digital*. Vol.3 N° 2.6. 2019, pp.464-480.
- [11] Shack N. Control in the times of COVID-19: Towards a transformation of control. *Office of the Comptroller General of the Republic*. Vol.1.2021. pp.1-106.
- [12] Shack N. The reform of governmental control in Peru. Balance after three years of implementation. *Office of the Comptroller General of the Republic*. Vol.1.2021. pp.1-210
- [13] Espinoza M, Espinoza E, Chumpitaz H. Internal control and business management of Peruvian shopping malls in times of the current pandemic *Accounting and Business*. Vol.16.No-31.2021. pp.57-70.
- [14] Piscoya A, Montenegro L. Internal control for effective administrative management. Headquarters of the regional government, Lambayeque. *Ñeque Magazine*. Vol.5. No.11.2022. pp.116-129.
- [15] Peña R. Administrative control and planning standards in the Corps of Engineers of the Army of Ecuador: evaluation and compliance. *Estado & comunes, revista de políticas y problemas* públicos. Vol.2. No.15. 2022. pp.19-36.
- [16] Morillo L, Flores N. Importance of Control and Evaluation in Ecuadorian Public Management. *Economía y Negocios*.Vol.11. No.2.2020. pp.82-97.
- [17] Ujkani S, Berisha N. An Overview on the Development of Internal Control in Public Sector Entities: Evidence from Kosovo. *International Journal of Economics and Business Administration*.Vol.VII. No.4. 2019. pp.320-335.
- [18] Schantl S, Wagenhofer A. Optimal internal control regulation: Standards, penalties, and leniency in enforcement. *Journal of Accounting and Public Policy*. Vol.40. No.3. 2021.pp.106-803.
- [19] Muraleetharan P. Impact Internal Control on Efficiency of the Organizations in Jaffna

- District. International Journal of Accounting and Financial Reporting Vol.9. No.4 .2019. pp.313-321.
- [20] Berbey E. Incidence of Prior Control in the Information and Communication Component of Public Enterprises in Panama: Its Relationship with Financial Accounting and Auditing. *Orbis Cognita* Vol.2.2019. pp.19-36
- [21] García M, Prado W. Internal control and contracting of less than 8 UIT in the UGEL Vilcas Huamán, Ayacucho 2021. *Ciencia Latina Multidisciplinary Scientific Journal*. Vol.6.No.1. 2021. pp.37-49
- [22] Melgarejo N. Internal Control and its Incidence in the Administrative Management of Pro Vías Nacional. *Universidad César Vallejo*. 2021.pp.1-83.
- [23] Estrada P. Efficiency of the Internal Control and Strategies of the Administrative Management in the Public Entities of the District of Cusco in the year 2020. *Universidad Andina del Cuzco*. 2021. pp.-1-116.
- [24] Piscoya A. Control Interno para la efectiva Gestión Administrativa de la Sede Central del Gobierno Regional de Lambayeque. *Universidad César Vallejo*; 2022. Pp. 1-109.
- [25] Contreras Portocarrero J del P, Baique Timana DB, Cacho Revilla A, Revilla A. The importance of internal control in the management of public works execution Peru. *Science and Technology University*. Vol.26. No.113.2022. pp.79-85.
- [26] Aguinaga Díaz EA, Olivos Romero FG. Internal control for the effective contracting process in the Regional Government of Lambayeque. Revista Neque Vol.5.No11.2022. pp.130-142.
- [27] ATLAS.TI Scientific Software Developmente GmbH [ATLAS.ti 8 Windows] (2019), [Online]. https://atlasti.com (Accessed Date: December 22, 2023).

Contribution of Individual Authors to the Creation of a Scientific Article (Ghostwriting Policy)

- Lidia Margot Tapia Cachay: contributed at all stages, from problem formulation to conclusions.
- Amado Fernandez: contributed with advice during the development of the research stages.
- Gualter Couto y Pedro Pimentel: revising the manuscript critically for important intellectual content.
- Rui Alexandre Castanho: Approval of the version of the manuscript to be published.

Sources of Funding for Research Presented in a Scientific Article or Scientific Article Itself

This paper is financed by Portuguese national funds through FCT—Fundação para a Ciência e a Tecnologia, I.P., project number UIDB/00685/2020. Moreover, the project is funded under the program of the Minister of Science and Higher Education titled "Regional Initiative of Excellence" in 2019-2022, project number 018/RID/2018/19, the amount of funding PLN 10 788 423,16".

Conflict of Interest

The authors have no conflicts of interest to declare.

Creative Commons Attribution License 4.0 (Attribution 4.0 International, CC BY 4.0)

This article is published under the terms of the Creative Commons Attribution License 4.0 https://creativecommons.org/licenses/by/4.0/deed.en_US