

## Labor Incentive and Its Influence on The Performance of Civil Servants of The Provincial Municipality of Antabamba

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### **Abstract**

*The research project is focused on determining the influence of associated factors for an optimal performance of public servants in the Provincial Municipality of Antabamba. In addition, it wishes to establish the most influential factors, whether economic or non-economic, for optimal performance, considering variables such as age, age group, work status, and the group that performs, among others. To determine the influence, a binary logistic regression model was applied where the response variable was the work performance in its optimal and normal categories, discovering that the associated variables are those where the servers are in the condition of administrative CAS, the servers appointed under Legislative Decree No. 276 and, finally, the economic incentive. These three factors explain an optimal performance of public servants in the Provincial Municipality of Antabamba. The research proposes guidelines to evaluate performance through its most relevant factors considering the types of incentives, which in turn can generate public policies when establishing not only salaries, but also those incentives that induce the public servant to have an optimal performance, since the state institutions do not enjoy a good perception, not only from the users but also from the servants themselves. Finally, in the present research, it is suggested to evaluate this problem considering not only demographic variables, but also sociological and psychological variables in order to determine their personality profiles and establish new constructs that contribute to a better work performance.*

**Keywords:** Incentive, Performance, Logistic Regression, Influence and Correlation.

### **INTRODUCTION**

The participation of the State or size of the public sector is reflected through public employment, as a percentage of total employment in the Latin American and Caribbean (LAC) region. In 2018, an average of 11.9% was recorded a lower percentage in relation to 2011 with 12.3% (Organization for Economic Cooperation and Development and Inter-American Development Bank, 2020).

It is convenient to achieve a timely understanding of how the economic and non-economic compensation of public servants is carried out. In Latin America and the Caribbean (LAC), the administration of salaries is carried out in strict function where incentives and economic shocks on the fiscal sustainability of a country are regulated.

Systems under remunerative procedures contribute to attract, motivate and retain individuals without involving or harming fiscal health. In Latin American and Caribbean countries, data and information are available, as well as in most of the member countries of the Organization for Economic Cooperation and Development (OECD) and the Inter-American Development Bank (OECD). This information makes it possible to elaborate the compensation that is subject to an agreement between the government and the unions; it is understood that this salary adjustment is defined only for all civil servants.

In three quarters of the countries of Latin America and the Caribbean, a program focused on negotiating a salary exchange is used. However, there are some differences between countries: Chile, Colombia and Costa Rica are more centralized; to the contrary, countries such as Argentina, Brazil, El Salvador, Guatemala, Mexico and Uruguay adopt certain adjustments at a decentralized level, always within the existing limitations and regulations on salaries defined by the budgetary jurisdiction.

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In Peru, Law No. 31188, Law on Collective Bargaining in the State Sector, is implemented through the stipulated guidelines and within the framework of respect for the rights recognized in Articles 28 and 42 of the Political Constitution of Peru, as well as the provisions of Convention 98 and Convention 151 of the International Labor Organization. However, the beneficiaries of this Law are the unionized workers of the State with more than 20 public servants. The minimum number of 20 union members to negotiate between the employee and the employers is stipulated in the same Law. In this regard, a reduced number of appointed and permanent public servants in the labor regime of Legislative Decree 276 is perceived in the rural municipal organizations of Peru; therefore, they do not have the possibility of forming their union to improve their economic income and/or benefits. This labor policy measure is considered discriminatory to a sector of the public servants due to the segmented scope of this Law.

There are numerous criteria to determine the base salary at the different hierarchical levels, the most common way is to use functional parameters such as the real capacity of each job and the necessary experience to perform it, without considering personal characteristics such as age and seniority, which is reiterative in the different levels, from administrative assistants to managers. The countries of Latin America and the Caribbean consider performance as a priority in the calculation of compensation, considering 33% for managers and 25% for professionals, technical support and administrative assistants.

Regarding the criteria for defining supplementary compensation, the countries of Latin America and the Caribbean consider seniority to have more weight than performance. For this reason, 67% of LAC countries assign bonuses for length of service (only Brazil, Peru, the Dominican Republic and Uruguay do not do so. In the OECD, 69% still consider a seniority bonus (although 31% have restricted its participation in overall compensation).

**Table 1.** Determination of base salary and use of performance pay, 2018.

País	Determinación del salario base				
	Una negociación única e integral para todo el sector del gobierno central/nacional/federal	Negociación a nivel central con posibilidades de ajustes descentralizados	Ramuneración basada en recomendaciones del ejecutivo	Negociaciones a nivel central, con ajustes por departamento/sector	Remuneración por desempeño en uso
Argentina	○	●	○	○	○
Brasil	○	●	○	○	●
Chile	○	○	○	○	●
Colombia	●	○	○	○	○
Costa Rica	●	○	○	○	●
El Salvador	○	○	○	●	○
Guatemala	○	○	○	●	○
Jamaica	○	○	●	○	●
México	●	●	●	○	○
Perú	○	○	○	○	○
República Dominicana	○	○	●	○	○
Uruguay	○	●	○	●	●
<b>Total ALC</b>					
● Si	4	4	3	3	5
○ No	8	8	9	9	7
<b>Total OCDE</b>					
● Si	21	5	6	6	30
○ No	15	31	30	30	6

**Note:** OECD/IDB (2018) Survey on Strategic Human Resources Management in central/federal governments of Latin American and Caribbean countries. OECD (2016) Survey on Strategic Human Resource Management. <http://dx.doi.org/10.1787/888934095419>

The criteria established in the countries of Latin America and the Caribbean are shown below.

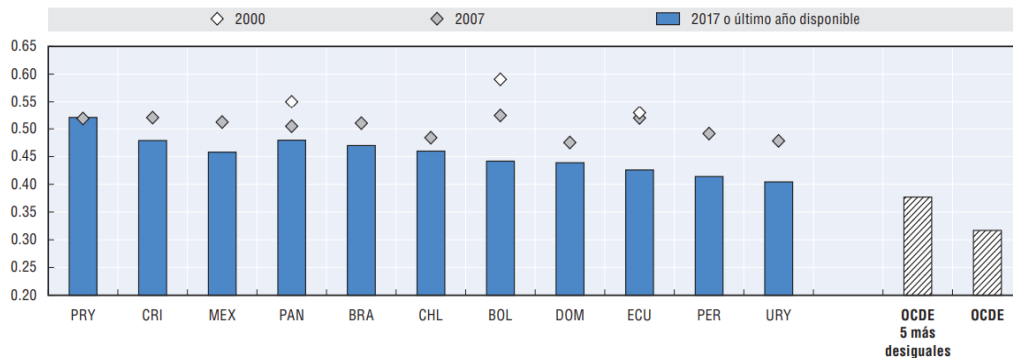
It should be borne in mind that income inequality in remuneration can have a negative impact on economic growth and generate social disruption due to dissimilarities in access to economic opportunities and basic services, such as education and health care.

There is evidence that redistribution in remuneration has increased in the region since 1990; however, some countries in Latin America and the Caribbean are among the most unequal countries in the world, both in terms of remuneration and in terms of access to services (Brezzi & De Mello, 2016).

In LAC countries, there is available information on income inequality: Bolivia is the country that has reduced inequality the most (from a Gini of 0.59 in 2000 to 0.44 in 2014), Uruguay held the lowest inequality (with a

Gini of 0.40) and Paraguay the highest (0.52); however, income inequality of remunerations is higher in all LAC countries than in the five most unequal OECD countries (which have an average Gini of 0.38).

This inequality is summarized in Figure 1.



**Figure 1:** Gini coefficient after taxes and transfers, 2000, 2007 and 2017.

**Note:** Balestra, C, et al (2018) "Inequalities in emerging economics: Informing the policy dialogue on inclusive growth", OECD Statistics Working Papers, n° 2018/13, publicaciones de la OCDE, París, <https://doi.org/110.1787/6c0db7fb-en>

This problem of wage inequality in Latin America and the Caribbean is evident in the different regions of Peru. However, this research analyzes the situation of civil servants in the Apurimac region and in particular in the Provincial Municipality of Antabamba - Apurimac. It is important to point out that the personnel of the aforementioned municipality has two labor regimes: public servants under the regime of Legislative Decree 276 and under Legislative Decree 1057 CAS.

The workers who are subject to the labor regime under Legislative Decree No. 276 have benefits such as bonuses and Christmas and Christmas bonuses of 300 soles and 30 days' vacation, but a derisory salary according to the remuneration items on their payroll. Unlike employees who are under the labor regime of Legislative Decree 1057 CAS, with expectant remuneration, the employer is free to determine the monthly salary of a worker according to the degree of responsibility of the job, and also has a bonus and Christmas bonus of 300 soles for Christmas and Christmas.

The author (Martinez, 2020) describes that the governments in power have neglected for decades to establish human resources management policies or public employment in the organizations of the three levels of government, the present event generated the festal procedures for the creation of positions and hiring without any technical-legal support. In addition, there is the diversity of labor regimes with differentiated rights, duties and compensations in the State organizations. Likewise, these regimes have promoted differentiated labor incentives for the employees in the different organizational levels of the municipalities and have limited their commitment to the achievement of the objectives and goals set by the institution (p. 17).

## Objectives and Hypothesis

### Objectives

#### General Objective

To determine the influence of labor incentives on the performance of the employees of the Provincial Municipality of Antabamba.

#### Specific objectives

- To determine the relationship between the labor incentive and the performance of the employees of the Provincial Municipality of Antabamba.

- To determine the influence of economic incentives on the performance of employees of the Provincial Municipality of Antabamba.
- To determine the influence of non-economic incentives on the performance of the employees of the Provincial Municipality of Antabamba.

## **Hypothesis**

### **General hypothesis**

The labor incentive has a significant influence on the performance of the employees of the Provincial Municipality of Antabamba.

### **Specific hypotheses**

- There is a relationship between the labor incentive and the performance of the employees of the Provincial Municipality of Antabamba.
- Economic incentives influence the performance of employees of the Provincial Municipality of Antabamba.
- Non-financial incentives influence the performance of employees of the Provincial Municipality of Antabamba.

## **METHODOLOGY**

### **Type and Level of Research**

From the approach of Ñaupas-Mejía-Novoa-Villagómez (2013), he considers that scientific research is divided into two types: pure basic or fundamental research and applied or technological research (p. 91). Given the characteristics of the present research, it can be conceptualized as pure research because it is oriented to discover the factors of work incentives associated with work performance; at the same time it is basic because it seeks foundations related to economic and non-economic incentives for better performance; and fundamental because it is important for the management of human talent.

According to Hernández et al. (2014), the level or scope of the research in the present investigation is explanatory (p. 104). On the other hand, the purpose of the research is to know the degree of relationship between incentives and performance and at the same time to explain the factors that contribute to work performance under the particular context. In addition, it is possible to predict the variables that cause optimal or poor performance in the public servants of the Provincial Municipality of Antabamba.

### **Research design**

According to Rivas (2017), the research design allows answering the research hypotheses which is adequately structured describing the procedures of the activities associated with the research variables.

Hernández and Mendoza (2018) indicate that "the term design refers to the plan or strategy conceived to obtain the information with the purpose of responding to the problem statement, the correlational non-experimental cross-sectional quantitative design" (p. 151).

Non-experimental, since the variables of administrative management and quality of public services were not deliberately manipulated; likewise, the phenomena and facts were observed in their natural environment and then analyzed. In addition, it is transversal, because the situation of the facts and phenomena was evaluated and analyzed in a given period.

### **Population and Sample**

#### **Population**

The population of the present investigation is composed of all public servants of the different occupational groups, including professionals, technicians and assistants, who provide services in the Provincial Municipality

of Antabamba, in the different administrative units, which constitute 78 public servants. The distribution is shown in Table 2.

Table 2. Population of public servants of the Provincial Municipality of Antabamba.

Occupational groups	N° of servers
Officials	02
Employees of trust	05
Professionals	23
Technicians	30
Auxiliary	18
Total	78

Note: Office of Human Resources Management of the MPA-2019

### Sample

Sampling is applied under two scenarios, when cost and time are to be reduced; however, given that the population is small and the necessary resources are available, no sampling technique will be applied. The entire population, i.e., all public servants of the Provincial Municipality of Antabamba, were sampled.

### Procedure

The procedure followed in this research is subject to the interest of finding the solution to the objectives set. These objectives are related to the hypotheses and general and particular questions of the research problem.

- According to Vara Horna (2015), after selecting the appropriate research design and the adequate sample size, the next step is to plan the data collection (p. 430). Data collection involves three strongly interrelated activities: The selection or development of a measurement instrument that is valid and reliable for the study population.
- Choose one or more data collection methods or techniques for data analysis.
- Explain or detail data collection and analysis.
- The research describes in detail how the data collection (field work) is carried out, considering five basic steps:
  - Identification to establish the sample frame.
  - Identification and adequacy of data collection instruments.
  - Application or execution of the instruments.
  - Organization in data tabulation
  - Data analysis.

In writing the collection procedure, you should make a list of all the activities that are considered to collect the data in your research, for later analysis.

### Techniques and instruments

In the present research, the instrument used to measure the characteristics of the work incentive and performance variables is the questionnaire. This questionnaire, as it is duly structured, integrates the two research variables. The first variable is the labor incentive, which consists of two dimensions: economic incentives and non-economic incentives, with eight and 12 indicators each. The second variable is the labor performance of the workers where there are three dimensions which are the leadership of the employees with

six indicators, their behavioral aspect also with six indicators and finally their technical aspect with only three indicators.

## RESULT AND FINDINGS

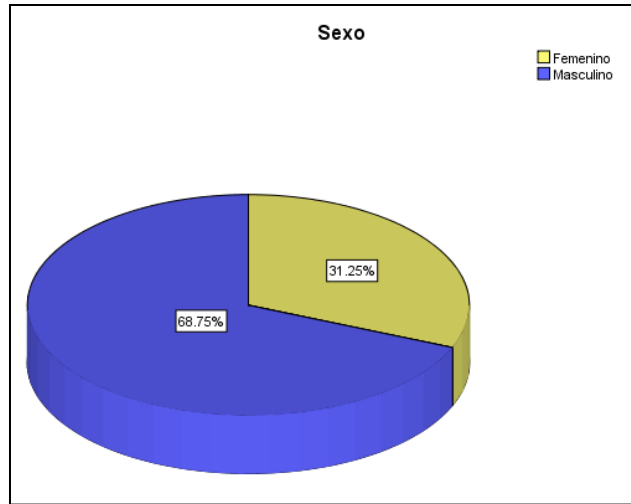
### Analysis of results

**Table 3.** Percentage distribution of public servants by gender.

	Frecuencia	Porcentaje
Femenino	25	31.3
Masculino	55	68.8
Total	80	100.0

**Note:** Number and percentage of gender in each group.

**Figure 2.** Distribution by sex.



**Note:** Reflects the number and percentage of gender in each group.

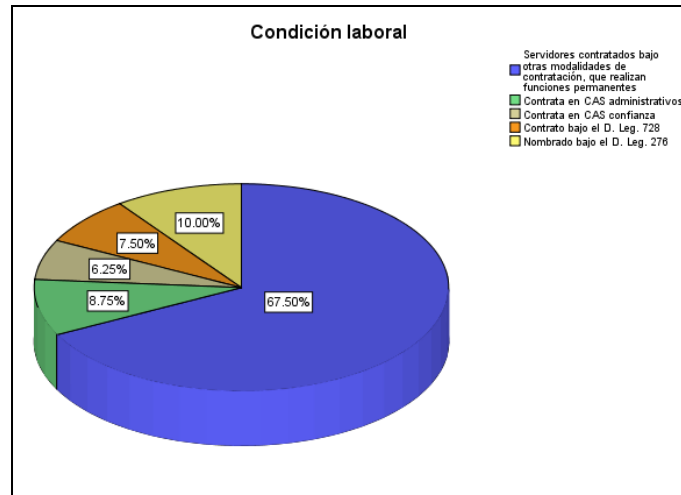
Figure 2 shows that 68.8% of public servants are male and 31.3% are female. The percentage of men is more than double that of women.

**Table 4.** Percentage distribution of public servants according to employment status.

	Frecuencia	Porcentaje
Servidores contratados bajo otras modalidades de contratación, que realizan funciones permanentes	54	67.5
Contrata en CAS administrativos	7	8.8
Contrata en CAS confianza	5	6.3
Contrato bajo el D. Leg. 728	6	7.5
Nombrado bajo el D. Leg. 276	8	10.0
Total	80	100.0

**Note:** Número y porcentaje de la condición laboral de los servidores públicos.

**Figure 3.** Percentage distribution of public servants according to employment status.



**Note:** Número y porcentaje de la condición laboral de los servidores públicos.

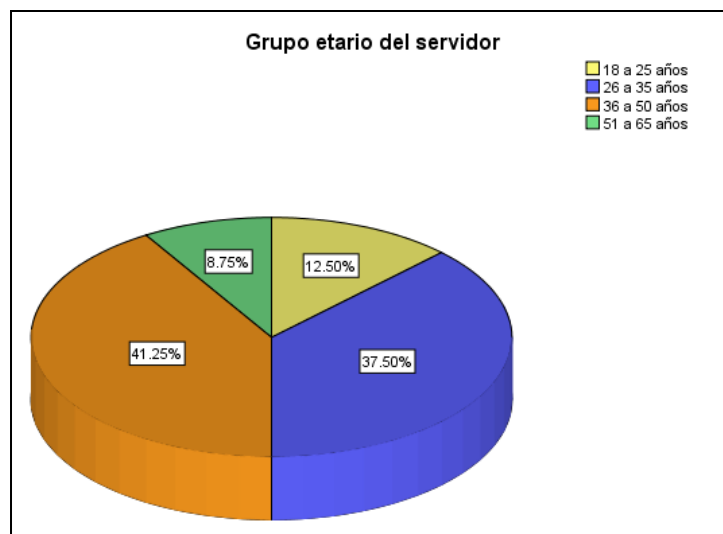
Figure 3 shows that 8.8% of the public servants are in the administrative CAS condition. 6.3% are public servants in the condition of CAS confianza. 7.5% are hired under Legislative Decree No. 728. Of this group, only 10% are appointed under Legislative Decree No. 276 and the largest group of public servants are hired under other modalities (67.5%), however, they perform permanent functions.

**Table 5.** Percentage distribution of public servants by age group.

	Frecuencia	Porcentaje
18 a 25 años	10	12.5
26 a 35 años	30	37.5
36 a 50 años	33	41.3
51 a 65 años	7	8.8
Total	80	100.0

**Note:** Reflects the number and percentage of public servants by age group.

**Figure 4.** Percentage distribution of public servants by age group.



**Note:** Reflects the number and percentage of public servants by age group.

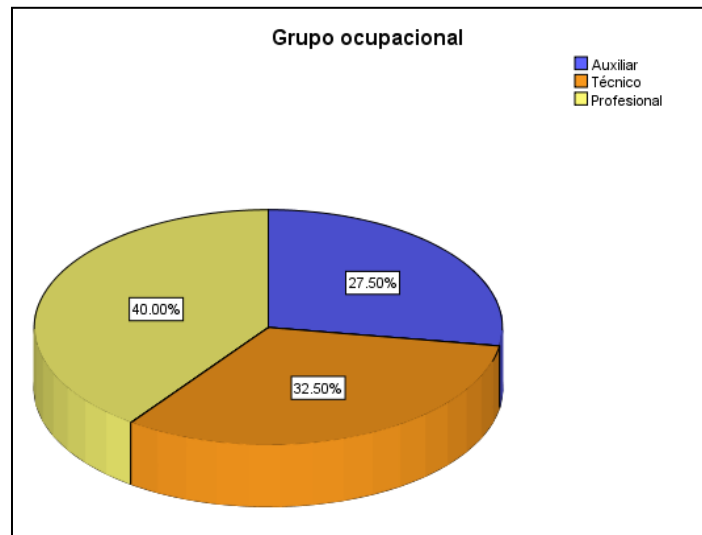
Figure 4 shows that 41.3% of public servants are the largest age group and their ages are between 36 and 50 years old. The second largest group is between 26 and 35 years of age (37.5%). The youngest group between 18 and 25 years of age represents 12.5% of the public servants group. Finally, the oldest group, 8.8%, are between 51 and 65 years of age.

**Table 6.** Percentage distribution of public servants by occupational group.

	Frecuencia	Porcentaje
Auxiliar	22	27.5
Técnico	26	32.5
Profesional	32	40.0
Total	80	100.0

**Note:** Reflects the number and percentage of public servants by occupational group.

**Figure 5.** Percentage distribution of public servants by occupational group.



**Note:** Number and percentage of public servants by occupational group.

Figure 5 shows that 32 of the public servants are professionals; these 32 workers represent 40% of the public servants in the Provincial Municipality of Antabamba. Of the public servants, 32.5% are technicians and 27.5% are auxiliary workers.

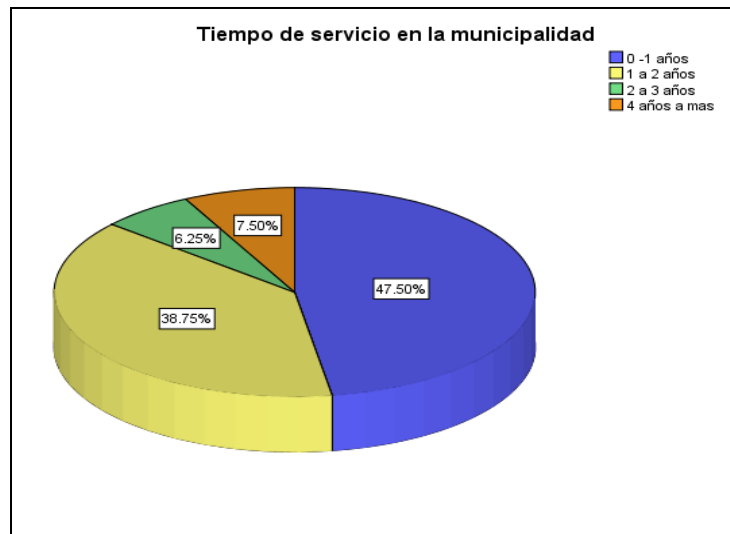
**Table 7.** Percentage distribution of the length of service of public servants in the Provincial Municipality of Antabamba.

	Frecuencia	Porcentaje
0 -1 años	38	47.5
1 a 2 años	31	38.8
2 a 3 años	5	6.3
4 años a mas	6	7.5
Total	80	100.0

**Note:** Reflects the number and percentage of public servants according to length of service.



**Figure 6.** Percentage distribution of the length of service of public servants in the Antabamba Provincial Municipality.



**Note:** Reflects the number and percentage of public servants according to length of service.

Figure 6 shows that 38 public servants (47.5%) have been working in the municipality for less than a year. Thirty-eight.8% have between 1 and 2 years working in the municipality, 6.3% have between 2 and 3 years and only 7.5% have more than 4 years working in the Provincial Municipality of Antabamba. It is important to have an idea of how the variables behave individually; however, we are going to present some two-dimensional tables in order to analyze two variables jointly.

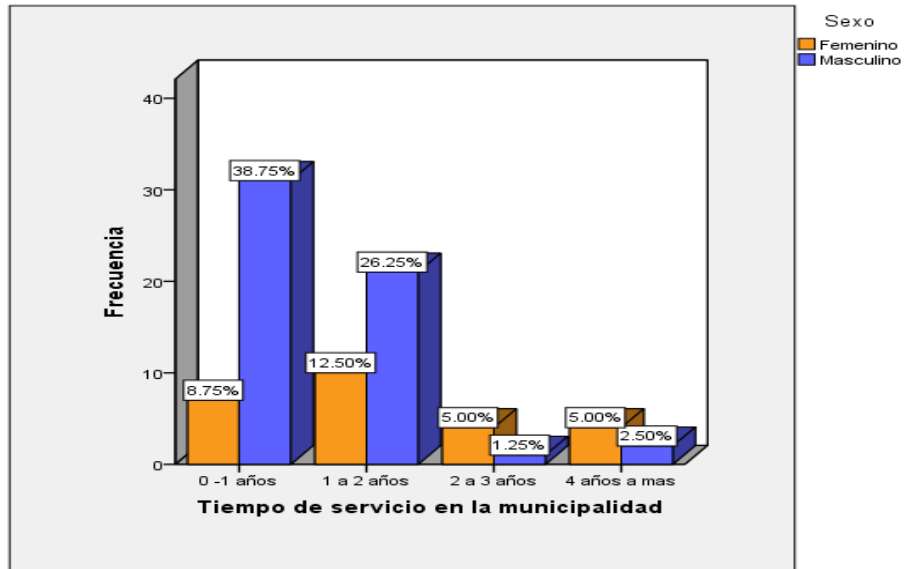
**Table 8.** Percentage distribution of the length of service of public servants according to sex in the Provincial Municipality of Antabamba.

		Sexo			
		Femenino	Masculino	Total	
Tiempo de servicio en la municipalidad	0 - 1 años	Frecuencia	7	31	38
		% Según sexo	28.0%	56.4%	47.5%
	1 a 2 años	Frecuencia	10	21	31
		% Según sexo	40.0%	38.2%	38.8%
	2 a 3 años	Frecuencia	4	1	5
		% Según sexo	16.0%	1.8%	6.3%
	4 años a mas	Frecuencia	4	2	6
		% Según sexo	16.0%	3.6%	7.5%
Total	Frecuencia	25	55	80	
	% Según sexo	100.0%	100.0%	100.0%	

**Note:** Reflects the number and percentage of public servants according to length of service.

Table 8 shows the variables time of service and sex of public servants. This is not the total percentage of public servants; this is the percentage column where only sex is considered. Therefore, it can be said that 68% of the women have less than 2 years working in the Provincial Municipality of Antabamba. This percentage is lower in relation to male public servants, since 94.6% of the total number of male public servants have less than 2 years of service.

**Figure 7.** Percentage distribution of the time of service of public servants, according to sex in the Provincial Municipality of Antabamba.



**Note:** Reflects the percentage of service time of public servants according to sex.

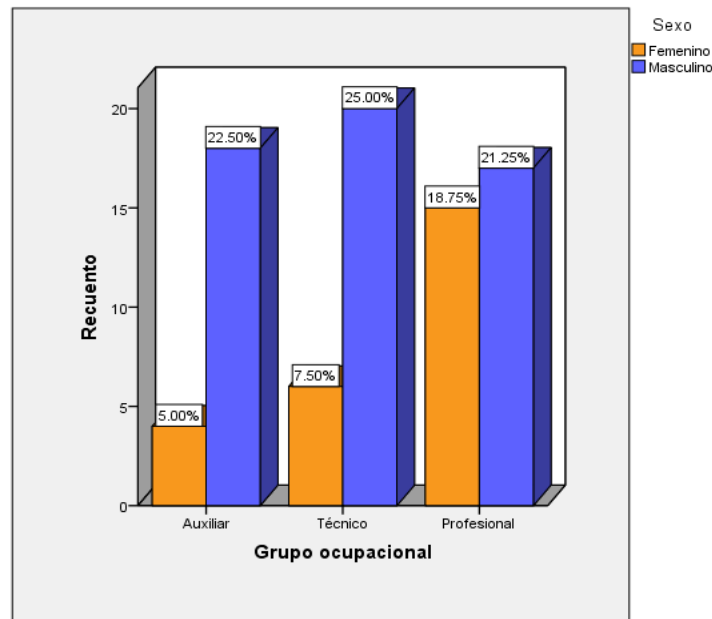
**Table 9.** Percentage distribution of the occupational group of public servants according to sex in the Provincial Municipality of Antabamba

Grupo ocupacional		Sexo		Total
		Femenino	Masculino	
Auxiliar	Frecuencia	4	18	22
	% dentro de Sexo	16.0%	32.7%	27.5%
Técnico	Frecuencia	6	20	26
	% dentro de Sexo	24.0%	36.4%	32.5%
Profesional	Frecuencia	15	17	32
	% dentro de Sexo	60.0%	30.9%	40.0%
Total	Frecuencia	25	55	80
	% dentro de Sexo	100.0%	100.0%	100.0%

**Note:** Number and percentage of the occupational group of public servants by sex.

Table 9 shows the occupational group and sex of public servants. This is not the total percentage of public servants; this is the percentage column where only sex is considered. Therefore, it is possible to say that 60% of the female public servants are professional women with university studies. In the case of male public servants, 30.9% have university studies and 69.9% are technicians or assistants.

**Figure 8.** Occupational group by gender.



**Note:** Reflects the number and percentage of public servants' occupational group by gender.

**Hypothesis testing**

In hypothesis testing, it is necessary to determine whether the hypothesis will be tested for one variable, for two or more variables jointly or for a model. In our research, in specific objective 1, it is necessary to contrast the hypothesis for two variables and in the other specific and general objectives, the model must be included, since the research is going to explain the influence of incentives in terms of performance. It is important to know that in order to be able to answer our research hypotheses it is necessary to answer each of the objectives and therefore we will be able to answer the research hypotheses.

**Specific Objective 1**

To determine the relationship between the labor incentive and the performance of the servers of the Provincial Municipality of Antabamba, 2018.

To answer this objective, it is necessary to calculate Spearman's Rho statistic because the variables are not quantitative, they are measured by ranks, Pearson's correlation is considered when the variables are quantitative. The hypothesis associated with this objective is defined as follows:

**H0:** There is no relationship between the labor incentive and the performance of the employees of the Provincial Municipality of Antabamba.

**H1:** There is a relationship between the labor incentive and the performance of the employees of the Provincial Municipality of Antabamba.

**Table 10.** Correlation between labor incentive and performance of public servants in the Provincial Municipality of Antabamba.

		Incentivo laboral	Desempeño de los servidores
Rho de Spearman	Incentivo laboral	1.000	.411
	Coefficiente de correlación		
	Sig. (bilateral)	.	.000
	N	80	80

**Note:** The relationship between the variables labor incentive and performance of public servants is examined. p-value =0.05

It is important to note that these are not the same values as the Pearson correlation. Therefore, it can be said that there is a moderate correlation between the work incentive and the performance of public servants. Likewise, it is observed that the p-value is significant, i.e., there is a relationship between the labor incentive and the performance of the servers of the Provincial Municipality of Antabamba in the period 2018.

**Specific Objective 2**

To determine the influence of economic incentives on the performance of the servers of the Provincial Municipality of Antabamba, 2018.

To answer this objective, it is necessary to establish a model to determine the influence of economic incentives on work performance. To determine the influence of certain variables, a binary logistic regression model will be applied, which was previously coded and additionally each of the tables will be analyzed and interpreted.

**Table 11.** Omnibus goodness-of-fit test of the binary logistic regression model.

		Chi-cuadrado	gl	Sig.
Paso 1	Escalón	50.622	14	.000
	Bloque	50.622	14	.000
	Modelo	50.622	14	.000

Note: The significance of the model is examined as a function of the input variables.

In this table, it is observed that the significance is less than 0.05. Therefore, the logistic regression model can be applied and, in addition, the variables entered are suitable for its application. Now, the verification of the goodness of fit of the model is continued and then the analysis can be continued.

**Table 12.** Goodness-of-fit statistics of the binary logistic regression model.

Escalón	Logaritmo de la verosimilitud -2	R cuadrado de Cox y Snell	R cuadrado de Nagelkerke
1	58.474 <sup>a</sup>	.469	.630

**Note:** The significance of the binary logistic regression model is examined.

This table has -2LLL (deviation): it measures how well a model fits the data. The smaller the value, the better the model; however, it is not a good fit. The Cox and Snell R-value ranges between 0 and 1, the higher the value the better the model.

**Table 13.** Hosmer and Lemeshow goodness-of-fit test of the binary logistic regression model.

Escalón	Chi-cuadrado	gl	Sig.
1	5.947	8	.653

**Note:** The significance of the binary logistic regression model is examined.

In this table 13, the goodness of fit of the logistic regression model is studied, when the p-value or significance value is greater than 0.05 the model is adequate. According to the results, it can be concluded that the model fits well to the data with a p-value of =0.653.

**Table 14.** Selection of variables in the binary logistic regression model.

		B	Error estándar	Sig.	Exp(B)
Paso 1	Sexo	-.687	1.067	.520	.503
	Grupo_etario			.566	
	Grupo_etario(1)	21.658	13723.844	.999	2547477010
	Grupo_etario(2)	21.194	13723.844	.999	1601135013
	Grupo_etario(3)	20.143	13723.844	.999	559975449.6
	Condicion_laboral			.154	
	Condicion_laboral(1)	3.792	1.742	.030	44.333
	Condicion_laboral(2)	3.114	2.098	.138	22.500
	Condicion_laboral(3)	1.870	2.379	.432	6.488
	Condicion_laboral(4)	5.229	2.504	.037	186.544
	Grupo_ocupacional			.113	
	Grupo_ocupacional(1)	.640	1.283	.618	1.897
	Grupo_ocupacional(2)	2.610	1.414	.065	13.600
	VAR00044			.810	
	VAR00044(1)	-1.457	1.693	.389	.233
	VAR00044(2)	-.953	1.634	.560	.386
	VAR00044(3)	-1.702	2.774	.540	.182
	ILE(1)	-4.359	1.158	.000	.013
	Constante	-21.033	13723.844	.999	.000

**Note:** The significance of variables in the binary logistic regression model is examined.

In this table, all the variables that are considered to explain performance are observed and according to the results it can be concluded that public servants in the condition of administrative CAS, public servants appointed under D.L N° 276 and the economic incentive have an influence on work performance. Therefore, the model to explain a good job performance of public servants is as follows:

$$Pr(\text{Óptimo desempeño del servidor público}) = P_i = \frac{1}{1 + e^{-Z_i}}$$

Where  $Z_i = 3.792 * CAS\ administrative + 5.229 * Named\ D.L.\ 276 - 4.359 * Economic\ labor\ income$

The estimated coefficient -4.359 for job performance represents the change in log performance (normal performance/optimal performance) for each dissatisfied worker in his or her economic incentive job performance decreases by -4.359, when other variables remain constant.

The estimated coefficient 3.792 for job performance represents the change in institutional log performance (normal/optimal performance) improves for each additional public servant in administrative CAS status, when other variables remain constant.

The estimated coefficient 5.229 for job performance represents the change in log institutional performance (normal/optimal performance) improvement for each additional public servant appointed under Legislative Decree 276, when all other variables remain constant.

### Specific objective 3

Determine the influence of non-economic incentives on the performance of civil servants of the Provincial Municipality of Antabamba, 2018.

In this objective, the same procedure is followed as for specific objective 2, since it seeks to determine the influence of non-economic incentives on work performance. To determine the influence also, logistic regression will be applied which was also previously coded by analyzing each of the tables with their respective interpretation.

**Table 15.** Omnibus goodness-of-coefficients test of the binary logistic regression model.

		Chi-cuadrado	gl	Sig.
Paso 1	Escalón	32.704	14	.003
	Bloque	32.704	14	.003
	Modelo	32.704	14	.003

**Note:** The significance of the model is examined as a function of the input variables.

Table 15 shows that the significance is less than 0.05. Therefore, the logistic regression model can be applied and, in addition, the variables entered are suitable for its application. Now, the verification of the goodness of fit of the model is continued and then the analysis can be continued.

**Table 16.** Omnibus goodness-of-coefficients test of the binary logistic regression model.

Escalón	Logaritmo de la verosimilitud	R cuadrado de Cox y Snell	R cuadrado de Nagelkerke
1	-2	.336	.451

**Note:** The significance of the model is examined as a function of the input variables.

Table 16 shows that the significance is less than 0.05. Therefore, the logistic regression model can be applied and, in addition, the variables entered are suitable for its application. Now, the verification of the goodness of fit of the model is continued and then the analysis can be continued.

**Table 17.** Goodness of fit statistics of the binary logistic regression model.

Escalón	Logaritmo de la verosimilitud	R cuadrado de Cox y Snell	R cuadrado de Nagelkerke
1	-2	.336	.451

**Note:** The significance of the binary logistic regression model is examined.

This table has -2LLL (deviation): it measures how well a model fits the data. The smaller the value, the better the model however we are not buying it. The Cox and Snell R-squared ranges between 0 and 1, the higher the value the better the model.

**General Objective**

Determine the influence of the labor incentive on the performance of the servers of the Provincial Municipality of Antabamba, 2018.

This objective considers the largest number of variables when modeling logistic regression and as in the previous cases a model is considered when the variables are significant.

**Table 18.** Omnibus goodness-of-fit test of the binary logistic regression model.

		Chi-cuadrado	gl	Sig.
Paso 1	Escalón	50.644	15	.000
	Bloque	50.644	15	.000
	Modelo	50.644	15	.000

**Note:** The significance of the model is examined as a function of the input variables.

In this table, it is observed that the significance is less than 0.05. Therefore, the logistic regression model can be applied and, in addition, the variables entered are suitable for its application. Now, the verification of the goodness of fit of the model is continued and then we will continue with the analysis.

**Table 19.** Goodness-of-fit statistics of the binary logistic regression model.

Escalón	Logaritmo de la verosimilitud -2	R cuadrado de Cox y Snell	R cuadrado de Nagelkerke
1	58.453 <sup>a</sup>	.469	.630

**Note:** The significance of the model is examined as a function of the input variables.

This table has -2LLL (deviation): it measures how well a model fits the data. The smaller the value, the better the model; however, we are not buying it. The Cox and Snell R-squared ranges between 0 and 1, the higher the value the better the model.

**Table 20.** Hosmer and Lemeshow goodness-of-fit test of the binary logistic regression model.

Escalón	Chi-cuadrado	gl	Sig.
1	5.493	8	.704

**Note:** The significance of the binary logistic regression model is examined.

In Table 20, the goodness of fit of the logistic regression model is studied, when the p-value or significance value is greater than 0.05 the model is adequate. According to the results, it can be concluded that the model fits well to the data with a p-value=0.704.

**Table 21.** Variable selection in the binary logistic regression model.

		B	Error estándar	Sig.	Exp(B)
Paso 1 <sup>a</sup>	Sexo	-.706	1.077	.512	.494
	Grupo_etario			.576	
	Grupo_etario(1)	21.631	13679.417	.999	2478038013
	Grupo_etario(2)	21.176	13679.417	.999	1573276541
	Grupo_etario(3)	20.134	13679.417	.999	554915198.5
	Condicion_laboral			.161	
	Condicion_laboral(1)	3.809	1.770	.031	45.088
	Condicion_laboral(2)	3.136	2.120	.139	23.015
	Condicion_laboral(3)	1.918	2.419	.428	6.807
	Condicion_laboral(4)	5.246	2.530	.038	189.769
	Grupo_ocupacional			.113	
	Grupo_ocupacional(1)	.644	1.283	.616	1.903
	Grupo_ocupacional(2)	2.626	1.422	.065	13.819
	ILE(1)	-4.440	1.289	.001	.012
	ILNE(1)	.136	.937	.885	1.145
	VAR00044			.832	
	VAR00044(1)	-1.428	1.709	.403	.240
	VAR00044(2)	-.970	1.643	.555	.379
	VAR00044(3)	-1.701	2.761	.538	.182
	Constante	-21.063	13679.417	.999	.000

a. Variables especificadas en el paso 1: Sexo, Grupo\_etario, Condicion\_laboral, Grupo\_ocupacional, ILE, ILNE, VAR00044.

**Note:** The significance of the binary logistic regression model is examined.

In Table 21, all the variables considered to explain performance are observed and according to the results we can conclude that public servants in the condition of administrative CAS, public servants appointed under D.L. N° 276 and the economic incentive have an influence on work performance. Therefore, the model to explain a good job performance of public servants is as follows:

$$Pr(\text{Óptimo desempeño del servidor publico}) = P_i = \frac{1}{1 + e^{-Z_i}}$$

Where  $Z_i = 3.809 * CAS\ administrativ + 5.246 * Named\ D.L.276 - 1.428 * Economic\ labor\ income.$

The estimated coefficient - 1.428 for job performance represents the change in log performance (normal performance/optimal performance) for each dissatisfied worker in his economic incentive job performance decreases by -1.428, when other variables remain constant.

The estimated coefficient 3.809 for job performance represents the change in the institutional log of performance (normal/optimal performance) improvement for each additional public servant in administrative CAS status, when the other variables remain constant.

The estimated coefficient 5.246 for job performance represents the change in log institutional performance (normal/optimal performance) improvement for each additional public servant appointed under D.L. No. 276, when all other variables remain constant.

## **Discussion**

The permanence of workers in the municipality is of utmost importance because it is analyzed whether or not there is a high turnover of personnel in that institution. This is evaluated not only in terms of time, but also in terms of the sex of the public servant. In the case of men, 94.6% of them have been working for less than 2 years; this was presented in Table 6 and is possibly due to the fact that the economic compensation does not meet the expectations of the public servants. It should be taken into account that men are always in search of a better salary because as heads of family they assume the greatest economic responsibility. In the case of women, there is a marked difference since they increase the family salary. However, 68% of women also have less than 2 years of work experience.

In recent years, women have a more active participation in the economic development of the country. This concept is proven in the municipality where 84% of the female personnel have higher education and 71.43% of this group are professionals. Peruvian women are becoming aware of their true role in society; they are no longer satisfied with being a simple housewife; on the contrary, they have aspirations to venture into work activities that allow them to achieve greater satisfaction in their professional development.

It is important to know the relationship of these variables since it is important to determine whether the application of incentives to public servants improves their work performance. In the research, it was found that these variables are related. Similarly, Silva (2020) found in his research that incentives or compensation influence the work performance of a group of collaborators subject to Legislative Decree No. 1057 in a public health institution. It is important to note that the Organization for Economic Cooperation and Development and the Inter-American Development Bank, 2020 Latin American and Caribbean countries consider that years of experience as a public servant have more weight when it comes to remuneration than performance itself. This is due to the fact that in other countries they consider the effort made by the public servants during all their years of service within the institution.

Work performance is related to multiple economic and non-economic factors in the employees under different regimes. In the results obtained considering the economic incentives of public servants who are in the administrative CAS regime or appointed under D.L. No. 276, economic income is relevant for optimal performance. However, Silva 2020, found that the economic compensation received by public servants has a positive influence on work performance; however, in the present research, there is evidence of dissatisfaction



with the income received even when showing an optimal performance. Similarly, in his research, Palomino 2018 affirmed the scarce or absent granting of economic incentives, related to certain commendable work. This is common in the country since there is no fair salary scale and much less an incentive scale.

Labor incentives generate well-being and satisfaction in both private sector workers and public sector employees. Likewise, work performance also depends on non-monetary recognition, this recognition should value the effort made through some benefits that generate some satisfaction to public servants. In the research raised, it was shown that the non-economic income is important, but not satisfactory, this perception was considered by the servers under the regime of administrative CAS, trust CAS and servers appointed under D.L. No. 276. Of equal importance, the results obtained in the research conducted by Palomino (2018) showed that non-monetary incentives is the most influential factor in professional performance. This shows that not only the economic aspect is important for individuals, but also the recognition of their effort.

Economic and/or non-economic incentives generate certain satisfaction in workers or public servants. This incentive contributes not only to performance, but also to productivity. There are a set of variables that can explain the optimal performance of a worker or public servant. In the present research, this variable was modeled and it was shown that workers in their condition of administrative CAS and appointed workers are interested in receiving incentives for a greater benefit. However, in the results obtained they showed dissatisfaction with the amounts received. This group of people give greater importance to economic incentives and disregard non-economic incentives. These results are in agreement with those obtained previously. However, it is important to remember that the same variables have been obtained, but with different coefficients, which determine how much each of these variables contributes to identify an optimal performance of public servants, either with a positive or negative perception.

## **CONCLUSION**

In the proposed research, it can be affirmed that the variables among the research variables show a direct relationship between labor incentives and the performance of public servants. Therefore, it is possible to conclude that the higher the incentive received by the public servant, the better his or her work performance in the Provincial Municipality of Antabamba.

The importance of work performance in the public sector is an extremely relevant variable to study. In the present research, it was concluded that the economic incentive will always have an influence on optimal work performance. This factor is strongly related to public servants who are in administrative CAS status and personnel appointed according to Legislative Decree No. 276.

Economic incentives are of great importance; however, this factor can also be replaced by non-economic incentives, where in the present research it was concluded that non-economic incentives also influence work performance. As in the previous objective, the public servant who is in the condition of administrative CAS, trust CAS and appointed personnel, according to Legislative Decree No. 276, are significantly related to an optimum performance.

Incentives are extremely important for public servants; however, when studying economic and economic incentives together, greater importance is given to economic incentives. Therefore, it can be concluded that public servants consider the economic factor more relevant in relation to the non-economic factor and that these in turn have a significant influence on the work performance of public servants who are in administrative CAS status and personnel appointed according to Legislative Decree No. 276.

## **Recommendations**

A relevant consideration when evaluating this problem is to consider other variables such as age in its true dimension and not as an age group whose objective, the psychological aspect whose purpose is to determine the primary needs and desires in their personal development. Likewise, it is advisable to analyze the family aspect since in every nucleus there are always a number of problems that affect their personality and therefore their work performance.

Professional development is always related to the psychological profile of an individual. Therefore, it is important to establish new logistic regression models (binary or polytomous) where a psychometric test can be integrated to have a broader vision of the personnel working in the Provincial Municipality of Antabamba.

It is recommended that public servants be evaluated using other methods that can determine the optimal performance of the personnel of the Provincial Municipality of Antabamba. Likewise, a discriminant analysis can be performed considering whether the model is viable (validation of the assumptions) to determine whether the study variables allow discriminating between public servants with normal performance and those with optimal performance.

It is advisable to establish a model of structural equations where it is necessary to establish new constructs that allow to associate other variables to determine if the existing results allow to develop new theories based on this same problem.

The results show the existing differences among public servants, according to their employment status. Therefore, it is recommended that management actions be taken in the public sector to change and improve certain problems detected in the research.

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